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Dr. Clarence A. Shore, Director of the North Carolina State Laboratory of Hygiene and President of the Tri-State Medical Association of the Carolinas and Virginia.
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FREE HEALTH LITERATURE

The State Board of Health publishes monthly The Health Bulletin which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

- Adenoids and Tonsils
- Cancer
- Constipation
- Chickenpox
- Diphtheria
- Don't Spit Placards
- Eyes
- Flies
- Fly Placards
- German Measles
- Hookworm Disease
- Infantile Paralysis
- Influenza
- Malaria
- Measles
- Pneumonia
- Pelagra
- Residential Sewage
- Disposal Plants
- Sanitary Privies
- Scarlet Fever
- Smallpox
- Teeth
- Tuberculosis
- Tuberculosis Placards
- Typhoid Fever
- Typhoid Placards
- Venereal Diseases
- Water Supplies
- Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

- Prenatal Care (by Mrs. Max West) "Our Babies!
- Prenatal Letters (series of nine monthly letters)
- Minimum Standards of Prenatal Care
- What Builds Babies?
- Breast Feeding
- Sunlight for Babies
- Hints to North Carolina Mothers who Want Better Babies
- Table of Heights and Weights
- Baby's Daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; year to 19 months; 19 months to 2 years;
- Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.

CONTENTS

Dr. Clarence A. Shore
Notes and Comment
The Age for Preventive Measures
The Mentally Handicapped Child
Need Extra Money in 1933?
A Short Sketch of Central State Hospital, Raleigh, N. C.
DR. CLARENCE A. SHORE

Just twenty-five years ago Dr. Clarence A. Shore assumed his duties as Director of the State Laboratory of Hygiene at Raleigh. The Legislature of 1905 had made provision for the establishment of a laboratory, but the first appropriation for its maintenance was only six hundred dollars per year. In 1907, two years later, the annual appropriation was increased to two thousand dollars. A tax was levied on the few water systems then in operation to aid in the work of the Laboratory.

Dr. Shore had already established a reputation as an instructor at the University of North Carolina, after his graduation there and at Johns Hopkins. At that time the equipment of the Laboratory was meagre and the work was unorganized. Typhoid fever from municipal water-borne infection was common. Few members of the medical profession were able to procure laboratory aid in their work, now considered so essential everywhere.

Dr. Shore immediately organized the small facilities at hand and set to work to build a modern laboratory. He did his work so well that today the State Laboratory of Hygiene at Raleigh is regarded by competent authorities to be one of the best in the United States.

Dr. Richard H. Lewis, who was Secretary of the State Board of Health at the time, had been busy for several years building on the foundation laid by Dr. Thomas Wood for an efficient health department. Dr. Lewis repeatedly urged Dr. Shore to undertake the work as Director of the Laboratory and the latter finally accepted and came to Raleigh in December, 1907.

It is the purpose of this sketch to pay tribute to Dr. Shore while he is yet living and in the midst of his life's work. He has unquestionably contributed as much to the welfare of the public and the medical profession in his advancement of the public health work as any other man who has lived in this State. Twenty-five years is a long time to stick to a public job through all the vicissitudes of conflicting political, professional, and commercial interests. But Dr. Shore has never been too weary to patiently assist any physician, health officer, or individual citizen who has appealed to him in any problem affecting the public health. His continuous official service has already been longer than that of any other staff official ever connected with the North Carolina State Board of Health. His work in production and distribution of biologicals has saved many lives. In establishing competent diagnostic facilities through the laboratory he has not only saved many lives but prevented much human suffering. It is the wish of his confreres that he may be spared for many more years of health and usefulness in his present capacity.
THE EDITOR is pleased to mention in this issue that Dr. J. W. Ashby, for several years assistant to Dr. Albert Anderson, was unanimously elected superintendent of the Central State Hospital for the Insane at Raleigh by the board of directors of that institution following the recent death of Dr. Anderson.

As the readers of the Health Bulletin know, Dr. Ashby has been an occasional contributor on mental hygiene subjects during the last few years. As further evidence of Dr. Ashby's conception of the opportunities for the dissemination of helpful information in the important field of mental health, we are publishing in this issue a copy of Dr. Ashby's reply to a woman's club chairman who inquired for information concerning the care of mentally handicapped children. We are also publishing a short historical sketch relating to the establishment and development of the Central State Hospital for the Insane. This article was written by Mrs. Finnell, superintendent of nurses, and was submitted at the suggestion of Dr. Ashby. We are pleased to announce to the readers of the Health Bulletin that they may look for occasional articles from Dr. Ashby or his fellow workers on Dix Hill providing helpful information on the subject of mental health.

The State Board of Health has received an appeal from a family of the State to assist them in solving a problem which concerns a ten-year-old son of the family. The father writes that "the boy is well developed physically, has good health, is smart and quick and active, but absent-minded" and, as he puts it, "random-minded." The family cannot keep him at home; he cannot be kept at school; and therefore about the only thing that can be done to help the boy at this time is to get him placed in the Caswell Training School, where they can study his condition and, if possible, locate any cause of the delinquency which might be removed. Appeals similar to this are of common occurrence, indicating that there are a number of families in the State having such problems to deal with. One of the significant statements in the father's letter is that they are very poor people. The family consists of himself and wife and seven living children. Only two of the family are at work and they are employed as ordinary laborers in a cotton mill. He says that thirteen children have been born to the couple, six of whom died in infancy. The reader may write the comment.

For five days, about the middle of November, under the leadership of Dr. Anna Gove, college physician, and Dr. Victoria Carlsson, director of the Hygiene Department of the Woman's College of the University of North Carolina at Greensboro, a most helpful health education institute was held. Dr. Carlsson and her associates prepared an exhibit on foods, and information concerning the detrimental practice of quacks and the harmful habit of promiscuous use of patent medicines, which provided a great deal of information to the many hundreds of visitors and students which visited the exhibit during the week.

As an example of the kind of information imparted, the editor noted a display of various kinds of foods used in the ordinary diet by the average family daily. In this exhibit the different elements comprising the food were set forth in terms of correct measurements. The names of different vitamins to be found in each food item were displayed and an example of a well balanced diet was set forth in understandable terms. With reference to the undesirable patent medicines imposed on
the people, the exact chemical analysis of each bottle of several common types was posted. It was astounding to note the large alcoholic content of most of it and the other detrimental drugs forming such a large part of the composition of some of these commonly used drugs. The whole affair was educational and should be productive of much good. The authorities of the institution are to be congratulated in their enterprise and initiative.

* * *

Beginning this month a new force of local vital statistics registrars will take office for a four-year period. There are at present approximately fourteen hundred of these local registrars. The success or failure of the vital statistics law, one of the most important laws on the statute books, depends upon the fidelity and efficiency of these fourteen hundred local officials. They are paid by the incorporated cities and counties in which they work. The registrars in the incorporated cities and towns are appointed by the mayors of such places. Those working in rural districts, or in some of the larger townships subdivisions of such, are appointed by the chairman of the boards of county commissioners. It is to be hoped that these new registrars will immediately familiarize themselves with their duties and scrupulously enforce the law requiring the prompt reporting of births and deaths from physicians and midwives and others in the State. One of their important duties is to obtain a proper death certificate from an undertaker before issuing a burial permit. If the law is scrupulously enforced, it will add greatly to the prestige of North Carolina in national circles.

This month also sees the beginning of service for a two-year term of a newly elected group of part-time county physicians and whole-time county health officers. The law automatically makes whole time health officers quarantine officers also, but in many of the counties served by part-time county physicians a separate office of quarantine officer, which may be filled by a layman in such counties, is maintained. This practice makes for some confusion and division of responsibility, but if all of these officials will first familiarize themselves with the law which they are supposed to execute and then conscientiously and scrupulously abide by the requirements of the law, it will make for a much more efficient local health system in North Carolina. During the past twenty years some of the most effective health work in North Carolina has been done by some of the part-time county physicians. These men have an opportunity of developing a health-minded population which will eventuate in the establishment of a thoroughly competent local health department. It is to be hoped that the new group of county health officials, particularly this year, will endeavor to meet the needs of the people, which are more acute now than ever before.

* * *

It was the editor's privilege during the early part of November to attend a community meeting in the town of Bladenboro in Bladen County. This meeting was called for the purpose of undertaking to devise ways and means for procuring necessary surgical treatment for a number of small school children found suffering from various defects. There were three physicians present at the meeting and the most representative people in the community, including the health officer of the county. It was an inspiration to note what has been done and what is now being done in this small community. Through the leadership of the local physicians, arrangements have been made since this meeting, so we are informed, with a near-by specialist to take care of all of these children's needs.

While there we visited the school and found one of the most effective systems we have come across in any place in this
About a year ago a school nurse from the State Board of Health spent some three months at work inspecting the children in the Harnett county schools. As everywhere, several hundred children were found to be suffering from various kinds of physical disorders. The usual education work was done and the usual recommendations made to parents, setting forth the findings of the nurse with reference to each subnormal child. The parents were urged, as usual, to do something about it. A recent report informs us that the authorities of the county made arrangements with a Fayetteville hospital and a specialist, and more than 350 children have been transported from Harnett County to the Hospital at Fayetteville and received operative and hospital care at the Fayetteville institution.

We know nothing about the details of the arrangement; our interest is simply in the fact that the Harnett county people found a way to get several hundred children treated, and therefore removed their physical handicaps and prepared them to enter school with better prospects this year. We have no report on the supposedly large number of children who received surgical or medical treatment from the specialists and physicians in Harnett county or by others in the counties near by. We feel sure that a considerable number availed themselves of such an opportunity. It would seem that the people in any county, under the leadership of the medical profession and the school officials, could easily devise ways and means of taking care of any subnormal, handicapped or underprivileged children in any county in this State.

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During the closing days of November, the director of the Bureau of Sanitary Engineering of the State Board of Health conducted his annual School Conference in Raleigh. This meeting was largely attended by sanitary workers, health officers, nurses, and other interested people from practically every section of the State. The program was comprehensive and much important information was provided at this meeting. It is not necessary to go into detail concerning the program as that was widely published in the daily papers of the State at the time. It is well enough, however, to mention that such important questions as milk sanitation, modern sewers, disposal, shellfish, and ice cream production, and particularly school sanitation received expert attention at this meeting.
I appreciate this invitation to speak to you, and in expressing this appreciation, congratulate you upon your choice of the profession which above all others offers the greatest personal service for the child.

I shall discuss with you the age for preventive measures, that is, the period of infancy and childhood. Pediatricians have realized that prophylaxis against disease in their branch of medicine is by far the most important part of their work, but not until this country entered into the world war and 1-3 of the men who applied for or were drafted into military service were found to be physically unfit, were the eyes of the nation opened to the necessity of producing a more perfect physical race. President Hoover realized this national need and called The White House Conference for the Health and Protection of Children which met in Washington City for several sessions during 1930-1931 and which was participated in by over a thousand trained workers from every section of the United States and her Insular possessions. One of the important facts resulting from the mass of information obtained was that medical students and pupil nurses were not getting sufficient pediatric training to enable them to do effective work in preventive medicine among children. Statistics obtained by and presented at The Conference showed no standard teaching of pediatrics in the medical schools of the country, and the follow-up committee is now working towards accomplishing this end. The committee on nursing of the Conference pointed out the inadequacy of this course of study for pupil nurses in most of our hospitals and emphasized more efficient, practical and theoretical instruction to student nurses in the active, preventive and educational phases of this branch of medicine as it relates to both sick and well children.

Until our medical students and nurses go out for service with a better preparation for this specific kind of work, they will suffer an unjust handicap in their efforts towards maintaining health and preventing disease.

As a member of an allied profession, may I urge you who frame the policies of your association to carry out these recommendations of The White House Conference in so far as you can.

I shall speak of preventive measures in prenatal life, infancy and later childhood.

Prenatal life: About 30% of deaths of the newly born or those infants dying in the first few weeks of life result from prematurity, congenital debility or syphilis. We do not know the cause of prematurity but by regulating prenatal habits of the expectant mother we do know that premature births would occur much less frequently. Congenital debility more frequently occurs as a result of improper food throughout pregnancy and hereditary syphilis can be eradicated by the specific treatment given early in pregnancy.

Intracranial birth injury is responsible for another 1-3 of these deaths. Depending upon the severity of the lesion the infant may be born dead, may live a few days, may become a mental invalid or may recover completely. While intracranial birth injuries may occur in the process of normal labor it more frequently occurs in the mother who has a contracted pelvis. About 15% of women have contracted pelvis and approximately 25% of these cause difficult labor. This physical defect is the direct result of failure to have instituted preventive measures against rickets during the first two years of the individual's life. It is relatively easy for the obstetrician to determine whether or not this defect exists.
months before the baby is born. If it does, then premature labor or Cesarean section, as indicated, will minimize the danger from these serious injuries.

Again many infants are lost annually through the toxemia of pregnancy. Prenatal care will save most of the mothers and their unborn children. Early in pregnancy the expectant mother should place herself in the hands of an experienced physician and prenatal clinics should be instituted for the poor where ever possible.

The newly born: The newly born baby is in danger from asphyxia, strangulation, hemorrhage, infections, and as has been stated, intracranial lesions.

In no other part of her work does the nurse assume such responsibility as with the newly born infant—in no other part of her work should she be more accurately trained to watch for deviations from the normal.

In resuscitating the newly born baby from a state of asphyxia the practice of plunging the infant into cold water is to be severely condemned. The chilling incident to this procedure carries a definite element of danger. I have seen disastrous results from too forcible artificial respiration. For general use, spanking, immersing in warm water and rectal stimulation are indicated and where available, oxygen carbon diqrid inhalations, specially devised respirators, and intra-tracheal insufflation.

Babies who are suffering from intracranial lesions present certain symptoms. Any one of them who fails to nurse during the first few days of life should be suspected. Attacks of cyanoses, a whining cry, bulging fontanelle, muscular tremors or convulsions also point to this condition.

It is of utmost importance to recognize these symptoms because if a diagnosis is made within the first few days of life and the hemorrhage on the surface of the brain is not too large, the blood may be withdrawn by lumbar puncture. This is done each day until the cerebro-spinal fluid is clear. This procedure minimizes the chances for permanent brain impairment caused by the scar resulting from the organization of the blood clot.

The bleeding in a case of hemorrhagic disease of the newly born usually begins on the 3rd day, and if a severe case, may exsanguinate the baby in a short period of time. The bleeding comes chiefly from the mucous membranes of the nose, throat and intestinal tract or from the stump of the umbilical cord. It is important to know that a blood transfusion will not only replace the lost blood but stop the bleeding permanently. In the milder cases injection of whole blood in the muscles of the buttocks will usually suffice.

Age of infancy: For the most part we have been discussing acute conditions—but throughout infancy we are concerned with the vital subject of nutrition.

An uninterrupted normal growth in weight and length throughout childhood is the all important insurance against sickness. Well babies with elastic skin, firm muscles and rosy cheeks are able to resist infections and particularly able to gain an early immunity to diseases if they occur.

There are close to 700 deaths annually from diarrheal diseases in babies under 3 years of age in North Carolina alone—yet the mortality among properly nourished, non-rachitic infants is very low. The same holds true of respiratory diseases and practically all other illnesses they may acquire.

The responsibility on the part of the physician for the normal continuous growth of the infant entails a knowledge of the problems of maternal nursing, mixed feeding, and artificial feeding, of the calorie requirements for babies of different weights, of the physical and chemical nature of artificial foods prescribed, of the more recently discovered vitamins which are essential for the preservation of health, and above all of the physical state of an infant at a given age—and how he or she is responding to the management outlined. Health supervision, consisting of regular periodic examinations by the physician responsible for the babies progress must be made, bearing...
in mind that throughout infancy each child is an individual problem, and no set formula for feeding can possibly be devised which will meet the needs of all of them.

The one constant note which went through all of the meetings of Committee on Medical Care of The white House Conference was this physical individuality of the infant of this age.

In an abstract discussion such as this is, I can only mention a few of the important problems connected with the subject of nutrition.

Maternal nursing is especially vital in the first two months of life, and should be continued in part to the 6th month when weaning should be done. Complemental feedings must be given at any age when the baby fails to make the proper weekly gain. At the age of 5 months, even though the infant is gaining normally on breast milk, one or two complemental feedings of cereal with boiled cows milk on it should be added. Accustomed to the taste of cows milk, it is not a problem to gradually add artificial feedings as the child progresses in age. When the infant has been exclusively nursed to 7 or 8 months, then he usually refuses any other kind of nourishment, consequently there is a slow progressive loss of weight, an increasing anemia and the manifestation of rickets.

Much has been justifiably written upon the value of breast milk in infancy, but too little upon the harmful effect of prolonged breast nursing.

An infant has enough iron stored in the liver to prevent anemia to the age of about 6 months when vegetable soup or the ever available pot liquor, high in iron content, should be added to the diet. Cod liver oil should be given throughout the first 2 years of life, irrespective of whether or not the child is breast fed, as a preventive against rickets. Pure cod liver oil contains Vitamin A, which increases resistance against infections and Vitamin D which guards against rickets. Animal experimentations indicate that Vitamin D operates more effectively against rickets when in the presence of Vitamin A. Consequently Cod liver oil is preferable to Viosterol—although the latter contains more Vitamin D units. Diphtheria has always been one of the dreadful diseases of childhood. Since active immunization against diphtheria was inaugurated the general mortality has been reduced 33 1-3%. The susceptible age of children to this disease is between 6 or 7 months and 6 years. They should be given this prophylactic treatment early—certainly in the first year of life, and should be Schick tested 6 months afterwards to be sure immunity is complete. Until recently toxin-antitoxin has been exclusively used for this purpose. There is an objection to this as a small amount of serum in the form of antitoxin is used to neutralize the toxin in the preparation. This small amount of serum may make a child sensitive to the specific serum if the latter has to be given later during childhood. Toxoid—which contains no serum is preferable—5 c.c. of this for the first dose and 1 c.c. for subsequent doses 2 weeks apart will immunize 90% of infants, probably for life.

State and local health departments have done good work in North Carolina in active immunization against diphtheria—as shown by the fact that this State has more children of the pre-school age protected than any State in the Union except New York.

The importance of early vaccination against small pox is being more and more recognized. Infants are very susceptible to it—and too, they have less reaction to vaccination than older children do. Again a few cases of encephalitis have followed vaccination in older children. The ideal scheme is to immunize against diphtheria at 6 or 8 months of age and vaccinate same against small pox 2 or 3 months later.

Pre-school child—As has been mentioned, 1-3 of adults are physically unfit. 1-3 of all our children are in a state of malnutrition, that is, are 15% or more underweight for their height. Malnutrition is relatively easy to correct in infancy, and in
the pre-school child if the proper measures are prescribed and adhered to. This is far from the fact in adult life.

While acute infections are not so severe and are more easily overcome at this pre-school period, yet the task of keeping these children up to par physically is a large one. A careful surveillance over these runabouts is difficult and, yielding as they are, they easily form poor health and food habits.

Preventive measures, that is keeping these children in the best physical state so that they resist infections are mainly accomplished by (1) removing physical defects if any—especially tonsils which are pathological. (2) a balanced diet (which of course must include milk and green vegetables. (3) Correct hours for meals—no food between meals, unless especially prescribed. (4) Sufficient sleep and (5) enough rest to guard against overfatigue. Periodic health examinations are essential for this age, though not at so frequent intervals as throughout infancy. Every few months their physical state should be determined, and their health regime discussed with their parents.

The children in this group who have a tendency to "catch cold" readily should be given cod liver oil through the winter months for the infection-resistant Vitamin A which it contains.

The school child—Medical inspection of school children aims to detect malnourished children, those obviously in poor health and those who lagging in their class work and to apprise the parents of the fact so that they may be taken to their physician for treatment. It also concerns itself with the proper hygiene of the school buildings, ventilation, the cubic space per pupil, lighting, room temperature, height of desks, toilet sanitation and a general cooperation with directors of the school cafeteria.

Efficient medical inspection of school children has proved to be a splendid preventive health measure among these older children, but there must be no let up in home care, proper food, sufficient rest and an emphasis upon out-door recreational exercises. The more complete the measure of health the easier will be the trying age of adolescence, more trying now than ever before.

Let us, then, who have as our objective the promotion of good health focus our efforts upon these young plastic children and help make them more perfect masters of our future civilization.

THE MENTALLY HANDICAPPED CHILD

A few days ago the chairman of the public welfare department of one of the woman's clubs in one of the towns of this State wrote to Dr. J. W. Ashby, superintendent of the Central State Hospital for the Insane at Raleigh, and asked him the following question: "Can you send me some material for a paper on the mentally handicapped child?" In response to this letter, Dr. Ashby made the reply quoted below.

The foregoing is a practical question and it should be of increasing concern to people all over the State. Dr. Ashby's reply is clear-cut and goes straight to the point. The information included in Dr. Ashby's letter is easily understood and will be helpful, we are sure, to people wishing to undertake similar studies elsewhere.

Dr. Ashby replied as follows: "I would be glad to give you any information I can concerning a question of such vital importance, but it would be difficult to cover the subject in a few words. "In our lectures on Psychology and Psychiatry we are being impressed with the importance of the early detection of mental abnormalities. It has been estimated that of the 7,000 infants born each day in the U. S., about 270, or one in twenty-six, eventually become incapacitated by abnormalities of the mind. Included in this num-

THE HEALTH BULLETIN January, 1933
January, 1933

THE HEALTH BULLETIN

Believe those who are born with germ plasm defects such as idiots, imbeciles and morons which could not be prevented, as well as the functional psychoses such as Manic-Depressive Phychosis and Dementia Praecox. It is known that 75,000 new patients are admitted annually to the state institutions for the insane. Dementia Praecox heads the list of the functional psychoses, the symptoms of which usually appear at the adolescent period and are indicated by lack of attention, ideas of reference and somatic delusions. The majority of these cases reach the state institutions with delusional trends fairly well fixed.

"It is thought that if the child is taught from infancy the importance of developing a well integrated personality, there might be some hope of escape from these functional disorders.

"It should be remembered that the child only possesses three native innate fears. These are lack of support, or fear of falling, a sudden loud noise and a sharp pain. Other fears are taught. Fear of the dark, fear of the bugaman, fear of the policeman and things of that nature have a tendency to build up a background that is faulty.

"We must not overlook heredity and environment in speaking of childhood development. It is stated that no child can develop into a well adjusted individual who is reared in a family or environment of discord. That, therefore, depends upon the parents. The entire burden of the maladjustment must not be placed upon the child without some investigation of its parents."

Need Extra Money In 1933?

By MRS. SUDIE PYATT MILLER

In a story of mine published in The Health Bulletin during the past year, one of my characters made some extra money. The editor of The Health Bulletin wrote me promptly inquiring as to just how my character accomplished such a feat in these strenuous times. I wrote the editor that I would not attempt to explain just how these gentlemen made the extra money, but that if I found time from my work, and my own extra-work activities to write it, I would give him an article on the subject for publication early this year.

Since health and money seem to be intrinsically bound up it is not out of place in a Health Publication. If people can make the necessary money, health already held, may be kept, while if the health is poor money may be used to secure the necessary treatment, or medicine whereby it may be improved. In our country today there are many health clinics for the correction of defects, particularly in children. But grown-ups, to which of course, this article is principally addressed, still have to find their own funds with which to have health defects corrected unless they appeal to charity. Most of us have, even during the depression, a dread of appealing to charity.

For those of us who work, and depend upon our income however small for our own well being and happiness and that of those dear to us, the efficient and satisfactory handling of our jobs is the most essential thing to us, more now than ever before.

Even in these days of depression if we will look about us, we will find that there are ways by which we can add extra money to our incomes, and in cases where we have no income, provide one, if we have ability to do anything from the baking of a cake to the painting of a picture. The woman who paints can make lovely articles, that are necessary to the comfort and welfare of her friends, and if she paints them attractively enough, and sells them cheaply enough to allow herself a small margin of profit, she will sell them—even today!
The man who knows how to repair his neighbor's radio, when he can not repair it himself, will certainly be welcome, and the neighbor won't mind paying a small service fee for the work, if it is well done.

Talented musicians, whether men or women can add extra incomes, or establish an income for themselves with their talent. A young bandmaster, formerly with the marine corps, in a southern state, during the past year, has worked up an income for himself, establishing band classes in a number of small towns. The business must have brought him in enough to live on, for he felt sufficiently courageous to marry during the time.

Women who were formerly teachers, those now teaching, or those who have the training and bent for teaching may pick up some extra dollars by coaching the neighbors' children. The wife of a merchant in a South Carolina town, added a line of magazines to her husband's stock, and coaches the children of her neighbors also, thus making two sources of extra income for herself.

There is always a market for good home baked cakes, pies, candies, rolls and pastries. The resourceful woman can develop her own markets. The women of farm clubs in one county have developed a club market, where they sell the products of their home kitchens, poultry yards, and gardens. They sell home baked cakes, pies, rolls, and pastries, canned fruits, vegetables, butter, cream, eggs, dressed and live poultry, and fresh vegetables carefully gathered and prepared ready for cooking.

Flower growing is a pleasant source of extra income for some women. Potted plants, individual plants, as well as cut flowers, and designs may be sold. Weddings, funerals, parties, receptions, school commencements, and anniversaries, all furnish opportunities for the sale of flowers, the resourceful woman soon developing her own markets.

The flood of ready-made articles on the market has not removed the market for home-made garments, and articles, especially when touches are placed on the articles that the machine-made article can not duplicate. This is food for thought for the woman who likes to sew, and can quickly and easily make attractive articles with her needle.

Chicken raising has been a source of income during the depression for both men and women. A young man in a South Carolina community who lost his position with a northern firm came home to the southern farm where he was born, and made a position for himself, raising chickens and turkeys, and other farm produce. Recently he has added a milk route to his other activities.

This young man used modern methods of scientific poultry raising, and handled his business with the best business principles he had learned while working in the north.

One stenographer in a small town adds to her income by acting as news correspondent from her town for three daily newspapers that come into her territory. The news she gathers as she goes about her regular work, and while making social calls among her friends. After the news is gathered it takes only a short while to write it and post it to the newspaper. She is adding many pieces of furniture to her home she would not otherwise have, and providing herself and small son with comforts, from the checks the newspapers send her for her work.

A letter of inquiry to the state editors of daily newspapers, or your county newspaper, will disclose whether or not there is a vacancy for such work in your community. County newspapers usually pay by sending the newspaper, but that is worthwhile.

Taking boarders is a time-honored way of making money for many women left without any source of income. People still must have places in which to live when they have no homes of their own. Boarders may not be able to pay as much as in previous years, but neither is the cost of
keeping a boarding house what it once was.

The sale of life insurance is another means for both men and women to add extra money to their incomes. A society woman in a small southern town whose husband's income has fallen off alarmingly helps to keep up the family's prestige with the premiums she gets from selling life insurance to her friends. She does it in a very charming manner, and her social contacts help her in making sales. A letter of inquiry to any life insurance company located in your territory or elsewhere will give you a line-up on possibilities in your community.

Examples given in this article are all from actual people who have made money, during the past year, and are making money during this year, from their extra activities, or have established an income for themselves by their own activity and ingenuity. None of the people who furnish the examples for this article live in large towns or in cities. The largest town, named from which the examples come has only 2,000 population, a large portion of that being colored.

Do not make the prices of your services or the articles you make for sale too high. Remember we are still in the midst of a depression, but allow yourself enough to realize a small profit. No business can be operated without a profit.

Study customers, and the people to whom your articles or your services are sold. Give them the things they want. People can still find money for what they want. They could not find money for what they did not want even in good times.

Be thoroughly business-like in all your dealings, courteous to the public always, and fair to others who are engaged in the same business you are.

Caution: Do not allow your zeal for your work to let you overdo to the danger of your health. Have a thorough physical examination during the year, and if defects are found correct them from the money you make from your extra work.

Arrange your day to conform to the principles of hygienic living, and never fail to secure at least eight hours of sleep every night regardless of how well you feel, and how flourishing your business is. Good luck in 1933 in making some extra money.

A Short Sketch Of Central State Hospital, Raleigh, N. C.

By MRS. PAULINE H. FINNELL, R. N., Superintendent of Nurses

THROUGH the untiring efforts of Miss Dorothy Lynde Dix, the most distinguished and useful woman America has yet produced, active measures were taken and preparations were made for the construction of the first insane asylum of North Carolina, which is the present State Hospital, Dix Hill, located in Raleigh, North Carolina. At the urgent request of the Legislature a noble and commanding site was chosen by Miss Dix and is named for her, "Dix Hill." In addition to this hospital, she was the founder of thirty two others.

The plan of the main building was the finest type then conceived and it stands today a fine example of the best thought of eighty-two years ago. Great numbers of visitors and citizens viewed the building and expressed their admiration of the elegance of its design and its completeness. It was to accomodate 224 patients. It may be said here that the construction was under the direction of Dr. Edmund Stroudwick, who may be considered the first superintendent, though he served for only a few months. In 1856 the institution, under the super-
vision of Dr. Edward C. Fisher, opened to receive male and female patients suffering from insanity. During the first year 90 admissions were made. A large number of these had been suffering from insanity for a period of thirty years or more. Some of them during that time had been confined in most unsuitable places of security. For instance, some were chained to the floors of their homes or confined to the dark, damp rooms of a cellar, while the much larger number had been confined to cells of the county prisons.

The effect upon the physical condition of many had been highly deleterious, undermining the general health and at the same time accentuating into a more hopeless form their mental delusions. It has been related that a man of means within our state had for years confined his insane wife in a log prison under unbelievable conditions that would not seem fit for untamed beasts. After a series of years of heartless torture he beat out her brains and forced one of his slaves to secretly bury the mangled body. When his fiendish acts had been detected he was publicly hanged.

North Carolina realized, together with Miss Dix, that some immediate provision must be made for the unfortunate citizens. Although the buildings and funds were inadequate, rapid progress was made in relieving the sorrow and suffering of the insane.

Superintendent Fisher's first year report was of noteworthy importance and interest. He reported a total of 169 patients. During this year the installation of gas, water, and a ventilating apparatus added much to the comfort of the patients and the efficiency of the hospital. A bakery, a workshop, a steam laundry and a drying plant were installed. The local clergymen of Raleigh had agreed to hold weekly religious services for all. Editors of local papers, magazines, and chronicles furnished regular issues. A special vehicle was provided for the female patients and they were given rides daily. These recreations added much to the happiness and well-being of the patients. The institution seemed to thrive slowly yet well enough until the hardships of the war were felt so severely on it. It is related that when Raleigh was surrendered to General Sherman in 1865 that the Federal troops took supplies of the hospital and burned the fences. General John U. Schofield was notified and he most kindly and promptly came to its relief. He furnished all necessary supplies for the remainder of the year. He furnished material and men for repairing buildings and machinery and rebuilding a fence, also the hauling of necessary wood and fuel.

The circumstances surrounding the management of the hospital from its beginning have been unusual, but all emergencies have been met. The mortality of the patients has diminished considerably, due to new conveniences. The by-laws governing the institution were drawn up and put into effect in 1858.

In the year 1858 the question arose as to what extent this institution be applied to the service for the colored insane. It led up to the provision made for the erection of such an institution in Goldsboro, North Carolina, in 1880.

In 1868 Dr. Eugene Grissom became superintendent and served for twenty-five years. He made an extensive investigation and gave specific reports on insanity both in this institution and the entire state. He did much toward the improvement of the grounds and added to the outside beauty of the hospital as well as to the inward beauty and comfort. It was during his term of office that the question arose as to what could be done with the criminal insane. It was not until later that a decision was reached as to just what definite arrangements could be worked out, but they were in the meantime properly cared for in this institution.

The Legislature continually provided improvement and enlargement of the hospital. In 1892 fireproof towers and fire escapes were installed. A new building containing a general dining room and dor-
In 1895 the school of nursing was established. In 1908 more land was purchased and two epileptic colonies were established. A colony building for convalescing male insane and an annex to the male insane department were begun. Work was begun on the Erwin building. This was for the female convalescing patients. The epileptic colonies were opened in 1910 with a capacity of 192 patients.

During the twenty-year period following the death of Dr. Grissom the institution had three superintendents, all of them exceedingly able men. They were Drs. George Tubic, James McKee, and L. J. Hub. In this period the hospital made substantial progress, although some of those years were troubled ones politically and financially. As an illustration of the place the hospital had in the esteem of the people, about the first act of the leaders of the Fusion Legislature of the Nineties was to assure Dr. Kirby, who was superintendent at the time, that they had no desire or intention to displace him or his board of directors so that the affairs of the hospital might continue to move along with serenity. They had the power to abolish the board, terminate the incumbency of Dr. Kirby and set up a new outfit, but such action was not even considered.

In 1911 Dr. Albert Anderson became superintendent and remained in this office until his death in 1932. He instituted vocational training for the patients with great success. He secured a highly trained expert for directing and demonstrating this new phase of treatment. Clinics were being held for the first time. At this time patients were beginning to be very carefully classified according to physical disease as well as mental. Tubercular patients were disclosed and placed in special buildings for both male and female. A complete medical laboratory was installed with a registered technician. A greenhouse was added to the hospital equipment, affording the patients access to more flowers and a greater variety. In 1915 a Receiving Building was constructed for females. Here the patients are received, classified, and distributed to the various departments in Center Building and Brown Building. Later a dental department was inaugurated. A Nurses Home was built. The school of nursing, then called the Dix Hill Training School, was incorporated; the first superintendent of nurses was Mrs. Lessie Johnson, R.N. This offered a broader field for study and demonstrating theory to the nurses. The nurses home had all modern conveniences for the comfort and needs of nurses. Nurses until this time had been residing on the various wards.

In 1918 a new kitchen and the best in any institution of this kind was built with a capacity to serve two thousand persons. In this year also the laundry was burned but was quickly rebuilt with double the former capacity. A new dairy barn was built, a new herd was purchased. The former herd was slaughtered, due to tuberculosis. The barnyard equipment was moved to the center of the farm with modern and convenient buildings. Eight cottages for colored laborers and a cottage for a feeder and caretaker were added to the apartment accommodations for employees and officers of the hospital.

General surgery was begun, giving actual proof to the citizens that mental and nervous diseases did not only affect the brain, but affected the physical health as well. During 1922-1932 a great number of minor and major operations were successfully done. This called for the present Emergency Room to be converted into an Operating Room equipped for modern surgery until the Hospital Unit Building was completed. This building was put into operation during the year 1923 and a large number of operations have been performed each year, the total number of operations the first eleven months of 1932 being 103.

In 1925 the west wing of the main
building was destroyed by fire. This was immediately reconstructed with modern facilities. The Receiving Building, now the Harvey Building, was proved inadequate for the number and types of admissions. A new building, the Brown Building, was constructed and opened in 1931, bringing the total capacity of the entire institution up to two thousand patients.

In 1925 the School of Nursing, under the supervision of a newly appointed medical director, had the curriculum enriched both theoretically and practically so the students were given not only equal opportunities offered in general hospitals, but, in addition, a thorough training for the care of persons suffering from mental and nervous diseases. Here the use of hydrotherapy in form of hot and cold packs and continuous baths replaced straight jackets and other less effective treatments. The demand for nurses was growing more insistent and more difficult to meet every day, not only in general and special hospitals, but also in community and social welfare work. Therefore, the plan of affiliation for students with other hospitals of more varied experience with physical illness was begun. Up until this time students were affiliated with Bellevue in New York. This arrangement being unsatisfactory, due to the long distance from the Home School, affiliation was established with the Medical College of Virginia. The high standards of ethics and ideals established for nurses has been rigidly maintained in the Dix Hill Training School. They also offered opportunities to both male and female attendants, who have been advised and urged to attend classes and lectures in the Training School regularly that they might attain the highest efficiency in the handling of the mentally sick. Since then the standards have been raised and the attendants are given separate classes in proper instruction which has added to the hospital's efficiency. The addition of individual departments of work offered a greater advantage to nurses. Their duties until that time had been more closely related to those pertaining to household duties rather than actual nursing procedures. Attendants with certain educational and social qualifications to whom caring for the sick was not desirable as a profession, were given these positions that dealt with the more minute household duties. Requirement for entrance for both students and attendants is that the applicant be eighteen years of age and have a high school education.

In 1927 it became necessary, in order to meet the requirements set by the North Carolina Board of Nurse Examiners and the North Carolina Standardization Board of the State Nurses Association, that the school of nursing have in addition to the superintendent of nurses an instructor. On the establishment of this instruction service the classroom and class demonstration room equipment was brought up to standard. Separate classes for each year's classes were given in order to attain the required semester hours and give proper instruction. The Nurses Reference Library was at this time very inadequate. It has been increased and improved until at the present it has a collection of approximately three hundred volumes of importance and interest. At present the school has in addition to its superintendent six instructors from the nursing staff and four instructors from the medical staff. Due to the oversupply of nurses the school of nursing limits its matriculation of students to a maximum of ten entering in September only of each year. Up to the present date approximately sixty-four nurses have been registered from this school.
RICHMOND COUNTY CHILD HEALTH CENTER

Here is a picture of the Richmond County Health Center and its director, Dr. Charles N. Sisko. The building is well equipped and some excellent work for the children of that section is being done there. Such work, when conducted along with a good prenatal service for expectant mothers, will soon cut down the infant and maternal death rate in this State. Dr. Sisk is Richmond County Health Officer and he is this year President of the North Carolina Health Officer's Association. His work for the past year has been notable in many directions. Home sanitation, diphtheria immunization, milk sanitation, pellagra control—all have received marked attention with successful results.
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FREE HEALTH LITERATURE

The State Board of Health publishes monthly The Health Bulletin which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

- Adenoids and Tonsils
- Cancer
- Constipation
- Chickenpox
- Diphtheria
- Don't Spit Placards
- Eyes
- Flies
- Fly Placards
- German Measles
- Hookworm Disease
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- Pellagra
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- Sanitary Privies
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- Smallpox
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- Tuberculosis Placards
- Typhoid Fever
- Typhoid Placards
- Venereal Diseases
- Water Supplies
- Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West) Table of Heights and Weights
"Our Babies" Baby's Daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 10 months; 10 months to 2 years.
Prenatal Letters (series of nine monthly letters) Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Minimum Standards of Prenatal Care
What Builds Babies?
Breast Feeding
Sunlight for Babies
Hints to North Carolina Mothers who Want Better Babies

CONTENTS

Notes and Comments: ........................................................................................................... 3
The Nurse's Page .................................................................................................................. 7
Relation of County Health Department to Education ...................................................... 7
Health Problems: Individual and Community ..................................................................... 9
Rickets .................................................................................................................................. 14
Tragedy of Children Who Lose Permanent Teeth .............................................................. 16
Notes and Comment

This story is about two physicians and two midwives. Up in Madison County last fall a midwife who operates extensively in one of the remote mountain sections and who has, if it may be called such, a rather large practice was called in attendance on a woman in labor. Complications developed, but the midwife worked and manipulated and punished the poor woman for twenty hours before agreeing for the family to send for a doctor. She then agreed reluctantly, but the head of the family took the matter in his own hands and sent off for a physician. The physician came at once and was able to deliver quickly, with instruments, a badly mutilated infant, but just about that time the mother died of exhaustion and loss of blood. The facts in the case, as learned by one of the State Board of Health nurses, fully justified the latter statement. To make this story complete, however, it must be added that the midwife had the unmitigated gall to come to see the husband some days after the woman's death and urged him to enter a suit against the physician for malpractice. It is a pity that it cannot be written that the husband murdered her on the spot. However, up to this writing suit has not yet been instituted against the physician.

Here is a clear illustration of what we have been urging upon every midwife in this State, and that is it is her first duty, when she is trusted with the responsibility of assisting a woman in labor, to demand that a competent physician be sent for upon the very first indication of danger. It will never be known how many women's lives have been sacrificed to the neglect of this the first and most important duty of any midwife.

The other picture is less pleasing because it illustrates that there is yet present a type of physician who ought to have been forgotten long ago. In this case a woman in labor commenced to bleed alarmingly and the midwife demanded that a physician be called at once. This was her duty, as pointed out above. The first physician approached criticised the midwife and the family for bothering him, stating that the midwife ought to have gone on and completed the job she had undertaken. Fortunately there are very few physicians who adopt such an attitude. Most physicians see the necessity for midwife service because there are so many people residing a long way from a physician's office and many in all sections too poor to pay for a physician's services. Most physicians, it is pleasing to note, encourage the midwives who are competent and careful to go on and render service to such women, and they also encourage these midwives to call the physician when danger appears.

We will not state the county in which the latter event occurred, because it would do no good. However it was not in Mad-
son County, where the events of the first story occurred.

The State Board of Health is sending nurses to as many remote counties as possible to personally see as many of the midwives practicing in such counties as they can. The nurses are specifically urging upon all midwives that there are three essential duties that they must perform. 

First. They must use the silver nitrate drops, as required by law, in each new-born baby's eyes, and they must report their births to the local registrar. 

Second. They must request the husband to send for a physician upon the very first appearance of a complication or any condition that is known to immediately mean danger to the mother. 

Third. They are urged to be scrupulously clean, free from disease, and to refrain from unnecessary examination of the patient.

* * * *

The following is a true story, and it happened in Harnett County. It is horrible to contemplate the possibility for irreparable damage which can be done in such a condition. A physician in Harnett reported that he had been confronted with cases of syphilis in young married mothers and their infants which he could not possibly account for. The laboratory test of several such cases indicated positive infection in a virulent form in a few of these cases. He set to work to investigate and found that all of these mothers had previously been delivered by one midwife practicing in the section involved. The midwife was forced to undergo a proper examination and she was found to be suffering from syphilis in its most active and virulent form, in a stage in which it is easily imparted to others on physical contact.

The reader of these lines is asked to stop for a moment and consider just what such an exposure means, and then to take action with a vengeance in his or her community in order to prevent any such occurrence in the future anywhere in this State.

When it is understood that a majority of midwives practicing in North Carolina are Negro women, many of them women of low standards of living, it is easy to understand how they might contract infection and thus pass it on to the mother and infant whom they are called on to nurse. It should be said in fairness that a large number of the midwives in the State are clean and free from disease, and those are the only ones who should be permitted to be employed.

The machinery for dealing with this situation is ample. Any county board of health in North Carolina worth the name can get together within twenty-four hours and enact rules and regulations requiring any midwife to present satisfactory proof of a good moral character and of reasonable competency and freedom from any kind of communicable disease before being allowed to practice in the county. The penalty can be enforced after such an ordinance is adopted against any woman who persists in practicing without complying with the regulations. It is a matter that only requires the interest of the local county physician or the whole time county health officer who is duly elected to serve as county physician or county health officer, to interest his board of health to the extent of enacting such rules and regulations. Once enacted, these rules can be easily carried out through a committee of the county medical society. At least three members of the county medical society can always be induced to serve on such a committee. The county sheriff's office can execute the law provided the health officer will do his duty. These women can be called before the county physician once a year and be required to renew their permits to practice, upon giving satisfactory evidence of their physical fitness and their ability to carry on their work. The physicians of any community have first-hand knowledge of those women who are safe and competent to practice and those who should be forbidden.

The State Board of Health does not have the legal authority to prevent this practice,
but the county boards of health do have the authority under the State law. It is hoped that before this winter is over the machinery for the protection of the mothers and infants in this State will be set in motion in every county from Clay to Cherokee. The director of the Department of Maternity and Infancy of the State Board of Health will gladly go anywhere and meet with any county board of health and county medical society to assist in drawing up such a regulation.

* * * *

Spring and summer will soon be here and it is a good time to call attention to the fact that milk is just as essential in the making of a balanced diet in spring and summer as any other season of the year. At this season, however, it is important to make sure that the milk is produced under clean conditions, from healthy cows, and that the supply is safeguarded every step from cow to consumer. A large number of communicable diseases may be transmitted through milk because milk makes a fine culture media for the development and growth of bacteria. It has been a long time now since North Carolina has had an epidemic due to infected milk, and it is hoped that this record will continue in the future. All of the diseases which may be communicated through the consumption of infected milk may be prevented if the milk is pasteurized. Pasteurization simply consists of heating milk at a steady temperature of about 145 degrees Fahrenheit for a period of about thirty minutes. Where pasteurized milk is not available and where the consumer has any reason whatever to suspect that the milk may not be up to the required standard of purity and safety, the milk may be boiled for three minutes, which will destroy any germs present that would be likely to cause disease.

Some people are prejudiced against pasteurized milk because they imagine that it does not taste quite natural. Others have been misinformed to the effect that pasteurization of milk destroys some of the essential qualities. Neither of these criticisms is true. Tests have been repeatedly made in which pasteurized milk and unpasteurized milk were served to people at the same table and no one could tell the difference except the person who had made the test. Another reason some people are prejudiced against pasteurized milk is that they look for the cream line on a bottle of pasteurized milk and it is generally higher than the same milk would be raw. They, therefore, come to the erroneous conclusion that the pasteurized milk is poor milk; this, of course, is untrue. The fact is that the heat of pasteurization breaks up the fat globules so that they are kept in suspension in the milk and do not rise and make so good cream line as in the same milk not pasteurized.

The editor recently had occasion to have a casual talk with the owner of one of the largest pasteurization plants in North Carolina. He says that all of the herds supplying his plant with milk are inspected by the county health department of his county, which happens to be one of the best in the State. He has a bacteriologist and a chemist—and this man is himself a chemist—and they periodically visit all producers and advise with them about their milk production. All of the milk supplied in this plant is produced in the county in which the plant is situated, therefore under the strict supervision of the county health department. He says that each can of milk which comes into his plant is inspected each day by an experienced man for flavor, odor, and general quality, and that chemical and bacteriological tests are repeatedly made. In these tests approved methods are used for checking quality and safety. He says that every reasonable precaution is made to bring milk of the very best quality into his plant and then, by pasteurization and modern methods of handling, to add safety to quality.

This information is passed along because it is of a reassuring character and because it is information that every one
should have. As the cities grow larger in population, the necessity for pasteurization and as near absolute safety as possible will be required of all milk sold for public consumption. In the rural districts and in the small towns where pasteurization is not available and not practicable, careful supervision by a competent county health department and production of milk by conscientious owners and employees make for such safeguards as to enable the State Board of Health to urge the increasing consumption of milk upon all of our people all the time.

* * * *

We find our mental hygiene talk for this month in the National Mental Hygiene Bulletin. It is an editorial reprinted from the New York Evening Post. The title of it is, "Sharp-Tongued Teachers." We are quoting the editorial below. It states in few words what the editor of the Health Bulletin has wanted to say more than once during the past few years.

At present there is no way of knowing just how many children are seriously upset by just such teachers as depicted in the editorial. From personal observation in North Carolina we do know that there are numbers of children in this State each year who fail to make their grades satisfactorily and who later drop out of school before completing high school because of such unfair practices. In many cases where such children do manage to complete the high school course and go on to college, their mental groundwork is so faulty that they are unable to complete a college course. And many college teachers are guilty of the same littleness. Many of these young folks are far above average intelligence; in fact, the child who is acutely sensitive and high strung suffers much more from such practices than do the children of more mediocre ability.

All of us have experienced at one time or another in our school course just such teachers as Dr. Bond so severely criticises in this editorial. We would like to suggest that the superintendent or principal of every school in North Carolina read this little editorial and file it away in his desk for reference which may prompt him to vigorous action at any time he discovers a teacher of this character in his organization. The editorial follows:

"A kind of cruelty to children has been identified by a professor of psychiatry as a symptom of psychopathic weakness in the school teacher. Dr. Earl D. Bond of the University of Pennsylvania calls for the instant dismissal of teachers who indulge in sarcasm at the expense of their pupils.

"They deserve dismissal on the ground of obvious incompetence. For kindly understanding and genuine sympathy are essentials of good teaching and should prevent any teacher from sharpening his adult wits at the expense of a child’s feelings. It is brutal sport for the teacher and it encourages a brutal spirit in the youngsters who profess to share his sorry jests.

"Sarcasm is employed by some teachers as a substitute for discipline, by others as an escape from the responsibilities of their profession. It is a refined sort of bullying, hopelessly unsuited to the atmosphere of the adolescent classroom. And by testimony of one who should know, it may do grave damage to the character and courage of its victims. They cannot reply to it in kind and they are too little experienced to ignore it. They may brood upon it, therefore, until it breeds a sense of injury and a rebellious mood which are difficult to cure by kindness or counsel."
The Nurse's Page

One of our experienced school nurses working up in the hill country in December makes some comments in the following narrative report, which we pass along in the hope that others will read it. It is too good to be buried in the files of an office. It is hoped that the good people who have been zealously working for the promotion of interracial relations in this State will read this item and take courage.

"I was at the first of three Negro schools on my schedule at 8:30 A.M., seventeen miles from my boardinghouse in the county seat town, and the teacher was there and had a good fire when I got there. It is one of the very cleanest, nicest-kept school buildings I have ever entered. It is a Rosenwald school. The grounds are well kept and improved. The two privies were standard and erected according to the exact specifications of the State Board of Health. They are scrubbed and scrupulously clean. The teacher said she begins work at 8:45, and by the time I got everything in readiness for the inspection of her pupils, they were all there, an unusually clean lot and well behaved, forty-two on the roll and forty-one of them present when school opened. It was a pleasure to work with this Negro teacher, and she told me she had taught there more than ten years.

Relation Of County Health Department To Education

By A. Pitt Beam, D. D. S.
Member Cleveland County Board of Health

[From an address to a Cleveland County Parent-Teacher Association]

It is a pleasure for me to be here and to say a few words to this body on matters pertaining to county health work. First, because I am vitally interested in any matter that means better health and welfare of the school children and the people of our county. Second, in the hope that I may be of some small benefit to the schools, city and county, as regards health work.

Let me say here and now that the county board of health is more than willing and anxious at all times to cooperate with the schools, city and county, in the promotion of health work. We as a board have not been able to do as much as we would like, owing to lack of funds; although we have tried to do the best possible with such funds as were available. So far a great deal of educational work has been done and there is room for a great deal more, also in the form of recommendations to the city and county officers as to the present needs. To be sure, not the fault of our county and city officers, but rather, in my opinion, a lack of education and proper understanding by the entire citizenship of the great benefits to be derived from health work in its various departments.

The board has by various methods tried to inform the public of the necessity of vaccinations against smallpox, typhoid fever, diphtheria and other contagious diseases, which is of utmost importance for every one.

Three or four years ago we had a very short dental clinic in the schools. It did a great work but just didn't last long enough. Last year a tonsil clinic was held, at which time about two hundred cases were treated, and the children greatly benefited, but that too was limited. The general health of those children treated by the tonsil and dental clinics was vastly improv-
ed. They were enabled to study better, learn faster and to build stronger and healthier minds and bodies.

This board has recently secured another dental health program for city and county schools, to cover a period of nearly seven months. This work is now being done in the city schools by a dentist employed by the State Board of Health, whom I know to be very capable. A great good will be accomplished by this work, and render a big saving to the city and county schools by the reduction of absentees and repeaters of grades. It will be impossible even in seven months to do the work necessary for the children (aged 6 to 12, inclusive) that really need dental attention. Hence the necessity for a like program next year. But I can assure you that just as many cases will be treated as is possible in that time. In the schools that are visited all children will be examined and recommendations made to their parents. This is such a vastly important program it is the desire that all parents and teachers give their needed cooperation. In the "Hoosier" days a sound mind was the sole aim of the teacher, and the fact that the source of a strong mind is a strong, well developed body was entirely overlooked. So today it is not enough that our children read about life, but they must learn what they must do to live life, to live it fully, strongly and gloriously. Health is the very cornerstone of this kind of life. Parents, teachers, health workers, children and those interested in child welfare are pulling together toward the goal of perfect health for every child. The time has come when every cause or institution interested in children is emphasizing health. The first school nurse who entered the hills of our educational institutions was our child's first insurance toward sound health. Hence the importance of a health nurse for the schools.

We can have healthy bodies only when we have healthy mouths. The mouth is the gateway to the body. Water, food, drinks and a great deal of the air that we breath must pass through it to enter the body. It is the only way by which we can take nourishment to supply our bodies with the necessary heat, fuel and energy. If bread and butter and vegetables could only speak how loudly would they express their horror of entering some of the mouths into which they must go. How important it is that we keep our bodies and especially our mouths clean and healthy. If the mouths of our graded school pupils are unclean, with every mouthful of food that is swallowed goes the germs that cause disease in the body. A majority of tonsil infection comes directly from decayed teeth. What chance have our children to live to the utmost with the menace of an unhealthy mouth to overcome? All the energy that they need to build strong bodies for the future is used at the present to overcome these invading disease germs. It is a constant battle. The heritage of childhood is happiness. No child can accept this heritage without perfect health.

We would like for anyone who is sufficiently interested to visit the schools where the clinic is being held to observe the wonderful work that is being done for those children. It is the hope of this board, and I am sure by anyone that realizes the importance of health work in our schools, that it will be able to broaden its activity in the form of securing a full time health officer and nurse. This has been recommended and discussed at length. It is also the earnest desire of the board that the people of the city and county will see the urgent need of an extensive health program which will be on a permanent basis.
Health Problems: Individual and Community

By B. W. Fassett, M. D.

[President's Address Sixth Councillors District Medical Society, Raleigh, December 1, 1932]

Health problems are as old as the dawn of human intelligence and date back to the time when the recognition of pain and suffering in others kindled in the human mind the emotion of pity and sympathy. In primitive man little was known about disease or its causes and the fear of death was the greatest incentive to the cultivation of health. As man departed from the nomadic type of living, developed trade routes and commenced to establish the community type of living, contagious diseases began to appear. At this time there was a close connection between primitive medicine and primitive religion. Edicts dealing with health and hygiene were a part of the religious code and illness was considered a punishment for sin rather than a consequence of natural causes. Religious codes contained practically all that was known concerning sanitation and hygiene and the priests of the period were the health teachers. The sanitary code of the Jewish people contained in the Old Testament is one of the greatest triumphs of sanitary legislation that the world has ever known.

It has been said that if the Hebrews had done nothing else but institute every seventh day a day of rest for humanity, that of itself would have been one of the greatest hygienic regulations ever made.

Although health laws had such an auspicious beginning this was followed by a period of several thousand years in which little or no progress was recorded. While sanitation and hygiene have advanced steadily during the last century we find that public health is only now reaching maturity and preventive medicine is just in its infancy.

There was a time in the not-far-distant past when good health was sought largely for the extension of life but in this day of enlightenment with its broader view, we might say that the object of health is the pursuit of happiness, the attainment of efficiency, the development of ability to face squarely the personal problems of life, to prolong our days on earth and to obtain for ourselves an abundance of health that we may enjoy those days to the utmost. Health has been termed, "The second blessing that we mortals are capable of: a blessing that money cannot buy."

Mental Health

In considering health problems we must think of mental as well as physical health. The mind is greater than the body, therefore mental health is of greater value to the individual than physical health and it means more in the way of progress, efficiency and happiness. If we were to take Huxley's essay on, "A Liberal Education" and use as a title, Good Mental Health, it would read as follows, "That man, I think, has good mental health who has been so trained in youth that his body is the ready servant of his will, and does with ease and pleasure all the work that, as a mechanism, it is capable of; whose intellect is a clear, cold, logic engine, with all its parts of equal strength, and its smooth working order; ready, like a steam engine, to be turned to any kind of work, and spin the gossamers as well as forge the anchors of the mind; whose mind is stored with a knowledge of the great and fundamental truths of nature and of the laws of her operations; one who, no stunted ascetic, is full of life and fire, but whose passions are trained to come to heel by a vigorous will, the servant of a tender conscience; who has learned to love all beauty, whether of nature or art, to hate all villainy and to respect others as himself."

To have good physical and mental
health to bequeath to and develop in our children, we must ourselves develop a more rugged physical and mental constitution by living the simple life and taking the best possible care of our bodies. Plenty of fresh air, sunlight, moderate exercise, sufficient sleep with regular hours, avoidance of excesses, this is the regimen we should exact of ourselves. Then studying the children's needs and giving them the training to which they are entitled, we may feel that we have rendered our best service to mankind.

In the span of life in which we pass from helpless infancy to an equally helpless senility, each year and each decade has its peculiar health problems but in the short time allotted to this paper I shall mention briefly and in an elementary way only a few of the problems frequently found in the stages of life which we commonly speak of as infancy, youth, adolescence, adult life and old age.

**INFANCY**

Some of the health problems of infancy could best be handled by careful selection of one's grand-parents, for the best guarantee of future mental and physical health are parents of good stock. There is no more pitiable sight than the wrecks of humanity which have been made such by the sins of their parents. In any busy practice there is frequently seen the pitiful sight of some infant bearing unmistakable evidence of hereditary lues and each case reminds us of that passage in the scripture, "The fathers have eaten sour grapes and the children's teeth are set on edge." The only time that such hereditary maladies can be treated with any degree of satisfaction is before the child is born and any expectant mother, knowing that she has a syphilitic infection should, for the sake of the child, receive treatment during pregnancy for as age advances little hope can be had for a complete cure and the most that we can reasonably expect is the prevention of complications or relief of symptoms as they arise.

In infancy and childhood the greatest problem is that of nutrition and it is probably the most effective method of control of diseases that the physician has at his disposal. The most difficult feat in medicine today, for the average physician, is the artificial feeding of the newborn and when this problem is mastered our efforts are directed towards immunization. For years this work has been left quite largely with local health officers but as they do not come in close contact with the children until they are ready to enter school, the most fruitful years for disease prevention are gone. The preschool age is one of rapid growth and development which creates problems of immunity and resistance. It is well known that at this age the child is highly susceptible to the infectious diseases therefore our greatest efforts at prevention should be directed to this period. The fact that most of the deaths from contagious diseases occur between the second and sixth years of age, demonstrates quite clearly that our immunization against such diseases should be completed during the first and second years of life.

Among the causes of infant mortality no two are more striking than ignorance and poverty. It is a well known fact that communities in which there is a large measure of poverty have a higher mortality from all causes at all ages than communities in better circumstances. This condition has been with us since the beginning of time but through the various channels of health education, parents are more and more learning the importance of preventive medicine. They are requesting supervision of the child's development and are turning to the one who is qualified and ready to give such services. There is no doubt that if we are successful with the child of today we have done much for the adult of tomorrow.

One can hardly pass over the problems of childhood without mentioning the importance of oral hygiene. It is increasingly evident that in order to make
any perceptible impression on dental caries in our school population, mouth hygiene must begin prior to school entrance. After children enter school, extractions and filling of cavities make up the bulk of dental work.

YOUTH AND ADOLESCENCE

We have suggested only a few of the health problems of infancy and childhood but must hurry on to youth, that period of life where there is great need for moral, mental and physical instruction that the youth may conserve and improve their own health. Useless and vicious habits are easily formed at this period and it is sad to see the wrecks of humanity made so by senseless habits, seemingly pleasant in the beginning but terrible masters in the end. Such a catastrophe can be avoided by cultivating in youth proper principles and habits of living that through their school life and in later years, will assure the abundant vigor and vitality that provide a basis for greater possible happiness in family and community life.

Almost unconsciously we approach adolescence, the time of life during which the immature personality, as it were, gradually crystalizes into its adult form, the time when rapid development and adjustment are taking place and when character development becomes of vital importance. It is the indication of whether or not the innate factors are uniting into a complete whole capable of surmounting life obstacles.

As we pass from adolescence to adult life we note the transition from dependency to independence, from a sheltering environment to an outside and not altogether sympathetic world. While it is true that some personalities meet this change with relative ease and even with joy, many make the change with difficulty.

The nervous and mental breakdown which we occasionally see at this period is regarded primarily as a failure of the individual to cope with the stresses of life. The physical health may suffer as a result of the mental attitude, sometimes a vicious circle is set up; the emotional affecting the physical and the physical having an adverse effect on the mental. The sound mind in the sound body is the ideal but this object may be hard to attain.

ADULT LIFE

The great problem of adult life is how best to prevent and treat the chronic degenerative diseases such as Bright’s Disease, disease of the heart and arterial system which so frequently terminates in cerebral hemorrhage. From a preventive standpoint but little has been accomplished because the study of chronic degenerative diseases has been confined quite largely to end results, or in other words these diseases have been studied backwards from the autopsy table and from the well developed and incurable stages. If progress is to be made in this study the medical profession must set in motion a program through which the symptoms and signs present from time to time may be studied throughout life. Recorded observations must extend over decades instead of months.

At present our greatest hope for the successful handling of these cases is in the periodic health examination by which correctible defects may be discovered early and properly handled. We are inclined to believe that the public in general does not realize or appreciate the fact that the difficulties attendant on the examination of the apparently healthy are greater than in any field of medicine for deviation from the normal may be so slight that correct interpretations are extremely difficult.

Valuable as these examinations are for the great majority of the people, our experience has taught us that there are a few in whom these examinations cause a morbid fear which is anything but beneficial to the general health. Fear is not a good steady diet even though people are careful so long as they are frightened.

While the degenerative diseases are
spoken of as the result of wear and tear of those who lead a strenuous life, we have another health problem whose causes are quite the reverse and in a measure are due to the happy go-easy existence and the free indulgence in the luxuries of life, that condition of physical make-up known as obesity. The attempt to relegate all cases of obesity to the category of specific diseases is meeting with little favor. Regardless of the cause, whether due to glandular trouble or simple gluttony, the two kinds of fatness merge gradually into each other so that it is difficult to distinguish one from the other. The storage of fat in either case is primarily a feature of metabolic bookkeeping, the energy intake being greater than the needs of the body. As one begins to put on superfluous flesh he finds himself under a definite physical handicap. On account of the excess weight he soon forms sedentary habits which are conducive to greater weight and the greater weight in turn is conducive to more sedentary habits. There being a lack of compensation in the bony framework to carry the excess weight we find many of them complaining of pains in the legs and feet and these discomforts which they experience they attribute to rheumatism and fallen arches. As they are unwilling to ascribe any of their discomfort to obesity they seek relief from every known agency except reduction of body weight.

In addition to its physical discomforts we find that after thirty-five years of age obesity is associated with an increasingly high death rate and at middle age it becomes a real menace to health. The accumulation of fat begins to affect the functions of the heart and other vital organs. Diabetes, a disease seldom found in the undernourished, is frequently found in those who over-eat; in fact some go so far as to say that diabetes is largely a penalty of obesity. The almost universal failure to handle properly these cases of overweight has frequently been in trying to accomplish too much in a short time. In the very gradual reduction plan there is the opportunity of forming new food habits and the lower body weight may be had and maintained without conscious effort. In obesity it has been well said that there are four restraining influences, "Education in nutrition, medical precept, life insurance admonition and style; and the greatest of these probably, is style."

OLD AGE

As we leave adult life we unconsciously find ourselves passing into the next phase of the life cycle which may be designated, the period of old age. In fact there is no sharp line of distinction between any of the various divisions of life. Senescence, or the process of growing old, begins when the embryonic stage is complete. Senescence progresses rapidly until adult life is reached and then more slowly thereafter. As we begin to grow old there is a certain satisfaction in knowing that the aging process is slowing up even though it is not exactly a painless one. The aged are subject to pains in the limbs which they ascribe to rheumatism but which in reality are at times, due to hardening of the ligaments and senile changes in the joints. The appetite is excellent but on account of wasting of the secretory glands of the stomach, the digestion is poor, food remains much longer in the stomach and they have all that goes with an imperfect digestion, flatulence with gastric and cardiac discomfort, in fact every organ of the body undergoes certain deteriorating changes and this enfeebledment of the vital powers causes life to hang upon so slender a thread that infections which might have been easily overcome in the vigor of youth are quickly fatal.

The mental attitude of the aged person who has nothing to occupy his mind but his body and his fate, is a dull, hopeless existence; retrospection brings regrets and the contemplation of the future arouses a haunted dread. If the mind is occupied with serious work which necessitates the
whole attention of the individual he is cheerful, hopeful and ambitious. The relatives of the aged often persuade him to give up his life-work and for the balance of his days enjoy the fruits of his labor. We have often observed men dying soon after they have stepped out of the harness of routine work to which they have become accustomed in their years of effort. For years their work has been the impetus that has enabled them to baffle decay and disease, the will and the necessity to live. And when a man drops his work his contact with these potent forces is gone, the bodily processes slow up, the power house is silent and death speedily follows.

In advanced age two common causes of death are heart disease and pneumonia, but death from these causes is not the tragedy that it is for youth or young adults. In fact it is almost a natural sequence and in a great many cases a benign, beneficent process, furnishing an easy and painless, as well as unprotracted, termination of life.

In spite of the many dangers encountered during life; death from violence, enemies to be fought, parasites to be endured, infections to be survived, enough manage to grow old to show us that there is an age limit beyond which survival is impossible because of internal changes due to ravages of time. These senile changes are less dependent upon the number of years a person has lived, than upon his constitution at starting and the use or abuse of his strength. There are many causes of premature senility and I believe that we are generally agreed that the three principal ones are syphilis, alcohol and over-worry. If there are measures which we can take to defer the progress of senility, our greatest hope is in living a quiet life, the use of light nutritious food and the avoidance of alcohol or at most its very moderate use.

It would be pleasing if we could know that under proper care and hygiene we could live to a hundred or more with full enjoyment of all our faculties and each organ functioning normally. Then when it became evident that there was a progressive waning of the vital forces, there should be no failure of any particular organ but all would share an equal fate like the Wonderful One-Hoss Shay, “All at once and nothing first just like bubbles when they burst.” This was the symbolic conception of that far seeing physician, Dr. Oliver Wendell Holmes.

TRIBUTE TO THE PEDIATRICIANS AND THE FAMILY PHYSICIAN

In conclusion I would pay due respect to the pediatricians who have been the pioneers in preventive medicine, and to the family physician who in all the problems of health, from infancy to old age, must remain the foundation of medical service, for his knowledge of the patient makes him better qualified, not only to diagnose and treat, but also to direct the management of the case. His responsibility is a profound one and no position in our social make-up requires a person of greater character, steadier industry and deeper appreciation of his moral responsibility than does the general practitioner of medicine. The changing character of medical practice has broadened the scope of usefulness of the family doctor and he has become the established leader in all health problems.
N the winter months, when the sun-light contains less of the ultra-violet rays, which are so essential to our well-being, and which are so necessary for the proper utilization of lime and phosphorus in our diet, it is important that we know something about a nutritional disease, Rickets. This disease has, for sometime, been associated with the absence of sunshine and the absence from the diet of an antirachitic substance called vitamin D, contained normally in certain foods. Pediatricians have noted an increase in this disease in recent months.

It was only recently that these two factors have been reconciled. The deficiency theory of the cause of rickets has now been combined with the sunlight theory. This reconciliation was made independently and almost simultaneously by Hess of New York and Steenbock of Wisconsin in 1924 when they announced that antirachitic potency could be developed in a number of different foods by exposure to the rays of a mercury vapor quartz or a carbon arc lamp.

Our first knowledge of rickets came to us from England about the early part of the 17th century, at which time it appeared in the south western part of England. During the latter part of the 15th century religious pictures painted by artists in Germany, in which children were used as models, portrayed unmistakable evidences of rickets, such as, square heads, knock-knees, bow-legs, enlarged wrists and pot bellies. The geographical distribution of rickets conforms to the theory that the lack of sunlight is an important determining factor, since this disease is, for the most part, restricted to that part of the world north of latitude 40 degrees, and to the corresponding area south of the equator. The distribution is not uniform as we do occasionally find cases of rickets elsewhere. It is of interest to note, that, the children of India, because of poverty, are required to subsist on an inadequate diet. However, we find that these children remain free from rickets on account of the exposure to sunlight, rich with ultra-violet ray. Then too, rickets is found infrequently among Eskimo children who live in darkness during the greater part of the year. Their freedom from rickets is explained by the fact that the diet of the Eskimo child contains fats, oils and fish liver which are rich in the antirachitic substance. These protect them from this disease.

Recent studies indicate that both food and ultra-violet light are factors in preventing rickets and that where there is an abundance of the solar ultra-violet rays, even with a deficient diet, rickets seldom develops, which shows, in the last analysis, that the sun is of the greater importance in preventing this disease.

In a recent article on Rickets released by the U. S. Public Health Service, which I shall quote, Rickets is described as: "a nutritional disease in which the chief difficulty seems to be related to the inadequate utilization of lime and phosphorus. If these two elements are not present in the blood in the proper amount and proportion, deficient calcification of the bones will result, and the characteristic bony deformities of rickets are produced.

The deformities include knock-knees, bow-legs, enlarged joints, deformities of the spinal column and pelvis, enlarged head and chest deformities, which are associated with a prominent abdomen, flabby muscles, sweating of the head and delayed teething.

At the present time rickets is a milder disease in the United States than it was formerly, and cases with marked deformity are becoming rather rare.

Though rickets may begin earlier, it is rarely evident much before the third
month of life, and the active process is usually over by the eighteenth month. In this country the more deeply pigmented dark-skinned races are the more susceptible to the disease.

The most striking symptom of rickets is bony deformities of the several types mentioned. These are due to a defective bone formation. In order to have perfect bone formation, the body must have sufficient lime and phosphorus in proper proportions, and in addition, an adequate supply of vitamin D and sunlight. It is possible for the food taken into the body to contain adequate calcium and phosphorus, but still, owing to the absence of vitamin D, they are not mobilized so as to bring about proper calcification of the bones. This mobilizing factor is vitamin D, and in the absence of this food element the body is not able to use the lime and phosphorus in such a way as to insure normal bone development. It is possible, and even probable, that there may be other circumstances in addition to a lack of vitamin D which are partly responsible for the development of rickets. In order to prevent the occurrence of rickets or to cure the disease when it does occur the antirachitic substance must be supplied in addition to an adequate intake of calcium and phosphorus.

It is especially to be noted that rickets seems to render children more susceptible to infectious diseases. This is particularly true of the respiratory diseases. The ordinary rachitic child does not die of rickets, per-se but he does die of pneumonia if his rickets is of a severe type. Not only is there an increased general susceptibility to infection, but the severe deformity of the chest accompanying the disorder seems to add a special hazard in the case of pneumonia. This, of course, is true only of the severer types of rickets, which, fortunately, are now much less common than formerly.

Happily, there is a tendency for the child to outgrow the conditions of bow-legs, and knock-knees—the most common deformities of rickets. On the other hand, in cases of continued dietary insufficiency these may increase.

Severe rickets may cause serious malformation of the pelvic bones; their growth may be arrested so that a rachitic pelvis is smaller than normal; or there may be abnormal and unequal growth resulting in deformity. Pelvic deformities may have serious consequences in connection with child-bearing, and may lead to the death of the infant, so that rickets must be reckoned with as a factor in infant mortality. The same factors which will cure most cases of rickets will also prevent the disease if they are made available for the infant before the condition develops. These antirachitic agents are sunshine, ultra-violet light (artificial sunshine), cod-liver oil, viosterol, and irradiated foods.

About ten years ago it was demonstrated that sunshine has a definitely curative effect on rickets, and it is now generally recognized as a most important factor both in the prevention and cure of this disease. However, not all of the light rays which go to make up sunshine are antirachitic; only the short ultra-violet rays have this property. These light rays are effective because they enable the organism to make use of the calcium and phosphorus in the food in such a way as to bring about normal hardening of the bones. It must not be forgotten that these minerals must be present, since the best antirachitic substance in the world cannot make bone without bone ingredients. They must be applied in the diet.

The effect of sunshine on rickets depends more upon its quality and intensity than upon the actual number of hours of sunlight available in any locality. The quality of sunshine varies with altitude and latitude, and other physical conditions. Winter sunshine in this latitude is poor in ultra-violet rays, and should not alone be depended upon for protection. Smoke, dust, and moisture tend to sieve out those antirachitic rays of the sun; ordinary window-glass excludes the ultra-violet rays of
sunlight, and such sunlight is without any prophylactic or curative value. Neither can the ultra-violet rays exert their healing effect through clothing, for the same reason.

The second great natural preventive and curative agent in rickets is cod-liver oil. Cod-liver oil is a sort of bottled sunshine, manufactured for us by the cod fish. Effective antirachitic treatment depends upon the maintenance of a certain ratio between rate of growth and the amount of antirachitic factor. The rate of growth is greatest with most children during the first five months. It is during this period that rickets is almost universal in modern industrial communities. The administration of cod-liver oil should, therefore, be begun very early in life. Cod-liver oil should be given throughout the first year or until such time as the child can partake of a diet which in itself contains an adequate amount of antirachitic factors. Most children tolerate cod-liver oil, but to those who may have digestive disturbances, sunlight or quartz lamp treatment should be given.

"The effect of cod-liver oil seems to be due chiefly to its content of vitamin D, the factor which mobilizes the calcium and phosphorus in combination essential to the calcification of bone.

Vitamin D, however, can be produced by exposing the chemical substance ergosterol to ultra-violet radiation. This irradiated ergosterol is a very powerful agent in the prevention and cure of rickets. It is given to the child in very small doses. Overdosage on the other hand, causes disastrous results; therefore, it should only be administered on the advice of a competent physician.

Certain foods that ordinarily have no antirachitic value can be activated by exposure to ultra-violet rays. These irradiated foods also exercise antirachitic properties and may become useful adjuncts in the prevention and cure of the disease. Cod-liver oil contains both vitamins A and D, and some irradiated foods contain other vitamins besides D.

No matter what antirachitic substance is used, one should be careful to see that the diet is well balanced and contains adequate amounts of calcium and phosphorus.

TRAGEDY OF CHILDREN WHO LOSE PERMANENT TEETH

Dr. E. A. Branch, who directs the Dental Division of the State Board of Health, issues monthly a publication which he calls "Tooth News." It is devoted to a more or less personal account of the activities of his department. Every month, however, he has one or more pertinent paragraphs of general interest. We quote below a most arresting comment about the large number of children who continue to lose permanent teeth. Dr. Branch will send "Tooth News" to anyone desiring it.

The comment follows:

"One of your dentists reports that last week he had to extract 130 teeth for children in the school where he was directing a Mouth Health Program. Fifty of these teeth belonged to the permanent set and could have been saved with the knowledge of prevention on the part of the parent and child.

"Can you imagine a worse tragedy than a child losing a permanent tooth, and some have to lose more than one. You can never buy a tooth. You may replace worn shoes, clothes, etc., but never buy a tooth. Good teeth must be made and require years of the best care and if lost through neglect or accident may be replaced by a substitute, but you can never buy a tooth."
TO THE CITIZENS OF NORTH CAROLINA:

Since its creation by the Legislature, more than fifty years ago, the organization known as The State Board of Health has labored long and hard to establish an effective system of public health work. Some of the most honest, efficient and patriotic citizens of the State have devoted many of the best years of their lives to this work. As evidence that their efforts have been effective the following comparisons between 1914, the first year of available vital statistic records, and 1932 are presented.

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<thead>
<tr>
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<th>1914</th>
<th>1932</th>
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<tbody>
<tr>
<td>Typhoid fever death rate</td>
<td>35.8</td>
<td>5.1</td>
</tr>
<tr>
<td>Infant death rate</td>
<td>90.3</td>
<td>66.1</td>
</tr>
<tr>
<td>Diarrhoea and enteritis (Infant) death rate</td>
<td>81.2</td>
<td>17.3</td>
</tr>
<tr>
<td>Diphtheria death rate</td>
<td>15.8</td>
<td>4.6</td>
</tr>
<tr>
<td>Tuberculosis death rate</td>
<td>139.3</td>
<td>67.4</td>
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The above figures are encouraging but they only indicate what can be done. Nearly all deaths from the above causes are entirely preventable. Any death from diphtheria or typhoid fever is unnecessary. Please note that the dread and horror of typhoid fever present everywhere thirty years ago has been all but eliminated; and that the infant death rate is now low enough for the first time to make it fairly safe to be a baby in North Carolina.

You want to remember that the better record of 1932 is not an accident. It is the result of persistent, intelligent, scientific efforts. Any lapse in vigilance may mean the return of typhoid fever in every community this or next year. But public health protection, like police and fire protection, costs some money. Are you willing to make the small financial sacrifice necessary for your own safety?
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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils
Cancer
Consipation
Chickenpox
Diphtheria
Don't Spit Placards
Eyes
Flies
Fly Placards
German Measles
Hookworm Disease
Infantile Paralysis
Influenza
Malaria
Measles
Pellagra
Residential Sewage
Sanitary Privies
Scrub Fever
Smallpox
Teeth
Tuberculosis
Tuberculosis Placards
Typhoid Fever
Typhoid Placards
Venereal Diseases
Water Supplies
Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)
"Our Babies"
Prenatal Letters (series of nine monthly letters)
Minimum Standards of Prenatal Care
What Builds Babies?
Breast Feeding
Sunlight for Babies
Hints to North Carolina Mothers who Want Better Babies

Table of Heights and Weights
Baby's Daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years;
Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.

CONTENTS

Notes and Comment ................................................................. 3
Undulant Fever ............................................................................ 5
Bed Bugs ..................................................................................... 8
Health as an Aim of Education in the Bladenboro School ............. 8
Plants and Boys ......................................................................... 10
Annual Milk Check Up .............................................................. 12
"Look and Read" ....................................................................... 13
Health Rules for Teachers ......................................................... 14
First Annual Morbidity Report Now Available ......................... 15
Measles Widespread ............................................................... 15
Total Number Deaths from Pellagra by Counties 1929-1932, Inclusive .... 16
Notes and Comment

We are reminded by an old friend now in Florida of one omission in the sketch of the Central State Hospital published in the January issue of the Health Bulletin and written by Mrs. Finnell. The omission referred to is that Dr. William R. Wood was superintendent of the State Hospital from 1889 to 1893. He was the first successor to Dr. Grissom, who served twenty-one years instead of twenty-five years. Dr. Wood was said to be a most excellent official and the institution made rapid progress under his control. He served for about four years, but, tiring of the work, voluntarily resigned in 1893, at which time he was succeeded by Dr. George L. Kirby, as noted in the article. Dr. Kirby was a member of the board of directors at the time he became superintendent. We are glad to make the correction, and also we are pleased to note that people as far away as Florida read the Health Bulletin.

* * * *

Sometime in December a rabid dog in the town of Greenville ran up in the yard and attacked a six-year-old child, who was out at play. The dog viciously bit the child about the face. Although it received immediate medical treatment and the Pasteur treatment was commenced a few days later and completed in the usual time, thirty-six days later the child died of hydrophobia. We call attention again to such a regrettable occurrence because it illustrates what we have repeatedly insisted upon in these columns and that is that the bite of a mad-dog about the face is extremely dangerous, and although Pasteur treatment is given promptly it very frequently fails to protect a person so bitten from hydrophobia. It does seem that in a civilized state, as we pretend to claim, that there would be some restrictions placed upon the dog population. It would seem that we value dogs greater than we do children. A helpless child is utterly unable to cope with the attack of a dog of any kind, but when a child is attacked by a large, vicious mad-dog, it does not have a chance. We repeat again that no dog in the State of North Carolina should be allowed to roam at large except accompanied by its master, who should at all times have the dog under control.

* * * *

Some of our Northern friends are beginning to speculate on whether or not there is a vitamin "racket." We are quite sure that there is now and has been an exceedingly well-organized propaganda at least to exploit the public interest in vitamins. This is manifested in innumerable ways. We have been pointing out in these columns for at least six or seven years that people should not become too much concerned about the vitamin business. The discovery of vitamins and their study has revealed much valuable knowledge about foods in general, but, like every other fad, when it caught the public attention, every quack in the country immediately jumped on the band wagon. "Nutrition experts," whatever that is or might be, are every-
where thick as Carter's oats. A great deal of hocus and bunk is being daily put out to the public about vitamin this and vitamin that.

We have repeated here from time to time that no one need try remember what Vitamin A does or what vitamin B comes from, but every family should remember that it is important to provide for its table a variety of food which should include a sufficient quantity of all the elements necessary for proper body nutrition. Let us again refer to the food to be had in this state previous to the War between the States by the slave owners on their large plantations, and after the war among the better class of farmers. The diet then provided was comprised largely of home-grown vegetables and fruits, cereals, meats, and dairy products, and poultry and eggs, such a diet, when partaken of in sufficient quantity, covers the ground. Nothing more is left to be desired. The base of the diet in those days was formed of fresh hot bread and fine fresh corn meal, home-ground at the small water mills which dotted the State at that time. In those days there was no shipping in of degerminated meal or flour; there was no old storage eggs from China; no imitation butter from the Philippine Islands; no degerminated white flour from Minnesota; and no oily packing-house product from Chicago; the people had home-grown nod and plenty of it. And pellagra was unknown and malnutrition among children was seldom seen.

There is one item the modern distribution system has brought about which is of great benefit to the people and that is the availability the year round of fresh fruits of every description. With the single exception of fruits, however, the items of food now generally consumed by the urban population of the State and many of the better class of people are poor substitutes for the foods provided in the "good old" days that are gone.

* * * *

A generation ago no respectable farm family in North Carolina would think of starting a new year without having Turner's North Carolina Almanac hung up in the place of honor by the family fireplace. Among other specialties of that classical publication, such as patent medicine advertisements and prognostications about the weather, was a column devoted to advice to the farmers and gardeners about what to do in the current month.

We are reminded of these things during the last few pretty days by seeing the house flies putting in their appearance around the markets and groceries and so on. So it would be advisable for all of us to do as the old almanac advised during the month of March—specialize. We should make a special effort to clean up all of the places around the premises, not only in the cities and towns, but out around the farm houses, which afford good breeding places for house flies.

Years ago some fellow, who likes that sort of thing, carefully figured out just how many million house flies would be produced if the original couple were not swatted along about the first of March. The idea is all right. The prevention of the breeding places for house flies and every method of control is worth while. House flies have undoubtedly carried infection to milk and other foods of babies and very small children which have caused death in some cases. The annoyance and worry of house flies is also a cause of inconvenience and annoyance, even though they were no menace to health.

Beginning with the first days of March, all breeding places around the homes, in city, town, and country, can be cleaned up easier than at any other time. Screens can be put in cheaper now than ever before, with so many men and boys idle everywhere. Only a few strips of lumber, a hammer, and some nails, and some screen wire, which can be purchased cheaply at any hardware store, and with the will to get things done, is all that is necessary to an effective screening for the summer months. Screens will also keep out mosquitoes,
which are a menace to the health of the people in all sections of the State.

Much as we hate to continually hand out advice to people about their own affairs, this is one matter about which too much advice cannot be given, and the main thing is that the advice be accepted and acted upon at once.

**Undulant Fever**

*By C. A. Shore, M. D.*

**Director State Laboratory of Hygiene**

A n unfamiliar disease often causes a state of fear and panic far in excess of that caused by other diseases, which are much more deadly, but which happen to be more prevalent.

The general public has a right to be informed so far as possible about the known facts of all infections. This is desirable in part to prevent undue panic, but full knowledge is necessary to serve as a foundation for measures of prevention as they may be discovered.

Undulant fever is one of these new diseases about which we are beginning to see and hear a great deal. It is not a common disease, but it is widespread and during the last few years there have been cases in all sections of our State and in all parts of the United States.

The disease belongs to that great group which may be conveyed to human beings from domestic animals. It is especially prevalent in cattle and in them it is commonly known as Contagious Abortion, on account of the common symptom of the premature birth of calves. Swine are also subject to the infection and doubtless most other domestic animals also, but in this country the disease is largely limited to cattle. In the Island of Malta a very similar infection has long been known under the name of Malta Fever and this form of the infection is universal among goats and is conveyed to man by the milk of these animals. In this region goat's milk is a common human food and the raw milk has been considered as the source of human infection.

In North Carolina the disease exists in cattle in all parts of the State. The human cases have been very few. In the State Laboratory of Hygiene we have diagnosed only about fifty cases in three years. No doubt there are a good many more human cases which remain unrecognized, but still the disease is quite rare in man.

Malta fever in the Mediterranean basin undoubtedly is an ancient disease and was accurately described, though not named, by Hippocrates. Then as now, it was characterized by a protracted fever, often lasting as long as four months and marked by an irregular, undulating fever curve with many exacerbations and remissions. It received very little attention throughout the Middle Ages, being one of the group of unexplained fevers. It was carefully studied by English doctors in the late 18th century, especially during the Napoleonic wars, when English troops occupied many stations in the Mediterranean basin. The disease was also called Neapolitan or Mediterranean fever. It was not until 1886 that the disease was clearly defined by Bruce, who, during a short assignment to Malta, discovered the causative organism in the spleen of a patient dying on the fifteenth day of illness. He grew the organism on artificial media and transmitted the disease to monkeys by inoculation. Wright in 1897 demonstrated specific agglutinins in the blood serum of Malta fever patients. However, it was not until 1905 that a British Commission discovered that goats were the natural animal reservoir of the infection and transmitted the organism in their milk.

Malta fever occurs in all the Mediterranean Islands and in all countries bordering that sea. It is endemic in certain parts...
of India, China, Philippine Islands and Africa. In the United States it was first reported by Craig in 1905, and somewhat later an endemic center was located amongst goat raisers in Texas, New Mexico and Arizona. Importation of goats from Malta had been going on for some years. From one-third to one-half of all the goats in Malta and Southern France are said to be infected, but the animals themselves show no symptoms except for an occasional abortion; and the disease in animals is not a problem of economic importance.

The organism is eliminated from an infected animal largely via the urine, and can live outside the body for long periods, if temperature is favorable. A single infected animal could, therefore, easily infect a pasture and a whole herd very quickly. The organism has been recovered from goat milk, and it was formerly believed that it is chiefly through milk that infection is transmitted to man. The prevention of the spread of Malta fever by this route is easily possible, if all milk is pasteurized or boiled before using, since the organism is quickly killed at pasteurization temperatures. Recent studies in Southern France, where prevalence of this disease in man is very high, indicate that most human infections come by the contact method and occur in those handling goats. The custom in Europe is to drink only boiled milk and spread by infected milk in European countries is said to be of minor importance. Since the infection is transmitted by contact, cleanliness of hands after handling the infected animals should be strictly observed. The disease is quite easily transmitted, and most laboratory workers or others associated in its study eventually become infected. Eliminating the disease from goat herds is very difficult of accomplishment short of universal slaughtering of the animals.

Up to about 1918 it was believed that all undulant fever in the United States was limited to individuals coming in contact with goats or drinking goat milk, and, as such it was not a very important disease for us. Infectious abortion in domestic animals is an ancient disease, but it was in 1895 that Bang and von Stribolt discovered the causative organism which was later named the Bacillus abortus of Bang. In 1910 MacNeal and Keri isolated it from cattle in the United States. Miss Alice Evans in 1918 pointed out the great similarity between the Bacillus abortus of Bang and Bacillus melitensis. This kinship was later recognized by placing both organisms in the new genus Brucella. In 1924 Keefe reported a case of undulant fever proved by blood culture to be due to the B. abortus organism. However, it was only by 1927 that the possibility of transmission of undulant fever to man by means of cow's milk was really taken seriously. Careful blood surveys (agglutination tests) since that time have shown the wise prevalence of the infection in this country. Hardy collected records of 1,430 cases in the United States prior to 1929. It has been especially prevalent in Iowa. The disease was not new but undoubtedly had been previously confused with other infections, but its true nature not found out. However, there does seem to have been a great increase in prevalence in that state in recent years.

It is quite obvious that those who live on farms are more likely to be exposed to infection than are city dwellers. Undulant fever may be transmitted to man by the handling of infected animals and carcasses, and this means of exposure is almost limited to farmers, veterinarians and butchers. At times the milk of an infected cow may contain a considerable number of the undulant fever germs. Such milk is apt to go on the farmer's table undiluted, or diluted with the milk of only a few other cows. Milk is rarely pasteurized on the farms. On the other hand, the urban population may be protected by pasteurization of milk, and even though raw milk should be used in the city the milk from a badly infected cow would be well diluted before use.

Hence, it is to be expected that undulant fever should be a disease affecting the rural population particularly. It appears
safe to conclude that undulant fever is more prevalent in the United States than the number of reported cases would indicate. Laboratory aid is usually essential in diagnosis as the clinical symptoms vary to a remarkable degree. They may vary from a low fever with transient malaise lasting only one or two weeks, up to long and prostrating illness lasting for months and which may recur from time to time through a period of years. Variations even greater may occur for death is possible and on the other extreme there is good reason to believe that the symptoms may be so slight as to be completely unrecognized. Even when the illness is severe the symptoms are so vague and non-specific that the disease has been mistaken for typhoid fever, for tuberculosis, for malaria, for gall bladder infection, for influenza and in fact for almost any of the acute infections.

The diagnosis is usually first suggested by the exclusion of other suspected diseases and definitely determined by laboratory tests only. The most practical laboratory test being the agglutination blood test. The infecting germ can also, in many cases, be isolated from the blood stream by culture methods, but this process requires from two to eight weeks so that it is not of much value to the patient as a practical diagnostic test.

It cannot be said that any satisfactory method of treatment has been discovered. Specific vaccines have been used with varying results and it is generally considered advisable to try them.

In domestic animals the disease is far more widespread than it is in man. The principal animals infected being goats, pigs and cattle. In most of these animals the disease is chronic and may persist for years with only slight symptoms. Diseased animals have been commonly used not only for the production of milk, but also they are frequently butchered and used for human consumption.

Perhaps the great majority of all persons have been exposed to infection, but fortunately the incidence of infection is low. Just why this is the case is not easy of explanation, as it seems to be definitely proved that human infection may occur both from the drinking of infected milk and from the handling of meat from infected animals.

In the United States the disease is so rare that it has comparatively little importance from a public health standpoint. The subject however, is not unimportant to the few unfortunates who contract the disease. The public has the right to know every practical means of prevention and these may be briefly outlined.

The first and most important method is the attempt to stamp out the disease in infected milk cattle. This is not easy, but great progress has already been made by the State and Federal Veterinary departments. As the immediate destruction of all infected cattle would be an extremely expensive procedure, the gradual separation and elimination has been found to be more practical. The milk from infected cows can be used with safety provided it is first carefully boiled or pasteurized.

This fact, namely, that the infecting organism is killed by heat is the basis for the second method of prevention. In other words the infection can not be carried in pasteurized milk. Wherever it is practicable we advise the pasteurization of municipal milk supplies, not only for protection against undulant fever, but other diseases as well. In private homes, if the milk cows are known to be infected, the milk should be boiled. Fortunately infants seem to be resistant to undulant infection and there are very few cases on record in children under eight years of age.

Milk is an essential food for all children and it is one of the most important of foods at all ages, and nothing should interfere with an adequate milk supply in the food of all persons. We advise pasteurization, but realize this is not at present universally possible. We should like therefore, to emphasize the fact that an inadequate milk supply is a greater danger than is undulant fever. The problem is therefore, a milk supply which is better protected and better safe-guarded.
Bed Bugs

**By Fred Coffman**

Assistant Engineer State Board of Health

**March, 1933**

Although there are several species of bugs confused with the common bed bug, the true bed bug may be recognized by the very slender third and fourth segments of its antennae, the second being shorter than the third, by its almost lunate shaped thorax into which the head is sunken, and by being covered by very short hair. It is rather elongate, whitish in color (although it becomes red after feeding) and large enough to be seen easily, and the female lays from 75 to 200 eggs. The young bed bugs are the same color, except somewhat paler. They molt five times and the last time rudimentary wings appear. They then become adult within a month after hatching, and feed just before each molting. They can live long periods, even from four to twelve months without food, and as their diet consists entirely of blood, they may remain in empty houses, infesting it for years, by sucking the blood from mice, rats, or other vermin.

Although people who do not travel often, or who live in well built homes may seldom see the bed bug, it is truly a cosmopolitan insect, being found in all parts of North America, and practically the entire world. They are very easily carried, and once they find entrance into a house, they occupy cracks in the wall, behind the baseboards, and in the crevices in certain pieces of furniture. People who travel on pullmans or sleep in hotel beds over a considerable period will sooner or later come in contact with this pest. Although the proof is not conclusive, it is believed that they are carriers of disease, such as leprosy, bubonic plague, relapsing fevers, and a fatal disease in India known as "kala-azar".

Besides attacking humans, they feed upon the blood of mice, rabbits, guinea pigs, horses, cattle, and chickens. On some humans the bite is not very severe, while on others a reddish color of the skin may appear and an itching sensation last as long as a week.

In warm rooms the bed bugs breed all the time, but during the winter, or especially during periods of cold weather, the adults and nymphs lie dormant, and probably do not lay their eggs until the following spring when the weather again becomes warm. When a residence becomes infected with the bed bugs they form one of the most serious pests that we have, and the most effective means of eradicating them consists of fumigation, either with hydrocyanic acid gas, or with sulphur. At times it is possible to superheat a room to a temperature of 130 degrees F., holding it there from three to six hours with great success.

If one is traveling much, it is well to carry a small package of pyrethrum powder and sprinkle it over a pullman or hotel bed. This will be effective in keeping the bugs from attacking for a single night. If there are no cracks in the walls or baseboard into which the bugs can crawl and find a domicile, they may be killed in the cracks of furniture by applying kerosene or gasoline. Kerosene is much more preferable, since it does not form the fire hazard as does gasoline. Mattresses, rugs, upholstery, and such other articles can be effectively ridded of these pests by being steam cleaned.

If, however, a house has become entirely infected with these pests, about the only remedy to eradicate them is by fumigation. The most effective of these is hydrocyanic acid gas, using one ounce of sodium cyanide to each 100 cubic feet of space. Fumigation with this material should not be tried without definite instructions, as it is
deadly poison and if breathed by humans will cause instant death. Perhaps the most common form of fumigation is by using sulphur at the rate of four pounds to each 1000 cubic feet of air space to be fumigated. Regular sulphur candles can be obtained at any drug store for this purpose, or four pounds of sulphur may be placed in a pan, sprinkled with alcohol and ignited. The fumigation should be permitted to continue from three to six hours. In fumigating with sulphur, care should be taken to place the dish in a pan of water so that there will be no danger of fire, and all plants, should be removed from the room, as it is very harmful to plant life and will in most cases kill it. Sulphur dioxide, the gas which actually does the fumigation, is also a very effective bleaching agent so that the upholstering on furniture, curtains, rugs, and other such articles may be caused to lose their color. Sulphur dioxide will also tarnish silver, brass, copper, or any other such articles which may happen to be in the room at the time of the fumigation. However, this tarnish can readily be removed by any silver or metal polish.

No doubt at this time of the year, when cleaning is uppermost in the minds of most housekeepers, a combination of the methods set forth may be utilized to advantage in ridding any home of this terrible pest.

**Health As An Aim Of Education In The Bladenboro School**

*By Albert E. Lee*

Superintendent Bladenboro Schools

PROBABLY the greatest asset of the individual is trained intelligence influenced by moral ideals and made effective through physical powers. The school should be so organized to conserve these powers or the highest interests of all will not be in the ascendency. Who doubts the necessity for strong, healthy bodies as the proper foundation for strong healthy minds? Many teachers have been satisfied if lessons have been learned and examinations have been passed; we have falsely assumed the attitude that healthy bodies are accidents of nature and that they may be preserved without any knowledge of how they are to be taken care of. The time has gone by in North Carolina when schools should exist for intellectual drill; the dawn of the new educational day—“Health” has arrived. The teaching of sound doctrine of health is urgent and wise for the pupil as a recipient of this teaching—sanitary and wholesome living, will affect the home environment. The home and the school have an important relationship. The school is not and cannot take the place of the home, but it will be lacking in one of its most important functions if it is not an important factor in the making of the home.

North Carolina teachers are working wisely and courageously to make the school environment wholesome and as a result of this students are gaining information relating to personal and community hygiene that is as practical as helpful. Every morning teachers and pupils on entering the hall of the Bladenboro School are reminded that HEALTH is an aim of the day by a miniature model of the Bladenboro School with colored streamers leading from the school building to the seven aims of education, “HEALTH”, being topmost.

One feature of the health program enjoyed by all the students of the school is the early morning inspection period at which time one of the boys dressed as a
doctor inspects all of the boys of his grade as to cleanliness habits while one of the girls dressed as a nurse inspects the girls; the doctor then inspects the nurse and vice-versa.

Results clearly show that our system for the practical teaching of health is very effective; one teacher is employed to teach health; she conducts classes among all the grades as a regular routine; in addition to this a fifteen minute period for calisthenics is observed daily; these exercises being corrective. One room is set aside for the examination of children found to be below normal in any way.

The school has an enrollment of approximately one thousand pupils and of this number ninety seven per cent keep the health rules set up by the health club under the direction of the teacher, each grade having a health club.

One hundred and sixty children being underweight are given milk and nourishing hot lunches. In checking the weight of these children it was found that each gained an average of four pounds the first month.

With the cooperation of the county physician, local physicians and the county health nurse all elementary children have been given a physical examination; as a result of this sixty children have had their tonsils removed while a dental clinic is being planned for the early spring.

Health charts creating rivalry in health habits are to be found in each classroom. Among the health habits encouraged are drinking a quart of milk daily, retiring early, brushing the teeth twice a day and bathing at least twice a week. Provision is made at school for each child to wash his or her hands before lunch.

Plants And Boys

By MARGARET STALLINGS
Woman's College, Greensboro

Characters:

Ted. An alert 10 year old boy
Jack. Ted's pal
Dad. Ted's father
Mother. Ted's Mother

ACT I
Scene I

Place: Dining room of Ted's home.—Ted, Dad, and Mother at breakfast. Ted is lustily at work on bacon and eggs.

Ted. Mother may I have coffee just this once?
Mother. Well, Ted, what do you think about it? Do you know that growing boys and girls should not eat or drink anything that will stunt their growth?
Ted. Sure, but just once wouldn’t hurt even a tiny bit, and, gee, it smells so good.

Dad. Cocoa is fine for husky lads like you, son. It has lots of milk in it. When folks are as old as your mother and I, they don't need so much milk.

Ted. Umm, these eggs certainly are grand. You sure know what to feed a fellow, Mom. Wish I knew as well as you.

I know you’re right about the coffee. It takes milk to make folks grow, doesn’t it, Dad?

Dad. It certainly does, Teddy-boy, and more things besides. About this coffee. Suppose we try an experiment just to see why little boys shouldn't drink it. Would you like it?

Ted. An experiment? Say, that would be great! I believe what you say, but seeing is believing, isn't it? And do I love experiments! Let’s try it real soon!

Mother. That would be fun. May I get
in on this, too?

Dad. Of course, Mother. Ted, if you will find a pencil and paper after breakfast we'll work this thing out for good.

Scene II

Place: In Ted's back yard. Grass and flowers. Ted is digging around some flowers with a watering pot nearby.

Jack. (Entering from side) Why, Ted! I didn't know you had turned florist. The gang wanted to know where you were and sent me over.

Ted. Hi, Jack. Boy, am I having fun. My family and I are having a 'periment, and I have to work on it every afternoon to see that it's done.

Jack. For goodness sake. You're up to more things. What kind of a 'periment are you doing on flowers? Trying to find out what kind of honey bees make from them or was that the last experiment.

Ted. (Laughing, but still working) No, this is one to 'termine how plants and boys need right sort of food. Tell me this instant, Jack Stone, why boys should drink milk and eat vegetables and fruit.

Jack. What do you think I am, a walking 'cyclopedia? Quit your kidding and let me in on this. It looks interesting.

Ted. Now, Mr. Stone, do you know what vitamins are? No? (Jack shakes his head.) Do you know what foods are good for you and why, and why we should drink water?

Jack. Ted, if you don't quit your foolin' and tell me what this is about I am going to soak you with this water can!

Ted. (Dodging) See this plank? (Lifts plank.) Under here is a plant I've had there for three days. See how white it is? That's what happens to plants when they don't get out into sunshine.

Jack. Oh, say, and that's what happens to little boys too! I 'member seeing a crippled boy all white looking just like that. What's that dried up looking plant?

Ted. The one in the tomato can isn't getting any food. It's so stunted, and dried up looking, I feel sorry for it, but it's in the 'periment and I can't give it food. And that one in the spinach can has plenty of food but no water. Boy, if you don't want to look like that you'd better drink water.

Jack. What is the experiment, Ted?

Ted. Dad worked it out. He thought it was better if boys could see what effect things had on plants and animals. I was going to use rats, but I couldn't get any. Plants are fine.

Jack. Yeah, and they grow faster too, don't they?

Ted. Uh-huh. Dad said even a little coffee now and then wasn't good for little boys and we decided 'cause it wasn't food or such that perhaps if I just neglected a plant once or twice we could see the difference.

Jack. I bet these plants are the victims! (Holding up two plants, one healthy, other weak.)

Ted. The healthy one I tended very carefully and the other I neglected somewhat, so you see if little boys were plants, coffee would make you weak. If you drink coffee, Jack, you'll be like this, and I'll be like the healthy one, 'cause I don't even want to drink it any more.

Jack. Oh, yeah! Catch me neglecting myself again. I don't exactly like the idea of being so weak looking. Let me in on this experiment and let's work together.

Ted. Swell! Here are the rules and regulations, and now I initiate you into this "better boys" club. (Suddenly sprinkle Jack with water, whereupon Jack chases him from the stage)

Scene III

Dad. (Putting aside paper.) Well, Ted, how's the experiment coming?

Ted. (Looking up from the charts he and Jack were perusing) Gee, Dad, they're swell. Jack is helping now and we are going to show the results to the school tomorrow!

Jack. Yes, we told the hygiene teacher we were working on a 'speriment and she wants us to take the plants and charts up to class and tell them about it.

Mother. Seems that your idea was quite a good one, Dad. I'm so interested in the plants that I have to help the boys every afternoon.

Dad. It's helped me, too. I guess we both needed pulling out of the house and getting a little exercise.

Jack. It's loads of fun, I think. I didn't know plants and boys were so much alike.

Dad. Yes. Plants and boys are more alike than anyone would guess. A plant with plenty of food and sunshine will be the best in the garden. So a boy with the best food, sunshine and attention will be the best in the land. I hope you boys learn a lot from this experiment.

Ted. Dad, we will. I hope the school folks like it. The other boys in the class are already saving cans to start plants in and one boy has some rats that he is going to use. We have lots of work on charts too. Plants certainly are useful—for experiments and food too.

Jack. Yeah. And I'm gonna be like that biggest one. My mother has already fixed a diet for me. Just you watch me grow.

Ted. And me too. We're Better and Bigger Boys, instead of being Better Babies!

(Curtain.)

ANNUAL MILK CHECK UP

Some 86 cities and town in North Carolina are now operating under the Public Health Service Milk Ordinance. The dairies furnishing milk to these towns are inspected by some 58 inspectors. Although they are all operating under practically the same ordinance the human element must of necessity enter into such work to some extent. To reduce to a minimum such variation, to assist inspectors in every way possible, to encourage the production of the cleanest safest milk possible, and to promote the more general use of milk is a part of the work of this Board.

One of the means of better enforcement of the milk ordinance is to compute an annual rating or percentage grading which shows how the enforcement of the ordinance as well as the quality of milk under the supervision of one health officer or dairy inspector compares with that of another. This is done through the cooperation of the State Board of Health and the Public Health Service. There has just been released by the Public Health Service the following figures which indicate the raw milk rating, the pasteurized milk rating as well as the rating of the enforcement work in certain of the cities and towns in North Carolina.

<table>
<thead>
<tr>
<th>City</th>
<th>Retail Raw Milk Rating</th>
<th>Pasteurized Milk Rating</th>
<th>Rating</th>
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<tbody>
<tr>
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<td>75%</td>
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<tr>
<td>Asheboro</td>
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<td>92%</td>
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<tr>
<td>Asheville</td>
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<td>92%</td>
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<td>88%</td>
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typhoid fever, and tape worms along with
some fifty other ailments, including tuber-
culosis and syphilis, is stepping along. Here
is the circular, read it and see just what
can be promised in the English language:

Mr. Eugent Ashcraft, editor of the Mon-
roe Enquirer, conducts a most interesting
personal department in his paper which he
calls the "Catch-All Column." In a re-
cent issue of the Enquirer he prints a copy
of an advertising circular captioned as
above. The old circular or handbill was
the product of a Monroe Negro who once
published a newspaper in the interest of his
race. It seems that "Uncle Dick," which
was the Negro's name, took a hand at many
things in his time. Naturally enough he
found the nostrum business interesting and
probably profitable. Mr. Ashcraft says
that "Uncle Dick's remedy claims to be
no more of a cure-all specific than do
some of the widely advertised nostrums"
of today parading in much more preten-
tious journals. We are inclined to believe,
however, that he took in about as much
territory as any we have seen. A nostrum
which promises to cure all skin diseases,
sure, kidney and bladder trouble, erysipelas, consumption, dropsy, influenza, ring worm, heart trouble, loss of appetite, gonorrheal, menstrual, secal trouble, syphilis, ulcers, stomach trouble, weak-bladder, nerve trouble, malaria and fever, lung trouble, dizziness in the head, bronchitis, nausea, vomiting, scrofula, tape worms, hemorrhages, night sweats, indigestion, skin diseases, gravel, typhoid fever, stone in the bladder, aching limbs, headache, dyspepsia, palpitation of the heart.

"Now if you have any other disease that is not mentioned above, I have the medicine that will cure it, if it can be cured, or I can get it. Just think how happy it is to obtain good health.

"All I ask you to do is to give this medicine a fair trial and you will be pleased with its results."

HEALTH RULES FOR TEACHERS

Superintendent Guy B. Phillips of the Greensboro City Schools recently published in the local papers of that city a list of suggestions to teachers designed to protect the health of the students. These suggestions are for the most part practical and some of them are extremely important. We reproduce the suggestions here in the hope that teachers all over the State will take fresh note of the importance of these things:

"Keep down suggestions of fear and reports of widespread contagion. Wild statements by school officials, teachers and pupils must be prevented," the school superintendent stated.

"Keep the building well heated and ventilated—but not too hot.

"Keep the building clear and free from dust.

"See that children who come to school with wet feet and wet clothes are properly cared for.

"See that children are allowed to enter the building during extremely cold or wet weather when they arrive.

"Do not allow much, if any, outdoor play while the ground is wet.

"Provide physical exercise in the room with fresh air available.

"Attend to the sanitation in the cafeteria and watch the children in the selection of their food.

"Watch for those children who appear to be sick. See that any one who is sick is not kept in the room with well children.

"Stress simple health habits for protection of the group.

"Teachers should lead the way by keeping well and strong. They should keep a close check on conditions and report serious cases to the nurse.

"Good attendance is desirable but not at the expense of health. This situation calls for real teacher leadership and judgment."

To the above we should add the most important rule of all and that is the teacher should see that the toilet facilities of the school are adequate and kept CLEAN at all times. The foregoing should be rule Number I in all schools and any principal and janitor who fails to observe it perfectly should be fired by telegraph.
FIRST ANNUAL MORBIDITY REPORT NOW AVAILABLE

The first annual report of morbidity in North Carolina has just been compiled by the Division of County Health Work & Epidemiology of the State Board of Health and will shortly be placed in the hands of all county health officers and others interested in this type of information. This first report runs to about 75 mimeographed pages and so is a rather bulky volume. But it is full of valuable and interesting information and should be of use to every one concerned in the study and control of epidemic diseases in our State. Since this volume is the “first” morbidity report, it was necessary to include in it a summary of reports for all the years subsequent to 1918, in which year reporting of cases of diseases of public health importance was for the first time made obligatory. The report gives incidence of reported cases of eleven of the major reportable diseases for the years 1918-1932 for each of the 100 counties in the State, and the same information is tabulated separately by months for the year 1932, so as to show the seasonal incidence. But the Division has called attention to the fact that comparisons between counties as to their healthliness cannot be made on the basis of this report, since reporting is evidently at very low level of completeness in many counties.

Two additional tables give the incidence for the State as a whole of all the 31 reportable diseases, for the same 15 years and by months for 1932. Allowing for the quite manifest incompleteness of the material, it is still worthy of note that we have here in this report an index to the health of the people of our State, set forth in a manner to be a valuable supplement to the Annual Report of Deaths. For example, a study of the tables on pellagra, typhoid fever or diphtheria will indicate how great is the task yet ahead of us of eliminating these preventable diseases. It is promised that the reports for 1933 will include analyses of the age grouping of cases. With the type of information available on his desk, the public health worker will have a guide to the study of his own county morbidity and an indication of where efforts to control disease could best be concentrated.

MEASLES WIDESPREAD

An outbreak of measles of an extent seen only about once every five years in this State is expected to descend upon us within the next few weeks. Ordinarily, measles reaches its peak of cases in North Carolina in March, April and May, often running at a high level through June. The seven weeks of 1933 already behind us have shown a greater number of reported cases each week than in any corresponding week in the past four years, being usually about twice the incidence of those years. The last extensive statewide outbreak came in the first four months of 1928, with 60,000 reported cases for the year, though the previous year had shown a building up to the peak with about half that number of cases. The years 1929 and 1930 had very low totals of slightly over 1,000 cases each. The years 1931 and 1932 have run well over 10,000 cases each and apparently show a building up to another extensive outbreak.
### Total Number Deaths from Pellagra, by Counties

**1929-1932, Inclusive**

**1929 1930 1931 1932**

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A JOINT RESOLUTION DESIGNATING THE STATE LABORATORY OF HYGIENE BUILDING AS "THE CLARENCE A. SHORE STATE LABORATORY OF HYGIENE BUILDING."

WHEREAS, Dr. Clarence A. Shore, State Director of Hygiene, departed this life on the 10th day of February, 1933, after more than twenty-five years of service as Director of the State Laboratory of Hygiene; and

WHEREAS, by his love of service and the commonwealth, he succeeded by his own personal efforts and diligent attention to duty in making the State Laboratory of Hygiene one of the four outstanding laboratories of hygiene in his country; and

WHEREAS, Dr. Clarence A. Shore was at the time of his death, President of the Tri-State Medical Association of the Carolinas and Virginia; and

WHEREAS, his reputation as a cultured scientist and his patriotic services to the State in the eradication of typhoid fever and the prevention of death by hydrophobia was nation wide and set an example emulated by other States in the Union:

NOW THEREFORE, as a fitting tribute and memorial to the notable life work of this outstanding public servant who laid down his life that North Carolina might live and live more abundantly;

BE IT RESOLVED by the House of Representatives and the Senate concurring:

Section 1. That the building now used and occupied by the State as the State Laboratory of Hygiene in the City of Raleigh, together with any and all extensions or additions thereto, be and the same is to be hereafter known and designated as "The Clarence A. Shore State Laboratory of Hygiene Building."

Section 2. This resolution shall be in force and effect from and after its ratification.

In the General Assembly, read three times, and ratified, this 23d day of February, 1933.

This Joint Resolution was presented by Senators Hayden Clement and Doctor T. W. M. Long. It is the only instance in the recorded history of North Carolina that such honor has been awarded a physician by the State Legislature.
MEMBERS OF THE NORTH CAROLINA STATE BOARD OF HEALTH

J. T. BURRUS, M. D., President
CARL V. REYNOLDS, M. D. .............................................. High Point
G. G. DIXON, M. D. ...................................................... Asheville
L. B. EVANS, M. D. ...................................................... Ayden
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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils  Hookworm Disease  Smallpox
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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)  "Our Babies"
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Table of Heights and Weights
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Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.

CONTENTS

Notes and Comment ................................................. 4
Trench Mouth .......................................................... 7
On Teeth ............................................................... 8
Is Parenthood Instinctive? ....................................... 9
Vitamins ............................................................... 10
Now Busy Immunizing Children Against Diphtheria ........ 15
Laboratory Products Should Be Freely Available to All Physicians 16
Notes and Comment

I N A FEW WEEKS the fiscal year will be closing, and all county and city health departments will be arranging their budgets for the new year. Everybody understands that this is a time of dire need. All public work is greatly handicapped on account of the failure of so many of the people to pay their taxes. Public Health work can be carried on only with funds appropriated from the taxes of the people. This is as it should be, because public health work is conducted solely in the interest of the public. The death rate in North Carolina for 1932 was the lowest ever recorded. At the same time, conditions existing among the people are such that the foundation will be laid for many nutritional diseases which, in a very few years, will run the rates up to an abnormally high degree. A child is a child but once; and unless the proper nourishment is forthcoming throughout infancy and childhood, and unless the mother is properly nourished from the very date of conception and prior thereto, these nutritional diseases will later on take a fearful toll.

In closing an excellent editorial in a recent issue of the Sanatorium Sun, the editor says: "We cannot escape the unwisdom of greatly reducing the activities in the public health field. If our view is correct, we shall have more illness rather than less to contend with very soon. There is a danger of false economy."

Along the same line, under the title "A Health Record for 1932," the Journal of the American Medical Association recently closed an editorial with the paragraph quoted below. This journal is conducted strictly in the interest of physicians, but it has the wisdom to see that the public health properly cared for, benefits the physician just as much as any other class of the population. The paragraph follows:

"The period of economic stress through which we are passing is calling for retrenchment in expenditures in almost every direction. The increase in poverty and unemployment is, in the long run, provocative of ill health as well as of suffering. The need for medical care as well as for public hygiene will almost certainly be somewhat augmented. Our communities must see to it that the high standards of public health already so fortunately achieved shall not be allowed to decline because of undue economies enforced on the essential health promoting agencies now supported by public funds."

* * * *

The editor of the Health Bulletin recently received a letter from a relative. One arresting statement contained in the letter we pass on here to all of our readers who are interested in the care of babies—and that includes most of them. In describing the condition of a year-old infant, the writer states that "he (the baby) does not sleep well, does not want to take his milk, and, on the whole, is not growing and developing as he should; but he is anxious for his vegetable feeding and takes it with relish."

On the same mail a review of an article

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The Bulletin

Published by the North Carolina State Board of Health
entitled "The Nutritive Value of Strained Vegetables in Infant Feeding," by Dr. George W. Caldwell, of the Department of Pediatrics of the New York Post-Graduate Medical School and Hospital, comes to hand. We quote below and recommend some of Dr. Caldwell’s conclusions:

1. Strained vegetables were well tolerated and digested in a series of young infants studied from this standpoint.

2. Digestive disturbances were not encountered, undoubtedly because during the straining process to which these vegetables are subjected, most of the fibre is removed, leaving only the mineral, vitamin, and nutritive elements.

In this State, where it is so easy to produce fresh from the garden almost the year round every conceivable kind of vegetable needed in the feeding of babies and young children, it is to be hoped that this year additional efforts will be made in every family where there are young children to provide these essential foods.

The Health Bulletin has been issued monthly, with very few exceptions, regularly for more than forty years. The purpose of its founders and those of us who have been responsible for it for the last twenty years may be said to be to try, through its columns, to teach the elementary principles of hygiene and sanitation in the homes of the State which have young children. Certainly for the past fifteen years we have endeavored to put something in each month’s issue in the way of definite information as to how to prevent the spread of disease and to promote happiness and wellbeing through good health. It affords us inspiration and encouragement to receive very frequently letters from our readers about in the State giving us definite evidence that we have been successful to some extent in attaining our objective. A recent letter from a friend in Randolph County so clearly illustrates the success of our efforts that we quote it here in full.

"Will you please send 'The Health Bulletin' to me? Having been reared in a home where the Bulletin’s information was read and put into practice, I feel that I need the help it can give, now that I have a home of my own."

Information of the character conveyed in the foregoing letter reaches us from all sections of the State at frequent intervals. We were much gratified last fall to have a report from one of our nurses who has been in the field for fourteen years teaching health in the public schools of the counties having no organized health departments. This nurse was sent to one of the western counties. This was the fourth time, at three year intervals, that she had worked among the school children of that county for our department. On beginning the work she wrote that she was meeting with an enthusiastic reception on the part of some young teachers who were pupils in the elementary grades when she first went to that county fourteen years ago. They became impressed with the information she was endeavoring to give them about the care of their health and the prevention of disease. This early teaching had borne good fruit; and now that they were teachers themselves, they were veritable evangelists in the cause of public health.

All of the foregoing is encouraging, but it means that we must keep up the warfare perpetually if we would have and retain a healthy population.

A few days ago the newspapers in the piedmont section carried reports of renewed activities among the eye fakers. One newspaper reported that our old friend “Dr.” Pierce, formerly “Dr.” King, “eminent” eye surgeon, this time from Washington, but a year or so ago he was from New York, had been canvassing the farmers in Davidson County, soliciting business.

As pointed out in these columns several
times before, these fakers always give a fictitious name and address. They always manage to find out just which farmer has an abundance of cash on hand, which instead of putting in a bank, he hides in the big trunk or in the family clock, just ready, like a ripe apple, for the faker to come along and gather. It seems in the particular instance reported from Davidson County that they located one farmer who had plenty of cash and who, strange to say, had been burnt a few years ago. That time "Dr.' King, who had fitted glasses—dime store products, you understand—had only charged them about $20. He got off light that time. On this trip "Dr." King's successor, "Dr." Pierce, came along and decided that an "operation" was necessary. These fellows always travel in pairs. The poor farmer was unable to resist the hypnotic appeals of the two fakers and finally agreed to an "operation" to be performed on his wife's eyes. The "operation" was done right there on the spot. After the so-called operation was over, they coolly told him that the bill was $585.50; but, on reconsidering, told him they would deduct the $23 paid for the glasses purchased from the "Dr." King previously, making the bill $562.50. The farmer turned over the cash in good United States currency.

These fakers ply their trade among the well-to-do class of farmers in preference to city or town. It does seem that people would finally learn that no reputable physician ever travels around and solicits business. The very fact that any such individual calls on people soliciting practice is prima facie evidence that he is a faker. If people would once realize this and call for the sheriff or the police the moment such a faker appears, they would soon disappear from this section.

* * * *

The editor saw an item in one of the Clinton papers sometime ago that set in motion a whole carload of thoughts and reminiscences. The item was a local news note from a country high school situated some miles from Clinton. The school in question was Halls High School. Right there, thirty-two years ago, in that locality the editor completed four years of teaching experience. At that time, like all the other rural schools of the State, the children brought their noonday lunch in tin buckets and baskets, and the chief ingredient was sweet potato, biscuit, fat meat, and sausage. This was not fit for lunch for small children, even when freshly prepared, except in small quantities, and by the time the stuff got cold and bogged all up in a tin bucket, it was utterly unfit for human consumption. There is no doubt that such diet contributed toward digestive disturbances in most of these children after they grew up.

One of the first pieces of work the editor did on coming to Raleigh with the State Board of Health eighteen years ago was to begin agitation for a warm midday lunch for school children. He had advocated such a plan while health officers of Sampson County and he had seen it put into effect in at least two or three schools in that county with fine results. There was no such thing as a modern cafeteria anywhere in the State of North Carolina at that time. The plan that the editor urged was identically what is now being carried out in this Sampson county school. To many people even a discussion of the matter now is considered trivial, because it is assumed that almost every community has some form of hot lunch available for its pupils, whether in the city or in the country. It is unfortunately true, however, that a large majority of the children in the State still carry their lunches to school, many of them eating it on the schoolhouse ground.

The Clinton paper's description of the plan carried out in the Halls School in Sampson County is so practical that we quote from it as follows:

"The parent-teacher association of Halls High School began serving a hot dish to all the pupils in the school last week. The parents of the community donate material and utensils, ranging from an oil stove to spoons, and from dry pans to soup stock.
Three women cook each day, preparing twelve to sixteen gallons of soup to be served to two hundred and seventy-five children of the school. Each child brings his own cup and spoon, and the hot dish supplements the lunches brought from home. This hot dish is free to everybody.

"The children seem quite enthusiastic and are very proud to bring in the quart of milk or other ingredients, such as tomatoes, peas, beans, and so on, which their mothers have been asked to furnish. The value of the donations exceed twenty dollars for food alone each week. When lunch time comes, pupils are sent from each room to take the soup back where the teachers, or someone appointed by them, serve. A schedule is made out a week ahead adding one cook each day and releasing one old one who has served for three days. The women enjoy the work and are reluctant, when their three days are up, to leave. The principal of the school reports that the pupils are very appreciative of this system and are taking renewed interest in their school activities.

* * * *

The Journal of the American Dietetic Association for November, 1932 contains an article on the Hot School Lunch. The article is based on reports of a program conducted by 57 teachers in rural schools of two or more states, including North Carolina. The Evaporated Milk Association, with headquarters in Chicago, furnished evaporated milk for this experiment. The program was put on cooperatively between the home demonstration agent and the health department in Pamlico and Beaufort counties, North Carolina, during the spring of 1931. The home demonstration agents of these two counties together with the health departments, in cooperation with the teachers of the schools and the parent-teacher association, organized and carried on this work.

In a report coming to us of this work from the Pamlico county health department, it is stated that perhaps one of the reasons Pamlico county was selected for this enterprise was on account of there being so few milk cows per capita in this county. While the health officer of Beaufort county did not mention any such conditions there, it is assumed that perhaps the same reason prevailed there to a large extent, both counties being eastern counties, in which available fresh milk is far below the necessity of the population.

The Beaufort county health officer says: "The experiment continued, under certain rules and regulations of the milk association, for a period of five months. The experiment included not only supplementing the cold pack lunch with some milk, but establishment of certain health habits. The results were very gratifying. Practically all the children gained weight, and it was the opinion of the teachers that the cold pack lunch was considerably improved, and the improvement of the discipline of the children was outstanding. The experiment demonstrated the feasibility of the supplementary hot lunch in the small rural schools. There was no detraction from the school activity. The local community, of course, furnished vegetables and whatever supplies necessary, except the milk. Each child furnished his own dish, spoon, and so on. If there is an opportunity for repeating the experiment in North Carolina, I would heartily recommend it."

The county nurse in Pamlico county calls it "one of the outstanding pieces of work done in Pamlico county in 1931 for good health. Realizing the value of educating the people in the use of evaporated milk, the Evaporated Milk Association in Chicago conceived the idea of furnishing milk to the schools for a hot dish lunch. The health department weighed and measured the children regularly and assisted the teachers in keeping an accurate record of their gains. The health department made every effort to impress the mothers that the growing child needs one hot dish for lunch regardless of the season of the year. The results of this project are far-reaching. The children were more attentive and made far better grades for having had the hot lunch, and the parents have learned the
value of milk in the diet and now make an effort to supply their family's need for milk."

The foregoing efforts were carried out, as explained by the advertising department of the Evaporated Milk Association. They wished to demonstrate practically that evaporated milk could be used satisfactorily as a substitute when safe fresh milk is not available. Further information about these experiments and the use of evaporated milk may be obtained by writing to the Evaporated Milk Association, 203 North Wabash Avenue, Chicago, Illinois.

Trench Mouth *

By FREDERICK R. TAYLOR, B. S., M. D., F. A. C. P.; High Point, N. C.

TRENCH MOUTH, known to physicians and dentists as Vincent's infection of the mouth, is a strictly local disease, affecting the mouth, and sometimes the throat. It is of importance for a number of reasons. 1. It causes much discomfort in the mouth, and occasionally great suffering, especially when the throat is involved. 2. By keeping the mouth inflamed it favors the development and continuance of other infections in the mouth, such as pyorrhea. 3. It is difficult to treat and often requires considerable time to cure.

The disease is due to two different types of micro-organisms that characteristically live and thrive together—a bacillus or rod-shaped organism, with tapering ends (a so-called fusiform bacillus); and a spirillum or spiral-shaped germ.

All cases of trench mouth should receive expert dental treatment. Some cases, in addition, require medical treatment. Ordinarily, the dentist is a better judge than the physician as to whether the patient needs medical treatment, but if the disease primarily or chiefly affects the throat rather than the mouth, the physician should be consulted first.

When medical treatment is indicative, the usual drug employed is one of the arsphenamine or "606" group of preparations so frequently given in syphilis. However, this most emphatically does not mean that trench mouth is a form of syphilis or has any relation to that disease. I emphasize this point because some persons have apparently come to believe that there is some connection between the two diseases, and suffer, as a result, untold and utterly needless mental agony if they or any of their loved ones develop trench mouth. There is absolutely no relation between trench mouth and syphilis. Trench mouth does not cause infection of the whole body, and is in no sense hereditary or congenital. Though the arsphenamines are used to treat trench mouth, the course of this medical treatment is much shorter than the two years or more required to treat syphilis. Some patients with trench mouth have been worried almost beyond endurance for fear that they might pass on a hereditary taint to their children. I repeat, that there is absolutely no possibility of such a thing. The disease can be transmitted to the mouths of other persons through the common drinking cup, forks, spoons, kissing, etc., though probably only with difficulty, as a dentist of wide experience tells me he has never treated two persons in the same family at the same time for trench mouth.

*My thanks are due to W. F. Clayton, D. D. S., of High Point, for a critical review of this paper previous to the preparation of the final draft of it.
Be that as it may, it is always desirable to thoroughly scald all dishes and table utensils after washing them. It may even be well for the trench mouth patient to keep his glasses, cups, forks, spoons, etc. separate from those of the rest of the family but the best way to prevent the spread of the disease is by prompt, thorough treatment by a good dentist; supplemented by medical treatment where it is advisable.

Trench mouth is a real physical handicap in many cases, and it may become serious in a few cases. It urgently needs expert treatment, but it is in no sense comparable to syphilis in its dangers, gravity, or social implications.

On Teeth

By Amy Williams

Woman's College, Greensboro

(With apologies to James Whitcomb Riley)

Once there was a little girl who wouldn't brush her teeth,
And all her friends and family said, "You'll surely come to grief!"
But she mocked 'em and shocked 'em, and she said she didn't care;
And now the painful tale to tell, she's in the dentist's chair!

And every little tooth she had cried out to her in turn,
"I didn't get my share of milk, or butter from the churn."
And they mocked her and they hurt her, and they said they didn't care,
Because the way she'd treated them just simply wasn't fair!

And so she told her dentist kind, all that her teeth had said,
And if they're friends of mine no more, please pull them from my head."
But he hushed her and he told her that 'twas every bit her fault,
And if she'd treat them as he said this pain would surely halt.

She promised him with all her heart to do just as he said,
And make her teeth be proud to say they lived inside her head.
So she cleaned 'em and she brushed 'em, 'till they were shining bright,
And in the sun all day she played, and slept long hours at night.

She ate green vegetables every day, and found how good they are,
And fruit she ate at recess time in place of a candy bar,
She drank her milk, she ate her greens, her teeth were rows of pearls—
And where'er she went she proudly told this tale to other girls.
Is Parenthood Instinctive?

By Frank Howard Richardson, M. D., F. A. C. P., Black Mountain, N. C.

AUTHORED as we have grown to the idea of education for parenthood, by the many articles along this line that have appeared in various magazines of recent years, it is still by no means a generally accepted belief that parenthood requires anything special in the way of preliminary preparation. We have at least begun to dig into the minds of the public at large that there ought to be some sort of preliminary ritual gone through with in the case of marriage—the old English “banns” had something of this significance; and many of our states now demand a physical examination as a necessary procedure before entering the state of matrimony. But so far, to a vast majority of our fellow citizens, the idea that it takes anything more than a weak head and a strong back to qualify one to embark upon the arduous career of parenthood, comes as a distinct shock, if it ever comes to them at all.

What have we in the way of preparation for parenthood, to offer the young men or the young women who come seeking this eminently sensible and undoubtedly desirable preparatory equipment? Is there any school that qualifies its graduates for this one of the learned professions?

So far, we shall probably have to reply in the negative. Vassar College has a summer Institute of Euthenics, in which college men and women may spend some weeks of their vacation period definitely studying the problems of child training, child psychology and home-making; and one of the other colleges for women has attempted some sort of correspondence course for homemakers among its graduates. But as these are taken advantage of chiefly by women who have already incurred, committed, or annexed parenthood (choose whichever term seems most closely to fit the haphazard way in which most of us enter this state), it would seem as if these colleges were attempting that ancient but not very admirable practice known as locking the stable door after the horse has been stolen.

Perhaps a more sensible timed attempt at education for parenthood is that being offered by so many schools, colleges and normal institutions in their courses in home economics, with the preparation of foods, interior decorating and similar practical aids to home making, as well as their child psychology, pedagogy and sociology. For the students in these institutions have not yet attained to the estate of parenthood; and it certainly seems more sensible to get ready for parenthood before it arrives, than to wait until after one has become a parent before trying to learn something about the job and how to discharge it.

For many of us have found out, by rather bitter experience, that it is not enough to be well-intentioned, and to try to do the best we can, if we are to give our children the best that our parenthood can possibly mean to them. We have discovered that it is not sufficient to barge along, doing the best we know how; for every so often we come up against a situation in which we are non-plussed, and in which we do not know whether to be firm or to be conciliatory,—whether to stand upon our dignity and our due as parents, or whether to act like “folks” and arrive at a modus vivendi that may not look so satisfactory, but is perhaps a better solution of the difficulty than what our prejudices or our impressions about how a parent ought to act would have dictated.

No, parenthood is not an instinctive ability; and those who have taken it for granted that it is have found, all down through the ages, that the problems con-
nected with the rearing of children and the guidance of youth are among the most difficult with which poor mankind is called upon to deal. Perhaps this lack of an informed parenthood,—rather, of a conception that parenthood is a profession requiring technical training in order to be properly discharged,—is the main reason for the disappointingly limited progress we have made along many of the lines of culture.

But while there are few if any formal courses leading to the degree of “certified parent,” still there are many opportunities for the young man or the young woman who desires instruction along this line, to secure it. One of the most helpful schools for parenthood is the experience many of us have had, of being one of a reasonably large family. The lessons in parenthood gained by an elder brother or sister, especially in a home presided over by honest, God-fearing parents, are priceless as practical training for establishing and maintaining a home later. And those of us who are truly interested in fitting our children for creating happy homes of their own, should remember that there is no training quite so valuable as that to which the example of happily married parents “exposes” them.

Many of our social organizations offer a valuable training in preparation for parenthood. The Boy Scouts, the Girl Scouts and the Campfire Girls have as a definite part of their program the responsibility of the older toward the younger. For instance, a boy scout must induct and train a tenderfoot, before he can himself become a full-fledged first class scout. Further than this, the scoutmaster himself gains a priceless training in the handling of his own sons later on, by the responsibility and the experience gained at the head of a troop.

Teaching should be an excellent preparation for parenthood for the young man or woman engaging in it, especially when preceded by the technical training that is being more and more insisted upon in our best school systems. Unfortunately, however, the teacher is exposed to the dangers of faulty method that may wreck not only success in the school, but as well all hope of satisfactory parenthood later.

One of the best methods of securing parenthood training is open to the reader of the current magazines, many of which attempt definite instruction in the specific problems of the “profession.” A study of this sort of thing, controlled by a determination to be guided by commonsense in its application, can be of inestimable benefit to parents or intending parents. Similarly, books can contribute to training,—a list of some that have been found valuable will be sent to any reader who encloses a stamped and self-addressed envelope to the editor of the BULLETIN.

Whatever method of preparation we employ, the main thing to remember is the absolute necessity of getting something more than the very meagre equipment that Nature furnishes; for parenthood is, most decidedly, not instinctive.

VITAMINS

By D. F. Milam, M. D.

Epidemiologist, North Carolina State Board of Health

The subject of vitamins is much in the public eye at the present time and quite justly so. For, at a time when prepared foods are so largely replacing the natural unseparated foods that are the normal diet of man, a little knowledge of scientific dietetics is an asset to anybody. I think it very likely that the whole subject of vitamins may be a little foggy in the minds of a great many people. I could not blame them for this, for it is a scientific study on which many learned men
are at work, trying to solve its mysteries. And these mysteries are so very profound, that a language quite technical is necessary to convey the ideas of these workers. There is, however, no portion of modern medical research which touches our daily lives more closely and there is no part of hygienic knowledge about which the individual should be more solicitous to inform himself. I want to sketch the barest outline of this knowledge and how it arose, and that can serve to illuminate the whole subject.

II.

Many years ago a Dutch doctor named Eijkman, who was working in the East Indies, was acquainted with a queer disease in Orientals which is called beri-beri, and which is characteristic by weakness of the legs and loss of or changes in sensation, all due to a degeneration of the nerve tissue. He, as others had before him, suspected that this disease was due to the very poorly diversified diet on which these people lived. This diet consisted mainly of polished rice with a little fish when they could get it. Now Dr. Eijkman in 1897 decided to see what would happen when he fed fowls on this same type of diet. So he cooped up a cage of them and fed them on polished rice alone. Before long, they developed a degenerative disease of the nerves characterized by weakness and which could easily be interpreted as beri-beri of fowls, which was what Eijkman called it. If a rice diet would do that to fowls, why not to man also? A few years later two brave Englishmen took 300 healthy Japanese laborers into a virgin jungle to work and fed half of them on polished rice and the other half on unpolished rice. The group on polished rice soon developed beri-beri but the other group remained well. This proved that there was something present in the rice polishings which keeps folks free from this nervous disease. And thus the first vitamin was demonstrated, though not yet so named.

It was in 1911 that a Polish biochemist named Funk succeeded in concentrating this very vital accessory food substance from rice polishings, and because of its suspected protein nature and vital function for life, gave it the name "vitamine", which, changed to "vitamin", has been accepted as the name for the whole group of accessory food substances. It is only within the past twenty years that this important part of dietetic knowledge has begun to be known.

III.

A few years after Funk's work, in 1917, a good American biochemist named McCollum began his experimental work in Wisconsin. He fed his experimental rats on various deficiency diets and among other things he found out that rats having a portion of butter added to their diet thrived gloriously, even though their diet was otherwise quite deficient. Control rats without butter in their diet degenerated physically and failed to reproduce their kind. Now this was quite startling and when an inkling of what was transpiring in McCollum's laboratory reached the Dairy Association, they seized upon it eagerly. For oleomargarine was ruining the butter industry, and here was a lifesaver who could prove that real cow butter was necessary for health. McCollum hesitated to put his still uncompleted work at their service, but his earlier conclusions were soon borne out and he could announce a second vitamin which he called the "fat soluble vitamins" as distinguished from Funk's "water soluble vitamin" of beri-beri. The fat soluble vitamin was found to be necessary for normal growth and even for reproduction, and its absence, among other symptoms, led to a scaly condition of the eyeballs with eventual blindness (Xerophthalmia.). It also accounted for the peculiar night blindness that afflicts Arctic folk living on concentrated diets without diversification. And people deprived of it are much more susceptible to infection of any kind. McCollum's vitamin is now called vitamin "A" and the anti-beri-beri vitamin is called vitamin
And thus the first two of the vitamins were scientifically established.

And now it seemed probable, once the idea of vitamins had taken hold of the imagination, that the disease scurvy, of adults and children, might have as its basis a vitamin deficiency. But that is a complicated story, for scurvy is a complex disease. In the 18th century it had been observed that when all raw foods were omitted from the diet, scurvy was likely to come on within forty days. And among people on poorly balanced diets it was quite a common disease. It was particularly prevalent on sailing ships during long voyages where no fresh food could be carried. Sauer kraut had been found to prevent on long sea voyages like those of Capt. Cook. The British introduced lime juice into the Navy and it prevented scurvy in the sailors. But preserved lime juice frequently did not prevent it. There was something most peculiar about what happened to food when it was preserved, and it was therefore assumed that no canned food was of any value in preventing scurvy. About 1915 it was recommended that in cases where oranges and other citrus fruits, peaches and apples in the fresh state, were not available, dried fruits would do the trick of preventing scurvy. So about the time of the Great War dried fruits began to be used for this purpose. Dried fruits were not cured by cooking and so were spared the heat which it was known would kill the scurvy-preventive element. But sad experience soon showed that dried fruits were practically of no value whatever in preventing scurvy. The issue was then further complicated by the discovery that canned tomato juice would prevent scurvy and canned tomato juice certainly has been heated to high temperatures. Now just what was the mystery involved in this puzzling riddle?

Most careful studies made by enthusiastic and capable research workers have given the explanation. Vitamin “C”, as the scurvy preventative element had now come to be called, is not nearly so easily killed by heat as had been supposed. It is, however, easily killed by combining with the oxygen of the air (oxidation and when foods are cooked in an open vessel this combination is just what takes place. When, however, tomatoes and other vegetables rich in vitamin “C” are canned in close containers with exclusion of air, most of the vitamin “C” content can be retained even at high temperatures. Even dried milk, which is prepared rapidly by spraying the liquid milk into a closed chamber at very high temperature, still retains most of vitamin “C” content of the original milk. So here we have the explanation, and knowledge of it makes possible the preparation of canned foods rich in vitamin “C” content. Scurvy can be prevented without the use of citrus fruits in seasons when they are expensive, by using a cheap canned food like tomato juice. But it should not be forgotten that raw potato or raw cabbage would do it just as well. But it is not so easy to give babies raw cabbage, even as expressed juice, and the orange will remain the fruit of choice. For adults a raw salad twice a day is valuable for health in so many ways as to be a primary rule for good nutrition. Such raw food is likely, also, to contain the other yet undiscovered vitamins that we will eventually uncover.

Then there was rickets, that disease of twisted bones and pale white bodies, which led to the death of so many infants each dark winter. What a puzzle rickets was! It had been known since ancient times that a well-fed child, if given adequate exposure to the sun, would rarely develop rickets. Ancient Roman doctors sent children to the country to recover from rickets. More recently it was observed that the sunning would not save a child from rickets if he had a very deficient diet, particularly one in which there was an unbalanced ratio between the two essential bone-building materials, calcium and phosphorous. It had also been found out that a thoroughly good diet would frequently not prevent rickets if the child were deprived of direct
sunlight throughout a long winter, such as occurs in many north temperate zone districts. It was a startling and beneficient discovery made by the canny Scotch that sunlight could be dispensed with if the infant were given cod liver oil. This bottled sunshine had some marvelous lifegiving property and it remained for the scientists of the last ten years to explain it. But in the meantime cod liver oil became a standard means of protecting babies from rickets and still remains the best remedy.

In 1924, Steenbock, another American biochemist, working at the University of Michigan, found that experimental rats on certain deficiency diets escaped rickets if they were exposed to the artificial light of the quartz lamp. The control rats on the same diet but not getting the radiation treatment developed rickets. Now that was a discovery! What was it that those ultra-violet rays did to a rat that kept him from getting rickets? Still more mysterious was the additional discovery that if the rats were given no exposure to the artificial rays but were given food which had been irradiated, rickets was still prevented. A furor of studies to solve this riddle followed Steenbock’s work and within the last few years the answer has been given. In many foods is found a certain plant substance (ergosterol), which, while powerless itself to prevent rickets, is yet activated by the ultra-violet rays of the quartz lamp so that it becomes the true vitamin which will prevent rickets. Incidentally, these ultra-violet rays are also abundantly present in normal sunshine but they are unfortunately filtered out by the cloud and smoke of the winter skies in north temperature zones, especially in cities.

Now, this vitamin, which it was found would prevent rickets, was named vitamin "D". It also is fat soluble like vitamin "A" and so occurs frequently in the same food as vitamin "A". But the two are distinct and vitamin "A" is killed by boiling temperature in two hours if oxygen is present, but vitamin "D" is not. The element which precedes vitamin "D" and which must be activated by sunlight to become vitamin "D" is called pro-vitamin "D". If the diet contains the provitamin, it is absorbed into the blood and is present in the thin, tiny capillaries in the upper laters of the skin. Here sunshine or the artificial rays of the quartz lamp will turn it into vitamin "D" and thus the riddle of how sunshine will prevent rickets is solved. Sunshine coming through closed windows won’t do it, for the glass filters out the ultra-violet rays. And if, on going out into the sunshine on a cold day, all the skin except the tip of the nose is covered, how can the sunshine get in its work?

This vitamin "D", when it arrives, is a lifegiver, and by its magic will marshal those bone chemicals of calcium and phosphorous into just the right concentration in the blood so that they are laid down in bone as needed, and straight, strong bones insured for the growing babe. Vitamin "D" is present in only a few foods, particularly in fish and fish oils, notably cod liver oil, but also in egg yolk. It seems that plants will make the pro-vitamin for us and other animals, but we must ourselves turn it into vitamin "D". In other foods it is likely to be present in such small quantities as to be insufficient to prevent rickets. However, the provitamin "D" is quite widely distributed in plants so that on ordinary well-balanced diets, if the individual gets adequate sunning, he will not develop rickets. In the absence of sunning of the human body, you can sun the food, being best done with the artificial ray of the quartz lamp which is rich in ultra-violet rays. Untreated milk will not prevent rickets but irradiated milk will. This holds true for many other foods. Some irradiated foods are now prepared and marketed under the patent which Steenbock obtained for his process. Also a concentrated vitamin "D" called "viosterol" is available. But when all is said and done, cod liver oil is still the most reliable preventative of rickets. And a well-balanced diet with adequate sunshine...
on the skin is a human right and necessity that should not be by-passed.

VI.

Vitamins A, B, C, and D have now become rather thoroughly established as necessary to wellbeing and an adequate diet must contain a source for every one of them. But is the series complete with four? Why should we assume that the ones we happen to have proven are all that exist? Many obscure diseases, even ailments not quite definite enough to be called diseases, may have a vitamin deficiency as their basis. The influence of diet on health is so paramount as almost to justify one becoming a faddist in this regard.

Now take the case of pellagra. From 1914 to 1930 a distinguished surgeon of the U. S. P. H. S., Goldberger by name, worked on the mystery of this obscure but widely prevalent disease. It is not an Oriental disease but one that is widespread throughout the southern United States and, in a lesser degree, in other part of the country wherever individuals limit their diet to a monotonous list in which red meat and certain other protective foods are absent. It was a question whether there was a relationship between diet and this disease or whether there was some poison or toxin of corn. For corn is the major item in the diet of sufferers from this disease. Goldberger accumulated evidence that convinced him that an unbalanced diet was responsible. In 1916 he banished pellagra from an orphanage in Mississippi by including in the children's diet an adequate amount of milk and meat. And he saw pellagra develop in six healthy convicts voluntarily living for six months on a pellagrous diet. These human experiments were hard to talk down. But pellagra is a protein disease and it is hard to explain it completely on so simple a basis.

An experimental animal was needed and was terribly hard to find. After many failure and following the lead of Chitten- den and Underhill, Goldberger, about 1920, was able to regularly produce a pellagra-like disease in dogs. This disease is commonly called "black tongue" and can be cured by giving the dog an adequate diet. Goldberger fed his dogs on a replica of the diet of human pellagrins of the cotton mill region, and black tongue developed.

About this time yeast was introduced as a pellagra-preventive food, or rather medicine. And good yeast was found to be singularly rich in several vitamins. By 1926 it had been found that yeast which would prevent both pellagra and beri-beri contained not one but two of the accessory food factors or vitamins. The fraction which prevented beri-beri was killed when the yeast was heated for two hours to boiling temperature (100 deg. Centigrade), but this heated yeast would still prevent pellagra. This new pellagra-preventive factor thus seemed to be demonstrated and the old vitamin "B" was found to be a complex of at least two and probably, as was later proved, several vitamins. The anti-pellagra vitamin was named "B2" or vitamin "G". Besides yeast, it occurs especially in beef, milk, fish, tomatoes, turnip greens and, to a lesser extent, in peas, beans, eggs, cabbage and other greens. Pellagra does not occur when an adequate amount of one or more of these foods are included in the diet. And they ordinarily are included in general diets. However, the great prevalence of pellagra in this and other states proves that such adequate diets are far from universal.

However, the pellagra problem has not been so simply disposed of and many obscure points are yet to be solved. That pellagra should occur in those on a corn diet and not in those on a rice diet is very remarkable since rice contains no more of the pellagra-preventive factor than does corn. It has been suggested that beri-beri represents a disease due to the deficiency of several vitamins in addition to vitamin "B"; but that pellagra, occurring among Americans with a more varied diet, particularly an adequate supply of vitamin "A", represents a lesser dietetic injury and a more simple food deficiency. In the Oriental on rice, beri-beri comes on before pellagra has time to develop, and perhaps
includes pellagra symptoms in its developed condition.

The role of iron and sugar in pellagra is not clear nor the reason why it does not occur if yellow corn is used. These points are still obscure. But the evidence of pellagra arising on a diet deficient in vitamin "G" and cured in its early stages by adding foods rich in Vitamin "G" is incontrovertible.

VII.

Before the anti-pellagra vitamin "G" was split off from the vitamin "B" complex, vitamins "E" and "F" had been named.

NOW BUSY IMMUNIZING CHILDREN AGAINST DIPHTHERIA

Beginning Monday morning, March 13, and extending for a period of six weeks, the State Board of Health and its cooperating county and local agencies throughout the State are carrying on a state-wide effort to immunize all pre-school children against diphtheria. It is important that this service be extended to every child, both white and colored, who expects to enter school this fall for the first time.

In connection with the efforts to get the pre-school children immunized, it is even more important that the smaller children in every family have the same protection. Most diphtheria deaths occur in children under three years old and most diphtheria outbreaks in school occur in children who are entering school for the first time. The most satisfactory time to give the immunization treatment is immediately after a baby reaches the age of six months. It is best to give the treatment during this period, which includes the summer round ups, or pre-school clinics, held throughout the State under the auspices of the parent-teacher associations.

The State Board of Health is recommending as the best and most practical method of immunization at this time two doses of toxoid, the second dose to be given two weeks after the first. It is also recommending that all children who have not had the immunization previously given between the ages of six months and ten years, to be given the treatment, emphasizing, as just stated, the necessity for immunizing the children who are to enter school for the first time.

Through special arrangements with the manufacturers, all agencies cooperating in this work, including all the practicing physicians in the State, may purchase the toxoid by ordering direct from the State Laboratory of Hygiene, Raleigh, North Carolina, cash with order, at 40 cents per 10 cc packages. A 10 cc package is sufficient to give the first immunizing dose to ten children. The second dose will cost the same. This brings the total cost for the toxoid down to about 8 cents per child.

Two doses of toxoid, it has been demonstrated, confer immunity in about 85 per cent of children given the treatment. This is approximately the same immunity to be obtained by giving three doses of the material heretofore mostly used. One of the advantages in using toxoid is that it does not sensitize the children to serum treatment at any time in subsequent life, if such treatment becomes necessary in the treatment of any special diseases.
LABORATORY PRODUCTS SHOULD BE FREELY AVAILABLE TO ALL PHYSICIANS

A few days ago the State Health Officer wrote to a large number of physicians throughout the State, soliciting their aid in the state-wide effort to immunize all susceptible children against diphtheria. Among one of the many letters received acknowledging receipt of Dr. Parrott’s letter was one from a physician practicing in a village in one of the large rural counties of the State. Some of this physician's statements are so very important and apply so universally throughout the State that we are taking the liberty of quoting the following extracts from his letter:

"I would suggest that one of the best and most important starts in the direction of diphtheria control would be for the State Board of Health to provide free toxoid and all other biologicals used in the physician's practice to prevent and cure preventable diseases. It is true we might waste a little now and then, but think of what we would save the State in the way of protecting the public health and preventing needless deaths. We have so much charity practice to do and, as you are aware, our collections are meagre, but the poor people need this protection worse than the rich, who are able to pay for it. If you will furnish me all the vaccines and serums I need, I will give it free. Last year the State furnished me with free typhoid vaccine and I gave it in my office free to everyone that would come for it. As a result I vaccinated twelve hundred people in my section, giving thirty-six hundred hypodermic doses. I shall be glad to do this much and more this year and I feel sure a majority of the physicians in the State feel the same way about it. Do you not consider this a fair degree of cooperation?"

To the foregoing letter we replied that we certainly did regard this as fine cooperation.

Toxoid, which the physician requested free, is one of the products that the State Laboratory of Hygiene has not so far been able to manufacture. Before Dr. Shore died plans were being made to begin the manufacture of this important product at the State Laboratory of Hygiene in order to supply it to physicians in the same way the typhoid vaccine is supplied. We were only awaiting the small appropriation necessary to inaugurate this work. Instead of making the necessary appropriation for beginning this important work, the Lower House of the General Assembly, the week these lines are written, cut sixty-three thousand dollars from the committee allowance for all of the work of the Board. This practically means that a great deal of the essential work heretofore carried on by the State Board of Health under great financial difficulties, especially the past year, will have to be closed during the next two years. The conditions for the next quarter, beginning April 1, are even more discouraging. There can be no doubt that biologicals should be furnished free to physicians at all times, so as to place no handicap in their way in providing all of such life-saving and disease-preventing methods direct to all the people reached in their practice. A state's first duty should be the protection of the health of its people.
For several years we have come to depend on Dr. J. Buren Sidbury, of Wilmington, for a photograph of some of his little patients for the May Bulletin. Dr. Sidbury is one of the State’s most beloved “Baby Doctors.”

For this issue he has sent us the above photograph showing the three beautiful children of a Wilmington family who have contributed as much to the development of North Carolina as any family in it for a hundred years. Dr. Sidbury writes that these children have complied with all the health regulations that are conducive to “blue ribbon children.”

This is one instance in which the fine old overworked word “beautiful” is inadequate to describe such a group.
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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils
Cancer
Constipation
Chickenpox
Diphtheria
Don't Spit Placards
Eyes
Files
Fly Placards
German Measles
Hookworm Disease
Infantile Paralysis
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Scarlet Fever
Smallpox
Teeth
Tuberculosis
Tuberculosis Placards
Typhoid Fever
Typhoid Placards
Venerable Diseases
Water Supplies
Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)
"Our Babies"
Prenatal Letters (series of nine monthly letters)
Minimum Standards of Prenatal Care
What Builds Babies?
Breast Feeding
Sunlight for Babies
Hints to North Carolina Mothers who Want Better Babies
Table of Heights and Weights
Baby's Daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.

CONTENTS

Notes and Comment
Superstition and Misconception in Child Care
On Day Dreaming
Now Is the Time to Prevent Infant Deaths
Prevention of Tuberculosis in Childhood
Page
3
7
9
11
15
We want to remind our readers that in the month of May the Vital Statistics Department has nearly always recorded a high infant death rate. In 1932 the infant death rate in North Carolina was lower than that in any other year of its history. The months of January and February, however, of this year had a higher death rate than the two corresponding months of last year. We are therefore urging upon all of our readers to do their utmost this year to prevent a high rate in the summer months, particularly in the months of May and September.

There are so many ways in which the health of babies can be protected that they are too numerous to name in the scope of a paragraph like this. Briefly speaking, the milk should be kept cool, and it should be pure and from a healthy cow, and the milking should be done by a healthy person with clean hands, and the utensils in which the milk is handled should be scalded and scrubbed and thoroughly clean. For every baby under three years of age the milk should be boiled, if it is not pasteurized at a public plant. All of the drinking water for infants and small children should be pure and, as a further safeguard, every drop taken by a child under three years of age should be boiled from three to five minutes before being given to the baby. Mosquito netting or some form of protection against house flies in homes where there are no screens should be provided. This is one essential that should not be neglected. In the month of May there are often many warm days in which the baby gets too hot, but in the late hours of the night the chill comes on and unless the baby is protected, it will get cold and therefore be more susceptible to infection from digestive diseases.

We want to call particular attention to two articles in this issue. The first is by Dr. Charles R. Bugg, a baby specialist of Raleigh. The title of his article is “Superstition and Misconception in Child Care.” We hope the mother of every baby in this State will read that article very carefully and file away for use this summer. The other article is by Dr. Frank Howard Richardson, and the title is “Day Dreaming.” The parents of older children will find this a most helpful article. Dr. Richardson is also a baby specialist and maintains a clinic for babies at Black Mountain, North Carolina.

One other thing, and that is, we hope that every child under six years of age who has not been immunized against diphtheria already may have this protection against that terrible disease. We all hope for a still lower death rate among infants this year, but the result will every bit depend on the individual care given to babies in the individual families of this State.

* * * * *

Science News Letter in its issue of March 11 says that “A new food made of milk and corn meal, developed by Cornell University, is said to have varied pos-
We do not know a thing about the Cornell product or the kind of combination they have formed with these two ingredients; but we do know, if they develop a new combination that has not already been discovered and practiced in Eastern North Carolina a long time ago, we will be surprised.

It is remarkable just how many palatable dishes can be made from corn meal and milk used in the varying combinations devised by many a good Southern cook. It remained for the breakfast food people to make millions out of corn products, and for the canned milk people to bring to the attention of numbers of people throughout the land the possibilities of milk as a daily item of food; but the old time North Carolina farm family had nearly all these combinations of corn meal and milk going a long time ago. They did not have the machines to shave the corn into flakes, but many of them had good teeth, and they knew how to parch the corn or to boil it into big hominy and numerous other combinations, which, along with milk, made many a palatable meal. A food made of fresh corn meal and milk, using the germ of the corn just as the little water-ground mills do today, could make a food having an astonishingly large vitamin and mineral content. It would also be rich in starches and fats, and, in fact, properly prepared, would be almost a perfect food.

We trust that the agricultural department scientists will soon be passing along full information about this new product when the research workers in Cornell have perfected the process sufficiently to pass along to the public. In the meantime, plenty of milk and good fresh corn bread along with spring turnips at this time of the year is mighty fine reliance for the average family.

* * * *

One of our nurses, who has long been in the service of teaching health among the children of the schools in the State in counties having no whole time health organizations, wrote us as follows:

"Very recently I was urging a group of 4th and 5th graders not to drink coffee, when one of the very cutest red-headed, freckled-faced, bright-eyed boys said, 'My mammy makes us drink sack-frack tea.' Whereupon childhood memories rushed through my mind and I told him I would be around to see him and join in that festivity as I am very fond of it, too. Next day he brought quite a big box of 'roots' to me and now this whole hotel of boarders where I am living while here have gone in for it, and enjoy it immensely. There is a lady here from Connecticut who had heard of it, but I think she thought only Southern poor whites and Negroes could drink it. She was quite 'stand-offish' at first, but could not resist long, and now is trying to get in touch with my red-headed boy to get some to send to her home folks in Connecticut."

The nurse goes on to wonder if the editor is too young to have enjoyed that pleasure long years ago, and to speculate as to whether or not we had lived too much in town and missed this fragrant spring tonic. She need not have bothered; we have been there. One of the surest signs of spring to country youngsters a half century ago in North Carolina was the fragrant odor of sassafras tea. Not a country boy but remember, with gratitude, the large portions of this fine drink allotted to him in place of the molasses and sulphur concoction of a previous day. Time to go barefooted and to clean out the old swimming hole was at hand when the odor of sassafras tea arose in the land.

Generally with the sassafras tea the mothers prepared a delicious kind of bread made from fine fresh home-ground corn meal with cracking shortening. That bread made up with milk and hot from the oven with plenty of steaming sassafras tea made a combination that such things as pellagra just could not stand up against. We do not mean to intimate that cracking bread and sassafras tea would be a specific for pellagra. We do mean to say that such a suggested diet of a wide variety of finely prepared and palatable food on every table, supplied from
year-round gardens, with plenty of dairy products, meats, and fruits, grown in the summer and dried or canned for winter, was conducive to excellent health in so far as nutritional needs were concerned.

* * * * *

The following pertinent inquiry was received from a teacher not long ago: "I find that about one-half of my pupils in the first grade don't like vegetables. Could you send me some device or pamphlets that may help them to see and understand that vegetables are better for their health than too much meat and sweets?" This teacher voices a need felt not only by teachers of every first grade in all the schools, but by parents who find it very hard to establish proper eating habits for their young children, unless it is started from the very first day of birth.

It is necessary for nearly every human individual to cultivate a taste for vegetables. This is particularly true in such items as tomatoes. If a baby is fed tomato juice, given at about five months of age, and so acquires a taste, and if it is fed the strained juice of vegetables, properly prepared, and, then, if this procedure is followed up later with an expansion in the diet, as the child grows older, to include vegetables every day, by the time the child is of school age it will have acquired a liking for all of these essential foods.

Children should be given a variety of vegetables, including leafy vegetables like turnips, spinach, cabbage, and potatoes, as well as lettuce and the different legumes like peas and beans, at a very early age. These vegetables should be very carefully prepared, should be appetizing, and the child should not be forced to take too much at a time, but should be given some two or more such vegetables every day. The taste for fruits is much easier cultivated, as it comes more naturally.

It is a responsibility of the parent to see that the child is forced to cultivate proper eating habits at an early age. For the parents and teachers of children who have failed to receive such home training when they start to school, the school cafeteria arrangements can be so managed as to soon inculcate the taste for such food among this group of children. One help would be for the teacher to spend a few minutes each day in explaining the mineral and vitamin contents of such foods as milk and the different vegetables and fruits. In this way the child is interested in a way that adds to its knowledge and at the same time encourages the formation of good eating habits.

* * * *

Tell it in Gath and publish it in Ascalon, Dan Harris, notorious Raleigh cancer faker, is now safely within the walls of the State Prison. But proclaim it everywhere, he is not in the penitentiary as the result of daily violation of the statute laws of this State for the past twenty years. Had he not got himself tangled up with a young girl under the age of consent, which put him in prison for a minimum of ten years, he would be illegally practicing medicine at the same old stand on Martin Street, Raleigh.

He has carried on openly and brazenly for nearly a quarter of a century. He never had any more knowledge of medicine or of cancer than the man in the moon, and yet he has openly and brazenly defied the Medical Practice Act of North Carolina and carried on with very little hindrance for all these years. If the average man sets himself up in an office, whether in Raleigh or in Robbinsville, without a medical degree and license from the State Examining Board, and starts in the practice of medicine, he would promptly find himself arrested and behind the bars; a large number of them have. But this faker has managed to get away with it all these years. The medical profession has repeatedly protested his nefarious acts, but to no avail.

A few years ago he responded to a call from Greensboro and went up to see an elderly woman suffering from cancer of the breast, who lived in a suburb of that city. He carried two bottles of so-called medicine, one of red liquid and the other a black, for which he charged the woman's
family one hundred dollars in cash, and got it. His instructions were to apply this liquid freely to the breast, which was inflamed, and the woman suffering the agonies of cancer in its last stages. The result was that the acids and lead in the liquids caused violent pain, and the woman died about twenty-four hours later in extreme agony. The superintendent of the cotton mill interested himself in prosecuting the faker. He was tried in a court in Greensboro, found guilty of practicing medicine without license, and fined one hundred dollars and cost. This, of course, was only good advertising for him, and he left the courthouse there with a crowd of followers still proclaiming his virtue as a "cancer specialist."

About two years ago he got so bold as to sign a death certificate for a sixty-six year-old woman here in Raleigh, putting on the certificate as a cause of death "cancer of the womb in the last stages." Naturally the State Board of Health would not accept a death certificate signed by any such an irresponsible individual. An autopsy was immediately requested. This was held by the city physician and the county health officer, with two competent pathologists performing the autopsy. Not a trace of cancer was found anywhere about the woman's body. She died from a totally different cause. The thanks from the family of the woman was a threatened suit for malpractice against the physicians performing the autopsy.

It is encouraging to know that at least this exploiter of the most helpless and pathetic class of afflicted in the world is safely behind prison bars, but it is not encouraging to have to record that he was put there upon conviction for another offense. He has probably committed as many murders as Al Capone in Chicago, for whom no law was able to reach for his real crimes; but, like Al, Harris gets hooked from a quarter against which he was off-guard at the time. Otherwise they would both be carrying on in the same old way.

The editor of the Health Bulletin is thoroughly cured this time. Two or three years ago we published what we thought was a sarcastic and scathing article condemning some fakers in the northwestern part of the State, who were exploiting the public by selling, at a high price, ordinary river water put up in an ordinary clay jug, which they called a "Radium Jug." Immediately following our published condemnation we received letters from all over the State from people who wanted to know where they could buy the jug and what was the price. We resolved then that in our future writing for this publication we could confine ourselves to the style of "Webster's Blueback Speller in the pages preceding the spelling of "Baker." In other words, we resolved to write just as simply as we could find language to do and to never think of sarcasm again.

This good resolve we kept for two or three years, but in the March Bulletin we fell from grace again. The cause of this fall was the receipt of a copy of the Monroe Enquirer carrying an old advertisement of a nostrum which had been exploited in that town by a local Negro. It was so preposterous and the claims so exaggerated and outrageous and so ridiculous as to make everybody laugh that we thought our readers would appreciate having it passed along. So we did, with the comment that any nostrum that promised a cure for more than fifty different ailments, ranging from tuberculosis to syphilis, was so outrageous that no one could fail to laugh at the claims. The first batch of bulletins had hardly gone out of the post office before we commenced to receive letters from all quarters inquiring the price and where they could get it. What is more, they have been writing to Mr. Ashcraft, the editor of the Enquirer, explaining their symptoms to him, just as they have to us, and wanting to know where they could get this cure-all.

From now on we are done with any kind of sarcasm in these columns, as long as the present management has any voice in what is published in the Health Bulle-
tin. Our conversation in these pages heraefter is going to be just as near to yes and no as we can possibly put it. Let us re­peat one more time, the "Radium Jug," the "Electric Belt," and the "Monroe Negro Nostrum" are all fakes and frauds and would not be good for any ailment under the sun, for man or beast.

Superstition and Misconception in Child Care

By Charles Richard Bugg, M.D.

Raleigh, N. C.

The rapid progress in our knowledge of the care of infants and children has created the impression among the poorly informed that much of the modern attitude is an extreme or "fad". One hears frequently such terms as "new fangled ideas," "stuffing babies with food" and so forth; which carry the implication that the progress has been not entirely well balanced and properly controlled. Certainly the science of child care has reached the point of actually proving, by its striking results, that the principles are right and stable. One of the obstacles which stands in its way consists of a large mass of superstition and false information. A young mother now frequently finds herself faced with the decision of following her physician's advice on accepted methods of infant care or following that of those who say "I raised mine by common sense," as if common sense or reasoning had disappeared at the approach of scientific knowledge.

In order to advance this branch of medicine it is essential that we combine all advances in scientific knowledge with common sense reasoning. This means retaining practices and customs which have been proven beneficial by experience, even though not proven by any definite scientific information. It is equally as necessary that we eliminate totally and permanently many ideas and customs which have been passed on from generation to generation, and which are not only disproven by scientific knowledge but which are now entirely contrary to common sense and enlightened reason.

In addition we have the problem of pseudo or false scientific information which is acquired from questionable sources and which in the mind of the average person forms a mass of vague confused jumbled ideas that could be more easily discarded than classified. The first group are the superstitions and false reasoning.

The second we call scientific misinformation. Among the superstitions false reasoning stand out prominently—First: those surrounding the eruption of teeth; second: those associated with weaning; third: those connected with the common respiratory infections.

The eruption of teeth is a physiologic or normal process which frequently produces symptoms of a mild nature. Many babies are fretful, have some change of disposition, often have some loss of appetite and their sleep is restless. No one who has had any experience with babies would deny this. More definite or marked symptoms than these should be considered to be due to some other cause. The idea that "teething" will produce high fever, diarrhea, prostration, vomiting, and respiratory symptoms must be discarded. The neighbor who contributes the diagnosis of "teething" to the case is unintentionally advising delay in treatment of what may be an ear abscess, meningitis, pneumonia, pyelitis or dysentery (colitis). Until we can get rid of the false conception that there is some connection between the eruption of teeth and the proper time of weaning or teething and the well known second summer intestinal disturbances, we will continue to have prolonged nursing and other equally unfortunate practices that contribute to our high infant mortality.

The eruption of teeth is almost continu-
ous from 6 mos. to 2 1-2 years. The occurrence of many infant diseases during this time has lead to the well known mistake in reasoning which consists of associating incidents that occur at the same time as being in the relation of cause and effect. I believe the above to be the attitude of experienced pediatricians.

The present conception of maternal nursing is that it gives the infant up to about 9 mo. of age a much greater opportunity for normal nutrition and for escaping many of the disturbances and diseases of infancy. We know it to be of almost equal importance to avoid prolonged maternal nursing, which practically always results in the infant refusing other foods, and becoming undernourished and pale. Weaning under 11 mo. is advised for this practical reason which we have based purely on actual experience. Gradual weaning with due consideration for the time of the year, the availability of good milk, etc. is associated with no difficulty. However, the opposition of many mothers to this accepted procedure is based on superstition that seem almost unbelievable. We hear such quotations as “wean them in May and you wean them away” and the “signs are wrong” (referring to the signs of the Zodi­ac.) or “But Doctor he hasn’t his to mach and eye teeth” as if this were part of the constitution. Fortunately these experiences are becoming rarer, which is part of the basis for optimism.

The most important type of false reasoning associated with the common respiratory infections or “colds” is the conception that purging is the cure-all, and in the minds of many to fail to give the customary dose of castor oil or calomel constitutes unforgivable neglect. It is recognized that the constipated child probably does not react as well as the normal to these conditions. On the other hand it is certain that a child in whom an artificial diarrhea is produced is one whose “resistance” is very definitely lowered, and babies frequently have a definite attack of intestinal indigestion with several days of diarrhea following the violent purging. Ap­parently the practice of giving castor oil based on the appearance of intestinal mucus (called “cold”) in the stool and the benefit is measured by the amount of this which appears. It is still to be hoped that the time will come when the proven fact will be accepted—that this is intestinal mucus, which has no connection with the mucus seen in the nose, and that this mucus is evidence that the intestinal lining has been irritated by the violent laxative. A continuation of this will often produce enough irritation to make the child sick—the treatment being worse than the original disease.

It is probable that the common cold is produced by some organism or virus not yet discovered. In addition many bacteria which inhabit our noses and throats at times also play a role.

In the vast majority of cases the infection stays localized in the lining of the upper air passages. In babies it is possible for any infection in the body to produce digestive symptoms, which are secondary to the original infection. However, this is a totally different conception from the vague and meaningless term “catching cold in the bowels.” We must be more accurate in our terms for the sake of accuracy. But more important than this we must avoid terms of this kind because they lead many to adopt measures of treatment that are definitely harmful because based on false reasoning which is the result of an old misconception. In the treatment of the common upper respiratory infections parents would do well to observe the old maxim “If you can’t do any good be sure you do no harm.”

Incidentally it might be truthfully said that much of the progress in our knowledge of infant care has been along the line of learning things not to do. This applies especially to the treatment of the common respiratory infections and the common digestive disturbances.

In considering the false scientific information that is abroad special attention should be directed toward two general lines. These arise in connection with the
exploitation of the vitamins, and the popular conception of so-called acid conditions.

The past few years have seen tremendous additions to our knowledge of the accessory food factors—called vitamins. They are intimately tied up with normal growth, nutrition and development. Diets inadequate in these substances will produce a host of abnormalities or deviations from the perfect normal. In infancy it is especially important that due consideration be given to this side of the diet, a matter which your physician will never neglect. It is a rather complicated matter to keep these various vitamins and their effects in one's mind. Smaller amounts of some are required than of others. Some are more essential than others. Ordinarily diets are more likely to be deficient in some than others. Excess of these substances is no advantage. So it seems important that the public in general "keep their feet on the ground" with reference to vitamins, and while recognizing their importance, avoid assuming that sufficient (or excess) of these substances will prevent all disease that human flesh is heir to.

The "acid" conception is a more difficult matter, because it is based on a more false conception of a more complicated subject. The chemistry of the human body is quite intricate and finely balanced. Acid reactions are normal in the stomach and urine and slightly alkaline reactions are normal in the blood and body cell fluids. The mechanism by which the slight alkalinity of the body cells is maintained is a very finely adjusted one. Human life is impossible with an acid reaction of the body cells and blood. So the term "an acid system" or "I am acid" or "I suffer with acidity" means nothing at all.

There is a very definite acute condition called acidosis which usually occurs in the course of some other disease such as diabetes or persistent vomiting. Recounting the symptoms of this condition is unnecessary here. Suffice it to say that they are not vague symptoms occurring in people who are up and around, and especially that a skin eruption is not one of them. Acidosis does not produce a skin eruption, which in the mind of the average person who uses the term, is its major symptom. The skin eruptions commonly thought to be due to "acid" are practically all forms of urticaria or hives which may be due to a great variety of causes.

The constant administration of various alkalis is an unwise procedure unless advised by one's physician. Many children in whom a parent has made a diagnosis of "acid" have less than the normal amount of stomach acid, a condition that would be aggravated by the frequent and regular administration of alkalis.

The important fact in connection with these misunderstandings is that a smattering of knowledge about them is often worse than complete ignorance. If the average person who so glibly talks about acid conditions could just start the journey into the mysteries of the chemistry of the human body he would be totally lost before the journey was well started and be willing to admit defeat and leave "acid" diagnoses to someone else. The same might be said about the glands of internal secretion. The vitamin situation is much better because much more easily understood, if one is sure of his source of information.

On Day Dreaming

By FRANK HOWARD RICHARDSON, M. D., Black Mountain, N. C.

THIS life of ours is often likened, by poets and preachers, to a battle. The likeness is a good one, in many ways; in none is it more applicable than when the warfare between phantasy and reality is implied.

For with all of us, and with children especially, there is maintained a constant
warfare between things as we would like them to be, and things as we find them. In fact, one of the best definitions that has been given of the achieving of maturity, is that growing up consists in learning how to adapt our desires and longings and cravings to the exigencies of life, and adjusting ourselves satisfactorily to them.

At first, we are able to bend external circumstances to our wills, to a certain extent. The baby very soon learns that if he cries hard enough and long enough ("enough" varying in different situations and with different parents) he can obtain a varying degree of conformity between what he desires and what actually takes place.

But what works with indulgent parents, fails to work with a much less indulgent parent, Mother Nature. The man on a desert island may cry till he is hoarse, and he will not be fed; and the dweller in a cold climate may kick and scream indefinitely, and no one will come and cover him up from the cold. Many a man never really achieves this maturity; the son of the rich, indulgent father, for example, can always get food, and clothing, and many other things that he wants by the simple expedient of making a nuisance of himself until his father gives them to him as truly as the crying baby gains his ends from his mother or nurse.

"But," you may say, "doesn't every one learn at last that he cannot get what he wants by demanding it, and by making a nuisance of himself until he does?" Unfortunately, no. And we are becoming increasingly cognizant of the fact that a failure to realize this underlies many a tragedy of everyday life that we hear or read about. Why does the "failure" commit suicide,—setting aside for a moment the theory held by many, that self-destruction implies some degree of insanity? Because he has never learned the lesson that wishing does not bring things about. Instead of getting down to brass tacks and changing circumstances by working at the job, he sits still and wishes,—and, when his wishes prove inadequate to the accomplishment of the task of giving him a living, or bringing him riches, or making him popular, or whatever it is that he craves, he gives up the fight.

Now there are two types of folks, though no one is a perfect example of either. One is the "extrovert," who lives entirely in the outside world about him. He gets his satisfactions by affecting this world, making it give him what he wants, bending it,—or striving to bend it,—to his will. This is the so-called "practical man," the "hard-headed business man," of whom we hear so much.

The other type is the "introvert,"—the dreamer, the poet, the idealist, who gets his satisfactions out of an inner life of the mind. He it is who sees visions and dreams dreams,—and is satisfied with the seeing and the dreaming, and does nothing to bring the visions and the dreams to fruition.

It will readily be seen that either of these types would be most undesirable, if lived out to its fullest implications. It takes some dreaming and some imagination to create the plans that the practical man is to carry out; the two types must be blended to make the desirable citizen, the normal man or woman into which every parent hopes his child will grow.

It is a great temptation for the child who cannot get what he wants by crying or teasing for it, to get his satisfactions by what is known as "day-dreaming." It is far easier, for example, to imagine himself the best athlete in the school, or the most popular boy, than to do the very difficult things that preclude the achieving of either of these most desirable consummations. Many a boy who tries and fails,—many another who never even has a chance, and knows it and so never tries at all,—learns the very perilous lesson that a lot of consolation is gained by moaning around and thinking of the things he might have done,—but didn't. Many a failure in life can make life bearable only by the faculty he has developed of thinking himself an unrecognized genius, or an unheralded conqueror.
A little of this day-dreaming, then, is all right. It is a source of planning for accomplishment, a consoler for failure, and a source of inward enjoyment when life outside offers little. But it is something to be watched carefully, lest it become too dominant in the emotional make-up. Why should I work hard supporting my family and doing my duty as a citizen, if I can get the same degree of inward satisfaction by sitting down and thinking what fine provisions I have made for my family and for my state,—while omitting to go through the rigors implied by really doing either of these outstanding pieces of work?

As a matter of precaution, however, it is only fair to say that so much has been written and taught of recent years upon the dangers of day-dreaming and the indulging of phantasies, that we are in danger of going too far in this direction. Some writer has caught this danger, and capitalized it in the phrase, “Pity the poor introvert!” The idea conveyed is that society, with its penchant for running a good thing into the ground, has gone on a still hunt for folks who get any inner satisfactions at all; and is heaping its approval upon the noisy, runabout, back-slapping extrovert who has no reticences and no reserves of inner satisfactions. As always, we parents must be on the lookout not to let ourselves be carried away by the faddists, and so do our children the wrong that no one else is so capable of doing as a misguided parent, who becomes zealous (as so many of us are prone to do) in a mistaken way.

The lesson to be learned is that we should gradually help and encourage our children to battle with their difficulties in increasing degree; that we should not pamper them so that they never know the sheer joy of winning things with their own efforts; and that we should be worried, rather than relieved, when they react to disappointments with too ready an acceptance. The day-dreaming child is not a troublesome child, as is his rebellious and pugnacious brother; but he may be in greater danger, from his very lack of self-assertiveness and “troublesomeness,” than that brother of his whose very insistence makes us solve his problem in order to get rid of the annoyance it is causing us. Day-dreaming in moderation is desirable; carried to an extreme, it may be most perilous. Careful study of the individual child will alone make the diagnosis, and suggest the treatment.

Now Is the Time to Prevent Infant Deaths

Four hundred and seventy-seven infants under one year of age died in the State of North Carolina during the month of May, 1932. In the summer months every year a larger number of infants have died in this State than in the other months of the year. The peak of these deaths is generally reached between the first of May and the last of September. Unless a widespread epidemic, such as measles or influenza, which causes a large number of deaths in all cases, occurs in the winter months, fewer babies are sacrificed during the cold months. The reverse is true with reference to adult deaths. Summer time is the glorious time for old folks, but it is a disastrous period for babies.

Last year we made a better record in this State than we have ever made before. What we mean is that fewer babies under one year of age died during the year than in any year of our history. We have, however, a considerably higher death rate among infants than the national average. One of the reasons for this is we have a very high birth rate, but that does not account altogether for our higher rate among infants.

The purpose of this article is to discuss in some detail, for the benefit of parents having babies in their families at this time,
the measures which may be carried out to prevent the needless sacrifice of so many of our infants. In an excellent article published in the January issue of the Health Bulletin, Dr. A. S. Root, a pediatrician of Raleigh, pointed out that about 30 per cent of deaths of the newly-born infants dying in the first few weeks of life result from prematurity, congenital debility, or syphilis. The cause of prematurity is not known, but by regulating prenatal habits of the expectant mother, it has been demonstrated that there are fewer premature births.

Doctor Root stated that congenital debility more frequently occurs as the result of improper food throughout pregnancy than from any other cause. This is a matter which could be easily remedied. During the months before the baby is born, of course, is the most neglected period of the baby's existence. The expectant mother is likely to have a finnicky appetite. Some days she will feel like eating a great deal of food, and other days she will not want anything. She will have a special appetite for certain foods which are not best suited to her condition. It is not safe, therefore, for the doctor to simply advise that she eat what she is accustomed to or plenty of good nourishing food. The doctor must point out specifically what the mother should eat; that is, the minimum of certain foods which are essential to the protection of her own health and which are particularly essential in the development of her unborn baby.

The foods needed during this period naturally differ from those of any other time. It is much more important to have a correct balance of food which contains all the essential elements for the repair and protection of her own body and to provide for the growth of her baby. Simple, easily digested food, with a reasonable quantity of laxative foods should be chosen. It may be better for the mother to eat four or five light meals than to confine herself to simply three meals a day. The mother should take plenty of time to eat. She should not eat hurriedly, and, above all, it is necessary for her to eat with regularity, the same time every day. She should not take any food when worried or depressed, it being better to pass up a meal entirely than to run the risk of disturbing the digestion through emotional upset.

**Some Of The Foods Necessary**

During this expectant period a woman should have an abundance of what has been called "protective foods". These are milk, eggs, green leafy vegetables, and fruit. Such foods safeguard the bones and teeth of the developing baby. Butter, fine fresh wholesome country butter, white potatoes and bread, some of which should be whole-wheat bread, in the daily diet are necessary. Some of the whole-grain cereals should be eaten daily.

Naturally milk is the most important of any single item of food. It is important and necessary for both the mother and her developing baby. The minimum of one quart of whole sweet milk should be consumed every day. It is not necessary to drink all of this quantity of milk as a beverage. Some of it should be consumed that way, if the mother prefers it. It may be utilized in cooking cereals, soups, with cocoa, in custards, or with white potatoes, and in many other ways. Care should be taken that a minimum of one quart is consumed every day. If such a diet could be followed carefully through the whole period by every expectant mother, there would be far fewer babies to die during the first few weeks of life as a cause of congenital debility than are now sacrificed.

If the expectant mother would spend a liberal amount of time in the open air and sunshine, with moderate exercise, such as walking, and should be careful not to over-exert or to take any other undue risk, fewer babies would be born prematurely than is otherwise the case.

**Hereditary Syphilis**

During the first few weeks, as a result of prenatal causes of early deaths, hereditary syphilis occupies an important place, as was discussed in Dr. Root's paper.
Practically every one of such deaths could be prevented. If the diagnosis of active syphilis could be made in every expectant mother before the fifth month and vigorous measures of treatment instituted for the remainder of the period, the chances are that the baby would be born healthy and totally free from syphilitic infection.

There are two things necessary which must be done if such babies are to be saved. First, the expectant mother must consult a thoroughly competent, reliable, and conscientious physician as soon as she discovers that she is pregnant. The second thing that is necessary is that the physician must exhaust every means at his command to make a diagnosis and then to follow his positive diagnosis up with the modern scientific treatment necessary to eradicate the disease, or at least to the extent of protecting the unborn child. It will be readily seen that the cooperation of the parent and the physician, team work all the way through, is essential if these babies are to be saved.

This is a serious problem when we stop to contemplate the fact that about one third of the mothers giving birth to babies in North Carolina annually have the attention of midwives only and never consult a physician. It has been demonstrated many times that some of these midwives are themselves infected with syphilis and capable of transmitting the disease to the healthy mother and the healthy new-born baby. This is a serious situation which should lay heavily upon the heart and conscience of people everywhere. For the poverty-stricken mothers, including both white and black, who have no contact with a competent physician, the public health departments in every county of the State should make provision for the examination and treatment of all such expectant mothers.

Intracranial Birth Injury

We will go back again to Dr. Root's paper in which he states that another third of all these early deaths of infants are due to intracranial birth injury. Many of these babies may die during the process of birth as a result of the injury; it depends on the severity of the lesion. Some of them may live a few days and then die. A few of them, of course, recover completely, but many become mental invalids and suffer the remainder of their lives. Sometimes these injuries may occur during the process of normal labor, but more often the injury occurs in mothers who have contracted pelves.

Dr. Root said that about 15 per cent of all women have contracted pelves and at least 25 per cent of them, as a result of this contraction, have difficulties in labor. Here again, in considering the preventive measures necessary to save these women from so much pain and suffering and their babies from intracranial injuries and death, it is necessary to go back to the mother's birth, because all of this trouble is nearly always a deficiency in the food and care of such a mother during the first two years of her own life. Many of the causes reach to the mother's own prenatal existence. This is important for everyone to remember. The building of a healthy population, the reduction of conditions and diseases which cause premature deaths is a matter that often takes a number of years to effect. A generation is not a long time in dealing with these problems.

The contracted pelvis of a woman is generally a direct result of failure to carry out preventive measures against rickets during the first two years of her life, as said before. The doctor should be sure to determine for every expectant mother in the early stages of her expectancy, when she first consults him, whether or not this physical defect exists. If it does, the doctor can then induce premature labor or have a cesarean section carried out, either of which measure will minimize the danger to the mother and protect the baby from injury. Many infants are lost from what is called the toxemias of pregnancy. Most of these deaths can be prevented by the proper medical care for the expectant mother.

Other Dangers To The Newly-Born

A large number of babies die as a re-
suit of carelessness or ignorance immediately after birth. Many of these babies are healthy and are born with every promise for normal health and growth. Some of these dangers to the newly-born are asphyxia, strangulation, and hemorrhage, and various infections. No other work for human beings is more important than the work of the nurse or the midwife and the physician in caring for a newly-born infant. Naturally the physician's work is ended with the normal and satisfactory delivery of the baby, but the nurse who assumes the responsibility for its care during the first two or three weeks is responsible for its protection during this dangerous period; that is, dangerous for the baby. The nurse should be carefully trained to observe any deviation whatever from the normal and so promptly secure medical attention. Chilling, over-heating, undue exposure to all the children of the neighborhood and the curious neighbors, all of whom want to fondle or kiss the baby, expose it to various infections which prove fatal in many cases.

Every year a large number of babies under one year of age die as a result of diarrheal diseases alone. The responsibility for the normal health and development of a baby for whom he is medically responsible entails a knowledge on the part of the physician of all of the problems of mixed feeding, artificial feeding, maternal nursing, and the caloric and vitamin requirements of food necessary for the baby's welfare. He should have knowledge at his fingers' tips concerning such matters as the normal development of the infant under his care at any given age. The physician should have full supervision over the health of the mother and the baby, and he should make regular periodic examinations to see that the mother and the baby are making the right kind of progress. Each child is an individual problem and no set rule, such as formulas for making up milk and feeding, can be made to apply generally.

MATERNAL NURSING

It is highly important for every baby to be nursed by its mother when the mother is healthy. No baby should be denied its mother's milk for the first seven to nine months, unless specifically advised by the family physician. The old slogan "the breast-fed baby is the best-fed baby," if applied practically in all cases, would save the lives of many infants. It is important that weaning of the baby, when breast-fed, should be done at the proper time. There are some considerations in which the doctor's advice should be procured in this matter, of course, such as season, condition of the mother, and the baby, and many other things. As a general rule, however, it may be said that weaning should take place as close around the ninth month of the baby's age as possible, everything else being normal.

When the time comes to supplement the mother's milk, by giving the baby prepared food, this should be done with the utmost care. The State Board of Health has some literature available for every mother at such times, which offers general suggestions in the way of time cards and diet lists, which has afforded much help to large numbers of mothers and babies in the State. This literature is designed to supplement and aid the mother in carrying out the physician's suggestions and is in no way designed to take the place of competent advice by a physician for each individual baby.

BOIL THE WATER AND THE MILK

In order to prevent diarrheal diseases and many of the digestive disturbances coming along in hot weather, the milk given to every baby, if not freshly pasteurized, should be boiled for three minutes and then cooled and kept on ice until time to feed the baby. All drinking water, no matter how safe it may be for adults, should be boiled for three minutes before given to a baby under three years of age. This should apply particularly in the summer months, when digestive diseases with resulting deaths are much more prevalent.

GUARD AGAINST INSECT PESTS AND WEATHER CHANGES

The room in which every baby is kept
should be screened to prevent the entrance of house flies and mosquitoes. Where it is impossible to afford screening the house and especially the room where the baby lives, a good grade of mosquito netting should be used which will protect the baby twenty-four hours a day from flies and mosquitoes. On hot days, the baby should not be persecuted by being covered up to the point of suffocation or clothed in too heavy clothing. Often in hot days which occur during the month of May around midnight the temperature becomes chilled, and at such times the baby should be covered properly in order to protect it. It ought not to be necessary to say that one of the important things is to keep it from being exposed to every child who has respiratory infections or any of the contagious diseases in any stage. One other exceedingly important matter is that the baby should be immunized against diphtheria immediately after six months of age, and it should be vaccinated against smallpox before a year of age.

If the simple measures mentioned in the foregoing paragraphs could become the heritage of every child born in North Carolina, in a few years the infant death rate would drop materially and our record in this respect would be better than the average in the United States.

**PREVENTION OF TUBERCULOSIS IN CHILDHOOD**

Under the above title we are republishing the extract quoted below from the American Journal of Public Health. These paragraphs are from an article in that publication, written by Dr. Richard A. Bolt, director of the Cleveland Ohio Child Health Association. The simple rules quoted at the conclusion of Dr. Bolt's statement should be known and observed by the parents of young children in every family where there is any reason to suspect that an adult member of the family may have tubercular infection.

"It is now well known that tuberculosis is usually acquired in childhood either from individuals in the home affected with tuberculosis or from infected milk. We have largely eliminated infected milk by tuberculin testing of cattle and by the efficient pasteurization of milk. As pasteurization of milk becomes more and more prevalent, crippling from tuberculosis of the bones and joints will become less and less common. Every child should be examined periodically by a competent physician in order to detect the earliest signs of tuberculosis. In this way only can the most effective measures for its control be applied. One of the most serious aspects of tuberculosis today is its appearance in young women of high school and college age. The tuberculosis death rate has been reduced considerably at all age periods except among young women. The dieting fad to secure a slender figure and overactivity at school and in social events undoubtedly contribute to this condition.

"The prevention of tuberculosis in childhood is relatively simple if a few principles are carried out as follows:

"1. Keep the child away from contact with tuberculous individuals, especially in the early years of life.

"2. Protect the general milk supply by efficient pasteurization and heat all milk given to young children.

"3. Maintain a good nutritional status in the child by proper feeding.

"4. Prevent as far as possible overactivity and fatigue in young people.

"5. Have the child examined periodically by a competent doctor."
This is a somewhat unusual photograph of a four months old baby. The boy is now more than a year old. At six months he was given the immunization treatment against diphtheria. His father is one of the Professors of Biochemistry at State College and an authority on Vitamins. In his work as a teacher he uses the Health Bulletin in his classes, and otherwise cooperates with the State Board of Health in spreading sound information about the prevention of disease.

In rearing their baby the parents utilize the valuable literature on infant care available from the State Board of Health. But a look at the photograph would prove that. Reader, you do not have to be a college professor to enjoy the privilege of securing this literature. It is free to all our citizens.
To the Parents of North Carolina:

We want you to help us eradicate diphtheria from our State. It can be done. We are on the way but we have not been moving fast enough. In the year 1922, one of our worst years, 8,136 citizens of our State had diphtheria; and 508 of them, mostly children, died. Ten years later, in 1932, one of our best years, 1,895 cases of diphtheria, with 150 deaths, occurred. The smaller number of cases and deaths resulted from constant efforts during the last ten years to immunize the children against the disease.

The State Board of Health in cooperation with the local health departments and the physicians of the State is making an intensive effort to secure the immunization of every baby between the age of six and nine months. The one thing necessary to get this done is for the parents, all of them, to take their babies to their physician or the local health department and have the preventive treatment given. About 75% of all deaths from diphtheria occur in children under five years of age, hence the importance of early immunization. Most of the deaths occur during the early fall months. A few weeks must elapse after the treatment is given before immunity is established. You should protect your children now. Take no chances, you might lose.
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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN which
will be sent free to any citizen requesting it. The Board also has available for
distribution without charge special literature on the following subjects. Ask for
any in which you may be interested.

Adenoids and Tonsils  Hookworm Disease  Smallpox
Cancer  Influenza Paralysis  Teeth
Croup  Malaria  Tuberculosis
Chickenpox  Measles  Typhoid Fever
Diphtheria  Pneumonia  Typhoid Placards
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Eyes  Disposal Plants  Whooping Cough
Flies  Fly Placards
German Measles  Sanitary Privies

SPECIAL LITERATURE ON MATER-NITY AND INFANCY

The following special literature on the subjects listed below will be sent free
to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)  “Our Babies”
Prenatal Letters (series of nine monthly letters)
Minimum Standards of Prenatal Care
What Builds Babies?
Breast Feeding
Sunlight for Babies
Hints to North Carolina Mothers who Want Better Babies
Infant Care: The Prevention of Infantile Diarrhea.

Table of Heights and Weights
Baby’s Daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Instructions for N. C. Midwives.

CONTENTS

Notes and Comment ................................................................. 3
Interesting Letter from Mr. Marshall ........................................ 5
Hard Times and the Public Health ........................................... 7
The Menace of Syphilis ......................................................... 11
The Secret Serves Revise Their Code ......................................... 14
Sixty-Second Annual Meeting American Public Health Association ....... 16
SEVERAL months ago Dr. Victoria Carlsson, Head of the Hygiene Department, the Woman's College of the University of North Carolina, sent us some articles prepared by students in her class at that institution. We published the first of these articles, "Plants and Boys," in the March issue. This was in the form of a play. It has produced a great deal of interesting comment. In this issue we are publishing a letter from Mr. W. F. Marshall, an experienced editor of Raleigh, commenting in a most interesting manner on Miss Stalling's play. Mr. Marshall, as it will be noted on reading his communication, is struck with the similarity of ideas developed by Miss Stallings to the teaching of the late Luther Burbank, the world famous plant wizard. In the April issue the second of these contributions was published. This was in the form of a poem by Miss Amy Williams and was a parody on one of Jarne Whitcombe Riley's poems. The title of Miss Williams's poem was "On Teeth." This, too, has produced widely favorable comment. To mention only one, the Red Cross of Toronto, Canada, has requested permission to reproduce this poem in one of their publications. In this issue we are publishing the third of the girl's contributions, the title of which is "The Secret Servers Revise Their Code." This was written by Miss Claire Hartsook. This is a splendid contribution, and we hope our readers, especially our high school classes, will read this article and profit by it.

In this connection we wish to commend the faculty of the Greensboro institution for its intelligent comprehension of the public health problems in North Carolina and their practical effort toward meeting these problems through their most excellent courses given to the students of that institution. We particularly commend the work of Dr. Carlsson and Dr. Gove as well as others in developing a public health consciousness among their students, which has already produced results in their home communities after leaving that institution.

* * *

Doctor Clarence Poe, editor of the Progressive Farmer, has sent us a clipping from some publication, possibly the Literary Digest, commenting on the "Mohammedan Scorn for Statistics." We are quoting the item in full below. Before quoting, however, we would like to say that the scorn for statistics and for scientific information is not confined to Asiatic Turkey. The truth is that a rather large number of citizens of North Carolina, consciously or unconsciously, have the same attitude expressed by the Turkish people interviewed by Miss Blake.

We have mentioned from time to time in these columns during the last twenty years the difficulty of overcoming an indifferent attitude toward preventive medicine exhibited by certain classes of our population. In many instances the attitude is much worse than indifferent; it is downright antagonistic. The worst of the situation is that such an attitude is not confined to the poor, the ignorant, and the down-
and-out by any means. In the experience gained in what is coming to be a rather long life, we have found no ignorance, intolerance, or antagonism so hard to overcome as that exhibited by people who might be classed on other grounds as intellectual. We have come to the conclusion that the greatest obstacle to the advance of preventive medicine and progress in general in our State is plain old prejudice.

Following is the clipping from Dr. Poe:

"A curious American asked a Turkish camel-driver how long camels live. The reply was, 'How should I know? Allah knows. When Allah wills to take a camel he takes him. Who am I that I should inquire?'

"A French statistician wrote to the valley of Aleppo and asked these four questions: 'What are the imports of Aleppo? What is the water supply? What is the birth-rate? The death-rate?' The valley replied: 'It is impossible for any one to know the number of camels that kneel in the markets of Aleppo. The water supply is sufficient. No one ever died of thirst in Aleppo. The mind of Allah alone knows how many children shall be born in this vast city in any given time. As to the death-rate, who would venture to ascertain this, for it is revealed only to the angels of death who shall be taken and who shall be left. O Son of the West, cease your idle and presumptuous questionings, and know that these things are not revealed to the children of men.'

* * * *

Constant readers of the Health Bulletin are aware of the fact that we have cautioned them repeatedly against falling victims to fads of every description masquerading under the name of Health. The fellow who first wrote "Be not the first to adopt the new nor the last to use the old" had the proper conception of what the average man should adopt as his attitude toward anything. The people who blaze out on new trails, the pioneers or the so-called fanatics, if you please, occupy an important place in the scheme of things. Their work is valuable because it often pierces the hidebound complacency of people who oppose any innovation because it is new. Their usefulness exists in their capacity to arouse serious thinking on the part of people in general. It matters little that a great deal of their theories and their opinions turn out to be impossible of practical application. The main thing is their thought-provoking attitude. The good old middle-of-the-road policy is best for mankind, but the mass movement must always be upward or the veneer of civilization would soon vanish and the world would sink into impossible chaos.

These thoughts are provoked by a double-column article in the New York Times of April 23. The title of the article is this: "Health Instructors Chided as Gullible in Acceptance of Fads and Half Truths." The article quoted part of an address by the Chairman of the Department of Elementary Education in a New York institution before a conference on "Interpretation of Physical Education"—whatever that might mean—recently held in New York.

The speaker was joshing the delegates on some of the fads that the health education people throughout the country have fallen for during the last few years. The speaker's charge that health authorities have accepted health fads and half truths is unfortunately true in some cases. The speaker stated that the health education people "have got on and ridden with each new health fad. They have staked their reputations on so many claims that were discovered to be wrong, or only half right, that they have properly lost the confidence of the general educator." The speaker up before this group, ridiculing the health people for their gullibility in accepting every statement put out by every organization under the sun under the guise of Health is himself guilty of the very thing he is so enthusiastically condemning. The speaker is right, however, in condemning a too hasty attitude on the part of boards of health everywhere in accepting and adopting the measures which have not been proved to be scientifically accurate. The
June, 1933

THE HEALTH BULLETIN

speaker cites some of these vagaries which were proclaimed as gospel only a few years ago and which must now be discarded. Some of these items may be mentioned to good advantage here, because we have repeatedly warned our readers against accepting too much of such teaching. The following may be enumerated as falling under the scathing denunciation of the New York speaker:

Clean your teeth on the ground that a clean tooth never decays. "This bubble," in the language of the speaker, "has been burst."

The fresh air fad—which is badly over-ridden.

Breathing exercises—much over-done always everywhere.

Height and weight attitude. The speaker rightly claims that this has become a regular health racket. Height and weight are very important considerations when measuring the health condition of any child, but such things as individual and family differences at one time a few years ago were entirely discarded. Those things must be considered, and the height and weight data is important only when used in connection with other things as an indication of the child's health.

The speaker even criticized the importance which has recently been placed on developing health attitudes. His criticism was against the assumption that health attitude would beget helpful behavior. He admits that such may be the case in a small degree, but advises not putting too much faith in such an idea.

All of this criticism should be accepted for what it is worth by people engaged in health education. We should get the facts and nothing but the facts about any given situation and then present them to the people simply and clearly, without opinion or exaggeration. We should avoid propaganda of any kind as we would poison.

Interesting Letter From Mr. Marshall

The editor of the Health Bulletin is pleased to publish the following letter from Mr. W. F. Marshall, of Raleigh. We are sure that Miss Stallings, the author of the play "Plants and Boys," will appreciate Mr. Marshall's letter. We hope all of our readers who have not already done so will read Miss Stallings's article, "Plants and Boys," in the March issue, and then read this letter from Mr. Marshall.

To the Editor of the Health Bulletin:

If you will permit a layman to venture into your health columns, I should like to commend the arresting and suggestive playlet by Margaret Stallings, entitled "Plants and Boys," which appeared in your March number. In the first place, the striking title caught my eye. And then the idea it carried engaged my attention, not so much on account of novelty as because of its constant rumbling about in my ruminations ever since it was suggested a few years ago by a passage in Luther Burbank's "Harvest of the Years." Naturally, I was tickled to see the thing developed and worked out so tellingly in that breezy little home circle drama; and I hope to be pardoned, under the circumstance, for the hefty slap given my knee with a wide open palm as I exclaimed "Great minds do run in the same channel!"—thinking of Miss Stallings, Luther Burbank, and just me, a mere layman.

Then as the play progressed, I was glad to hear Ted quote Dad as thinking "it was better if boys could see what effect things had on plants and animals." Then Jack: "I didn't know plants and boys were so much alike." And Dad's come back, "Plants and boys are more alike than anyone would suggest." And lastly the wind-up by Ted suggesting the husky slogan of "Better and Bigger Boys" instead of "Better Babies." The only thing the matter with Ted's slogan is that, he has too
much of Willie Willis in him yet to allow his health circle to take in girls, too. But we needn't worry about that. If Mom and Dad and the Hygiene teacher and the boys succeed with their 'speriment in diet, sunshine, and exercise, Ted will become a better and bigger boy after awhile and draw his circle large enough to take in the girls—you bet he will—even if he has to use both arms to extend its circumference.

Another reason why I like the plan adopted by Miss or (Doctor) Stallings, is that it gets right out on the firing line amongst the folks themselves, where all the work of the State Board of Health and other health lovers must take effect and come to fruition if we are ever to get anywhere with it. Heaven speed the day when all the people of the State will resolve themselves into an alert and determined "Committee of the Whole" to give full effect to the teachings and leadership of our health agencies!

The passage from Burbank referred to above is so exactly in line with the idea back of "Plants and Boys," that I will give it here. Says the great plant wizard:

"In the last forty years I have proved time and time again that there is not a single desirable power of which a given species of plants is capable that cannot be impressed on it by breeding, selection, and repetition, repetition, repetition. I have given scentless flowers perfume, tasteless fruits flavor, dry-colored blossoms, or those with a single hue, brilliant and variegated garments. Time after time, as already related in these pages, I have taken a definite order to produce a definite quality or set of qualities in well-known and apparently unchangeable plant or flower or fruit and in a comparatively few generations have delivered the order. Choose any reasonable improvement you please in a plant and it can be accomplished; not only that, but it can be fixed in the plant so that, short of reversing the process employed, or permitting Nature to reverse it—‘letting the plant go back to its wild state’—it will remain fixed and unalterable in its new character."

Then addressing himself to parents and others who work with boys and girls, the author carries the same principles of procedure over from plants to human beings. Mark how positive he is in expecting even greater things in working with intelligent human beings than with plants:

"If scientific breeding, careful selection, repetition, repetition, repetition of impressions, and tireless patience and strict adherence to the programme can achieve this in the plant world, how much more surely could a definite improvement be achieved with your children, more sensitive, more adaptable, and blessed with powers of discrimination, the gift of appreciation, and the ability to reason and compare for themselves."

This quotation is from page 268 of Burbank’s "The Harvest of the Years," one of the most captivating books I ever read. Plant-minded readers of "The Health Bulletin" will, I am sure, be equally fascinated with its pages. Over the phone, I have just asked Miss Beale, Secretary of the State Library Commission, if Burbank’s book was on her circulating list. "Yes," she replied in her charming telephone voice, and naturally I was gladdened. "But," she added with a tone indicative of real heart-sorrow at having to disappoint anyone, "it’s out." Then I was gladder still, for that is just what I wanted to know, namely, that the Library Commission had the book and that it was not being allowed to give many at home parties on the Commission office shelves.

Now if my piece shall cause somebody to get busy on the lines marked out by Miss Stallings and Luther Burbank, and thus help the State Board of Health put across one of its biggest problems, that of educating the people into the individual application and practice of health laws, then I have started a little something anyhow.

Layman,

W. F. MARSHALL.
From time to time during the last few years some of us have had something to say concerning the relation of the depression to health. A year ago it was evident that the change in social conditions resulting from hard times had not materially influenced health. We were then in the third year of the depression. We had lost money, were having difficulty in meeting public and private budgets, were hurt in our hopes and our pride, but our death rates did not give evidence that our health had suffered.

Analyzing the death rate, we found that the increase in deaths from certain diseases and at certain age periods had just about been offset by decreases from other diseases and at other age periods. If there had been any tendency toward poorer health it was just about offset by the decline in the birth rate, a lessened proportion of babies and other younger children, and a decrease in the infant death rate.

Another year has passed. We are now in the fourth year of hard times. The proof that the position then taken was correct is more evident.

Meanwhile, there has been a rather widespread effort to use the comparative good health in spite of hard times as an argument against public health work, and even against private medical service. It has been said that the experience goes to show that appropriations for public health work can be curtailed without harm, and that sick persons need not call physicians nor go to hospitals. The quarrel that health workers have is with the conclusions that are drawn from the facts rather than with the facts themselves.

There have been fewer deaths. Certain people have concluded that this means there has been no necessity for the expenditures for health protection. To these people, should we not reply with a few questions?

Why have a doctor in attendance, since it has been demonstrated by experience that 80 per cent of sick people are going to get well anyhow, whether they have a doctor or not? Why maintain hospitals, since experience has demonstrated that without using the hospitals there is a lower sickness rate and a lower death rate? Why have money spent for preventive measures such as those of public health, since the less we spend and the more we economize in the health department, the lower the death rate? This line of argument is logical and sounds reasonable and appealing to certain people. Their argument has been: "As it has been, it will be!"; that if the sample was good, more of it would be better. If a little relief from hospitals and from doctors and health departments has got us somewhere as it appears to have done, then more of it would get us still farther.

Health improvements began prior to depression.

What is the answer to the argument? In the first place we have been in the midst of a downward trend of disease for a half century or more—for centuries in fact. There has been a constant trend toward betterment of health conditions, but in the last quarter of a century this trend has been more easily demonstrable, and more readily comprehended. Tuberculosis has been on the decline for about fifty years. The men who are studying the prevalence of the disease, those engaged in the strategy of tuberculosis control, have projected lines into the future based on the experience of the past and have even predicted dates when the trend line would cross the zero line. This phenomenon would introduce the time when the disease would disappear entirely.

That which we are reaping in the shape of health improvement is the result of forces that began to operate decades ago,
in some instances. We are in the midst of the harvest time. The time of sowing was some months, or some years ago, or some decades ago, and all we can say is that the depression through which we have been passing for several years is calculated to disturb the establishment trends. That is one of the answers to the arguments of those who have claimed, and still claim that we can afford to discontinue all kinds of health work, including those of preventive and curative medicine as well; of those who say we will get well if we wreck the machinery of medicine, and leave the intelligent and educated human beings on their own resources.

Another part of the answer to that assertion is this: That which we have been experiencing since the onset of the emergency is just what we would have experienced had there been no depression. The established trend has not been interfered with. I dare say that Dr. Cooper or any other State Department of Health man who is studying vital statistics would have been quite willing to have told you in the years 1927 or 1928 just about what the death rate would be in 1932. The figures given would not have differed materially from that which experience has determined. Furthermore, in coming to that conclusion, they would not have thought much of what kind of times we were to have, whether hard times or good times. In other words, the trend, the established tendency, the reaping that followed the sowing of years ago has gone on without interruption or change because there has been no great influence from the hard times. In effect that is demonstrable at the present time, and that brings me to the next point.

TIME BETWEEN CAUSE AND EFFECT VARIES

You are exposed to pneumonia tonight and by tomorrow or the next day you have pneumonia. The disease treads on the heels of that which causes it. At the other end of the line, we will say, is heart disease. You have rheumatism and you recover from it, you think, but thirty, forty or fifty years after you develop chronic heart disease. During all the intervening years the cause of the chronic heart disease has been there. It began to operate in childhood but there was no clinical manifestation of the effect of that cause during the whole intervening period. There was a space between cause and ultimate effect of about half a century. The case in which childhood rheumatism is followed half a century later by chronic heart disease represents the extreme of a lapse of time between cause and effect. In but few instances does effect quickly follow on cause.

We are exposed to tuberculosis in childhood. Long years there-after, as a result of something else which may be quite unrelated to the first happening, after years of good health, clinical tuberculosis develops. The effect has followed sometimes months, but more frequently years, after the cause that has been responsible for that effect.

Deprivation and want and hunger manifest their effect on different levels. During the World War we had an illustration of the effect of one level. Out of poor nutrition in the German child there came tuberculosis in children and tuberculosis in adults, particularly the adolescent women. That is one level on which the effect of deprivation and want and hard times may manifest itself. Another was that found in Roumania, where there was more suffering, where the contending armies beat back and forth, trampling the people under foot and destroying the resources of the land, causing greater suffering than in any other part of Europe. There was hunger edema and, as a result, there were various manifestations of lack of resistance to disease. All kinds of diseases eventually increased as the result of nutritional disturbances. Among these was pneumonia in children, as well as in the adult population, though less prevalent there. That is an illustration of an effect or deprivation operating at still another level.

III. HEALTH EFFECTS OF DEPRESSION BEGINNING NOW.

This depression has not been very severe from the standpoint of physical want. We have been hurt in separate ways, in pride,
in self-confidence, in the pocketbook, and somewhat in our physical being, but we must have been far less hurt on the physical side than many of us consider we have been. Our pride has been so humbled that we are quite certain that we are hitting the dust in our every part, although evidence to that fact is not very conclusive. And yet, reports are beginning to come from here and yonder that the people in less favored groups are beginning to feel the effects of these hard times, sometimes in one way and some times in another. Evidence that the morrow will hold still more effect, just as we today are reaping the effects of good sowing of a decade or two ago, is not lacking. A decade from now we or our successors will be reaping the poor sowing of this four or five years.

It is difficult to become enthusiastic about a low infant mortality rate when clinicians report that cases of rickets are rapidly increasing. In order to economize, poverty stricken mothers are nursing their babies as long as possible without supplementing the breast milk with other necessary food. If the health of the future generations must be built upon the rickets, malnutrition and decayed teeth of today, there is every reason for believing that regardless of present morbidity and mortality rates, the depression will sooner or later collect its toll.

Cancer and heart disease appear to show a more rapid increase at least in some communities during the depression than they did during prosperous times. Diabetes, which had a tendency to drop during times when there was enough money in the family to provide insulin and a proper diet for the patient, shows a marked increase in some statistical reports during the past year.

There are reports from some sections of an increased prevalence of pellagra. That this is not yet true in North Carolina, we are very grateful. There are other illustrations which might be cited but these are enough to make clear the fact that already over the horizon there begins to appear evidence of trouble ahead. What is going to be our response to the situation? How will our generation and perhaps the succeeding generation respond to the need for public protection and the need for individuals to lead the people into better ways; to train them so they may escape tuberculosis in part; to protect them against tuberculosis but, in greater part to train them so to live, that they will deserve to escape tuberculosis. And so with typhoid fever, diphtheria, and nearly every other disease that has engaged the attention of the health workers for the last quarter of a century. There have been results.

Past Achievements Worthy of Pride

The tuberculosis death rate of my city is only one-third as high as it was twenty-five years ago—a two-thirds reduction in the span of a quarter of a century. The rate for the whole state of North Carolina is not quite one-half what it was twenty-five years ago (67.4 in 1932—129.3 in 1914). That is a performance, an accomplishment that all people who work in public health, who work against tuberculosis, all who bend their efforts toward health education can be proud of.

There has been greater improvement still in respect to diphtheria. How are we going to respond to that? Are we going to find in it an excuse for being faint hearted? Is it not rather a stimulus to greater endeavor? Is it not rather a stimulus to those who render the service and do the work to continue further, to those legislators who provide the laws and to those counsellors who furnish the funds? Should they not be urged to carry on rather than to quit in the face of this emergency? If we stop now we will not only have a break in the course of time, an interruption in the steady onward progress toward protection against these diseases, but we will slip back and pay the penalty of any interruption that we may indulge ourselves in.

Expense of Health Work Low

We have heard public health work referred to as a luxury. I wonder if it is so. We have been told of the millions that were spent in this state and every other
state for the care of those who are mentally sick. I have heard of every dollar of tax funds spent in the State of North Carolina nearly five cents goes for curative care or custodial care of those who have developed mental diseases, some part of which might have been prevented. As against that there are seven-tenths of one cent spent for prevention and all the work done under the observation and direction of the State Health Department, which is not for the prevention of diseases only but for the promotion of all physical and mental health and well-being that can be brought about. Prevention in the degree which we have costs seven-tenths of one cent as compared with five cents for the care of something that might have been prevented. We spend more than half of our total expenditures on roads while, from the standpoint of the amount involved, health protection expenditures is one of the most trifling and unimportant items in the appropriations made by the legislature of the State of North Carolina. Large expenditures are made, as is always the case, for the much more expensive process of curing and caring for the sick while prevention has been neglected. It is prevention that is economical. It is a method of cure that constitutes the luxury, and this is no time for the people of this State to indulge in luxuries. If they, as a consequence of warped ideas and carelessness, neglect and support of the institution of prevention they will pay, and instead of paying at the rate of seven-tenths of one cent they will pay at the rate of dimes and dollars and hundreds and thousands of dollars.

Illness must be paid for. That is inevitable. Before the legislature of this State, the city councils, or any other appropriating body, the only question for debate is how they will pay and what they will pay. Will they pay for prevention in mills or will they pay for developed illness in dollars and in tens and hundreds of dollars.

HEALTH WORK IS GREAT ECONOMY
We are in the midst of an actuality. In the language of Grover Cleveland, we are confronted by a condition, not a theory; the depression which has hurt our pride, which has made some so humble and others so hopeless, has created a necessity for clear thinking. During the period which immediately preceded it, we could proceed with recklessness and do foolish things. It seems that now has come the day of reckoning. There was nothing to ripen our judgment nothing to train us in clear thinking. Now, we are in the midst of a situation where the obligation is to think straight, to burn out the dross and leave the gold, to discard the superfluous and wasteful and hold to the needful, to discard the expensive and hold on to that which is economical.

If there is anyone that needs courage to fight and confidence in his work during the present economic depression, it is the health officer. With the need for public health services becoming greater each month, and the demand for lower taxes becoming more general and determined each day, most health officers are confronted with a most discouraging outlook. While everyone will readily admit that health is the most valuable possession of individuals as well as communities, there are still many people that are skeptical of the claim that public health within certain limitations is purchasable. Communities like many individuals are still inclined to place more confidence in fate than in recognized scientific health measures. On account of the great need for economy, taxpayers and their representatives are willing to gamble on a community's health in order to reduce expenditures. Knowing little about the many essential and effective health activities of a modern health department, many people are apt to believe that at least some of these activities are so-called frills which can be eliminated without endangering the health of anyone.

The budgets of police and fire departments are reduced if any, with fear and trembling, because the big taxpayers don't want their fire and burglary insurance rates increased and the small taxpayers are more afraid of fire and robbers in their
homes than they are of disease and death.

In addition to the ignorance and indifference, of the general public in public health matters, the health officer also has to contend with a certain amount of opposition, from which most other city departments are free. Some health officers not only receive very little support from many of their medical friends but are actually being opposed by some of them who are sincere in their belief that the work of the Health Department may be materially curtailed without jeopardizing the health and lives of the people. Having the opposition of many and the support of only a few does not end a health officer's worries. His real troubles begin when, on account of reduced budget, he is compelled to reduce or abolish some of the health services. He decides that certain services and certain employees can be spared with the least harm to the community, he is apt to be accused of unfair and inefficient action by the same individuals and organizations that demanded a drastic budget reduction.

The health officer of today is "on the spot." If he opposes the curtailment of vital health services, he is accused of being unsympathetic with the hard-pressed taxpayer and if certain health services suffer due to a forced reduction in his budget he will be accused of making the saving in the wrong place. Regardless of the consequences to himself, every courageous and conscientious health officer must continue to fight for those whose health and lives are at least partly dependent on the efficient, unselfish and fearless administration of the health department.

We stand with our hands out asking for support by public funds for the continuation of a cause which has made good as no other cause has in all human history. Never since the world began has there ever been rendered an accounting of stewardship like that which health people are able to render. We don't feel as yet the consequences of the economic crisis but if want continues to grow there will come a time when the consequences will not only be registered in the bodies, the minds and the spirit of the people, but they will be so plainly registered that there can be no mistake about them and the result will finally blossom out as disease, disease which might have been prevented and which, had it been prevented, would have saved money. Disease which could have but has not been prevented will be expensive.

The burden of taxes, burden of want and woe, of deprivation and sorrows, burdens of developed disease that might have been prevented will be the penalty we will inevitably pay if we permit an efficient public health machine to be wrecked. Lower taxes can never justify higher morbidity and mortality rates and every health worker must be guided by that principle.

The Menace of Syphilis

By WM. D. RILEY
Consultant, Veneral Disease Control, State Board of Health

LARGELY because of the nature of and manner in which the veneral infections are spread, the general public has for many years been prone to refer to these diseases as "social disease." Now, the term "social diseases," particularly in so far as it is applied to the veneral infections, is a misnomer, since these diseases are decidedly antisocial in character, cause, course and effect.

While there is not, properly speaking, any such thing as a "social disease," there is a distinct relationship between disease and the social life of any people. In the veneral diseases we have a group of infections that cause a larger percentage of physical and mental defects than do any other group of diseases; and physical and mental defects bear a direct relationship to lowered efficiency, partial and complete in-
capacity, shortened life span, delinquency, crime, disrupted homes, and other social disorders.

Of the four diseases that comprise that group of infections known as venereal, syphilis is by far the most important as a public health problem. It is one of the gravest, if not the gravest infectious disease with which mankind is afflicted. No other disease, with the possible exception of the common cold and the measles, is so widely prevalent. It extends around the entire known world, and into all climes and all races of people.

It is rather commonly supposed that syphilis is a disease confined chiefly to those individuals comprising what is known as the underworld. This is a most fallacious idea. The majority of persons infected with syphilis irrespective of class or race are mingling unsuspected with society. Syphilis affects the righteous as well as the wicked; the rich as well as the poor; the learned as well as the ignorant; the innocent as well as the guilty. In fact, it affects all races and all conditions of men, women and children everywhere.

Under the microscope the germ of syphilis looks like a slender silver corkscrew that moves across the field of vision with a rotating motion. In the blood of man, however, it twists and turns like a tiny metal spring heated red hot. Once the germ of syphilis has gained entrance to the blood stream, it may invade any organ, tissue or bony structure of the body with the exception of the enamel of the teeth. In the child which has been infected with this disease through the mother before its birth, even the enamel of the teeth may be affected.

Syphilis is aptly described as the mocking bird of diseases. It can scarcely be said to have a tune all its own, but rather it screeches forth its tragic notes on every pathological key, now imitating one malady, now another. Hence, the disease is frequently called the “great masquerader”.

Syphilis paints the skin every hue of the rainbow. It enters the mouth and makes of it a charnel house. It bestrides the face and makes a saddle of the nose. It leaps upon the scalp and snatching here and there, makes sad wreckage of woman’s crowning glory. It touches the sparkling eye of youth and leaves in lieu thereof a stupid stare. It plays with the mechanism of the brain and turns a brilliant man into a simpering idiot. It crowds our insane hospitals and feeble-minded institutions to overflowing with defective individuals who might otherwise be engaged in gainful pursuits of life instead of being a drain upon the public purse.

Syphilis is a deceptive and treacherous disease. Oftentimes a person whose primary infection was so trivial as to pass unnoticed or be forgotten may enjoy good health for many years. Then, without apparent cause, he begins to notice that his feet behave curiously; he has difficulty in walking; disturbing, lightning-like pains shoot through his body. Or he may begin to have grandiose ideas. If he is poor, he thinks himself rich; if he is rich, he may begin to make bad deals and dissipate his fortune in a short time. What has happened to disturb the smooth current of his life? The treacherous germs of syphilis, lying dormant for years, have begun to stir. Resistance to the disease has finally been completely broken down. With a countless host of its progeny the germ of syphilis assaults the storehouse of nerve energy and lets it run riot, destroying the cells of the brain. Paresis, a form of insanity, has come on.

It is estimated that one man insane from syphilis represents an economic loss, based on life expectancy, of $20,000.00 in earning capacity, and a cost of $4,000.00 for maintenance. It is also estimated that not less than ten percent of all insanity is due to syphilis. On the basis of these figures, the loss in earning capacity and the cost of caring for persons insane from syphilis, which is a relatively uncommon complication of the disease, constitutes a tremendous economic loss to say nothing of the suffering and the defeat of human capability involved.

Insanity is only one of the many social
consequences of syphilis. There are other and equally grave complications of this disease. In its later stages, syphilis runs into several well recognized complaints which must be reckoned with in the indictment against this disease.

At certain stages of syphilis the infected parents may transmit the disease to the unborn child. This is the greatest cause of babies being born dead. When born alive, the child so infected may have all the complications of the disease together with other special complaints peculiar to the manifestations of syphilis in the second generation. This is one of the most tragic aftermaths of syphilis in the family. It is particularly tragic when it is realized that the transmission of syphilis from the parents to the offspring can be prevented by skillful treatment of the mother.

When uncured, syphilis, more than any other communicable disease, manifests itself in some disabling form long years after infection has occurred. During the period between the date of infection and the physical or mental collapse of the infected person there is an ever present danger to the public health since untreated syphilis may be infectious months or even years after all apparent evidences of the disease have disappeared. For this reason, it is unfortunate that syphilis does not always manifest itself early in some temporary disabling form which would cause infected persons to seek early medical care and to persist in treatment until cured, or at least until they have been rendered permanently non-infectious. If every case of syphilis produced only the repulsive skin conditions that some people always associate with this disease, the public would soon demand the eradication of this great threat against human life.

Practically every case of locomotor ataxia, for example, is caused by syphilis. In fact, it is believed that there is no other cause for this unfortunate affliction. This is also true for paresis. Furthermore, a definite proportion of deaths from other diseases, such as certain varieties of organic brain, heart, and kidney diseases, are directly or indirectly attributed to syphilis. It is estimated by some authorities that together they cause more than 300,000 deaths annually in the United States.

It is believed that syphilis causes, year-in and year-out, two American deaths out of thirteen, leading by a wide margin tuberculosis, the dreaded white plague. Heart disease, the terror of declining years; pneumonia; the savage slayer of maturity; the gentle reliever of age; cancer; the dark mystery of science—all give place to syphilis in the mortality rate.

Now, perhaps some of my readers have reached the conclusion that a dark and hopeless picture of syphilis has been presented. If this impression has been given, it should at once be corrected.

It is true that syphilis uncured probably causes more physical and mental disabilities than any other communicable disease. It is also true that it ranks as one of the foremost causes of death in the human race. On the other hand, syphilis can be prevented, and it can be cured. In fact, our available resources in controlling, preventing and curing syphilis are almost all that could be desired.

We know the cause and mode of spread of syphilis. We have ample facilities for its diagnosis. We have specific remedies for its treatment. We have at hand methods by which the efficiency of treatment for syphilis in its various stages can be definitely and accurately gauged.

With so complete an armamentarium it may seem strange that so little headway has been made in the control of a disease as far reaching in its effects as syphilis. The slow progress that has been made is not due to any lack of scientific knowledge, or to lack of specific curative drugs. Rather it has been due to an inability to bring this knowledge as to the prevention of the disease to those likely to be exposed to it, and to make freely available to those already infected these scientific methods of diagnosis and treatment.

Not until the people become better informed regarding the seriousness of syphilis
and enthusiastically cooperate with public health authorities and the medical profession so that the proper methods of prevention and control can be given practical application, will there be any great strides made in the effort to eradicate syphilis. Until then syphilis will continue to be a menace to the public health.

The Secret Servers Revise Their Code

By CLAIRE HARTSOOK
Woman's College, Greensboro

[The play calls for six girls. Learning the play is a special assignment for them. It can be given in the classroom or the auditorium.]

Cast:
President of the Secret Servers.
Vice-pres. of the Secret Servers.
Secretary of the Secret Servers.
Treasurer of the Secret Servers.
8 Club members of the Secret Servers.

ACT. I
Time: An August afternoon, 1932.
Place: Flower garden, living room or a vacant room, whichever is convenient.

Scene I
Six Club members are seated around a table or in a circle.

Pres. (Standing up) "Is everybody here?"
1st Member: "Betty and Sue are sick and can't come."
Pres. Too bad, they are sick a lot. Where is Mary?
Treas. She told me that she was just too tired to walk over.

Pres. (Tapping fist on table) (this is to gain the attention of the other girls who have been murmuring to themselves.) The meeting will please come to order. This is the regular weekly meeting of the secret servers. I hope we have some good reports to make. I don't believe that we are doing as good work as we ought to. We'll have the Secretary's report. (Pres. sits down.)

Sec. (Standing and reading from book) "The secret servers met August 11, 1932. Five were present. A collection was taken totalling fifteen cents. This collection will be used to buy toys for poor children. Only four special deeds were reported. Mary took collection for children's toys, Edith entertained several Greek girls one night. Emma took a poor girl some of her cake and Susie gave four hungry negro boys her ten cent bag of candy. (Sits down.)

Pres. Is the report correct? Well, we are ready for this week's reports. I hope there are a lot of them. I'll start: I saw a little boy crying in the street in front of our house, and I took him in and gave him my whole piece of chocolate pie. (She appeared proud of this) You now Jane.
Treas. I helped mother with the dishes.
Pres. I'm sorry but home work doesn't count with us. (Treas. sits down and hangs head in shame.)

Pres. Next, Edith.
1st Member. Well, I've been sick and haven't felt like doing anything.

Pres. (Stands and looks disappointed) All right, Mary, tell us what you did.
2nd Member. Oh, I made some fudge Tuesday and gave it all to the children on 4th St., whose mother is out of work. They surely were glad to get it.

Pres. Is that the only deed?
2nd Mem. Yes.
Pres. Let's see what our Secretary did.

Sec. (Hanging head in shame) There wasn't a thing I could do. I tried to think of something. Will I be kicked out of the club? This is my third time.

Pres. (Rising slowly) What can we do girls? She isn't the only one with three black marks. We can't kick everyone out. (Everyone sits and
June, 1933

THE HEALTH BULLETIN

Treas. Mother said that I'd have to stop coming to these club meetings every week, cause they never amount to anything.

Pres. Can't anyone think of something to do. Those Westover Hill Club girls will surely laugh at us if we break up. Let's all come once more and try to get all twelve members here. Then we will vote on whether to drop the club or not. (All prepare to leave, quite sad and disappointed.)

ACT II

Scene same as before.

Time: A week later—next meeting—all present except Pres. Girls are laughing and talking among themselves.

Treas. Oh, boy, I've got a good idea.

1st Mem. I don't bink we will have a break up our club.

2nd, 3rd and 4th Mem. 0, I don't either. (Enter Pres. running.)

Pres. Hello, everybody. Sorry I'm late. I'm hoping this won't be our last meeting. Let's not have the regular business, but just vote. All in favor of keeping the club raise your hand. (Covers her eyes with her hand quickly—and then slowly looks up. On seeing all hands up she smiles.) Goody, that means we're going to keep it.


Pres. (Astonished at their enthusiasm) Just a minute. One at a time.

Jane. I have an aunt who is a nurse and I told her about our trouble. She suggested a lot of things to do. She said the first trouble was in the attendance and it's because we sometimes feel bad. She asked if the members ate between meals and ate candy and cake like I do. I said, "I guess so," She said we had all better start forming good health habits and start to feeling good before trying to do something for others.

Pres. Yes, but how are we going to know exactly what to do to form good health habits?

Susie. That's exactly what I want to tell.

I got tired of being sick so I asked our doctor how I could stay well after he cured me. He told me to look up the health rules in my hygiene book, so I did.

Pres. Miss Jones will you read us those rules and I'll ask the Secretary to take them down.

Susie. (Reading slowly) (Everybody very attentive)

1. Drink no coffee, tea or coca-cola.
2. Sleep from 8 to 9 hours a day.
3. Sleep with room sufficiently ventilated.
4. Eat a fresh fruit every day.
5. Drink 1 qt. of milk per day.
6. Eat a fresh vegetable every day.
7. Stay in open air at least 2 hours a day.
8. Drink from 4 to 6 glasses of water a day.
9. Take a warm or cool bath daily.
10. Brush teeth at least twice a day.
11. Change undergarments every other day.
12. Eat only at meal time.
13. Keep finger nails and hair clean.

Now he said if we did all this we would surely feel better and could fight the disease germs.

Pres. Let's make those health rules our code, instead of all that other stuff we have written down.

Members. All right, let's do.

Pres. All raise your right hand and repeat after me "we hereby promise to keep this new code of health rules every day.

(Club members repeat it and sit down smiling)

Treas. Madam Pres., My mother said we weren't doing good deeds when we gave cake, candy and pie to little children between meals.

2nd mem. No, because didn't that rule say to eat only at meal time?

Sec. Madam Pres., we can do our good deeds by trying to get other children to keep these rules.

Pres. Yes, let's all try to influence others by our code. We will meet week after
next and see if we don’t have better reports. Is there a move we adjourn.
1st Mem. I move we adjourn.

ACT III
Time: 3 months later.
Scene: In President’s home (President is holding a newspaper with a picture on it.)

Pres. Gee, I still like to read this even if I did read it all day yesterday.
Jane. I do too. Aren’t our pictures good?
Pres. I’ll say—a happy, cheery bunch is what my Sunday School teacher called us.
Jane. Let’s hear it again.

SECRET SERVERS AWARDED.

Secret Serv­ers Awarded. (Looks up) That’s a great headline, isn’t it? The county physician and home demonstration agent of Orange County, awarded the Secret Servers Club twenty-five dollars for their loyal service to the poor of the city. The club has helped many find joy and health by giving them fresh fruits, vegetables and milk. Many mothers were gladdened by these girls keeping their babies in the sunshine while they attended their house work. These young ladies deserve this honor for their worthy deeds.

SIXTY-SECOND ANNUAL MEETING AMERICAN PUBLIC HEALTH ASSOCIATION

THE American Public Health Association, foremost sanitary organization in the United States, announces its Sixty-second Annual Meeting, to be held in Indianapolis, Indiana, October 9-12, 1933.

It was in Indianapolis in 1900 at the Twenty-ninth convention of the American Public Health Association that Dr. Walter Reed read a paper entitled “The Etiology of Yellow Fever—A Preliminary Note” indicating that the mosquito serves as the intermediate host for the parasite of yellow fever. History was being made in the Old German House that day, yet it is reported by some of those present that the epochal report was received only with mild interest.

At the Sixty-second Annual Meeting it is planned to honor the only living participant in the famous Yellow Fever Experi-

ment, Dr. John R. Kissinger, at a special memorial session.

The scientific program will discuss every aspect of modern public health practice, from the viewpoint of the health officer, the laboratory worker, the epidemiologist, the child hygienist, the industrial hygienist, the nurse, the vital statistician, the health educator, the food and nutrition expert, the sanitary engineer. Distinguished scientific pronouncements may be expected from the outstanding personalities in the public health profession who will contribute to the program.

The American Public Health Association, 450 Seventh Avenue, New York City, will be glad to send more complete information about its Indianapolis Annual Meeting, to anyone interested.
This Raleigh baby as you may see, at the time this photograph was made was one year old and had four teeth. Her weight was exactly normal. Health record for first year perfect. She was completely immunized against diphtheria long before time for the birthday celebration. Her parents inform us that she is being raised strictly by "the book." Meaning, of course, in accordance with the helpful suggestions in the literature supplied by the State Board of Health. This service is available to the mother of every infant in the State who will write and ask for it.
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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils  Hookworm Disease  Smallpox
Cancer  Infantile Paralysis  Teeth
Constipation  Influenza  Tuberculosis
Chickenpox  Malaria  Tuberculosis Placards
Diphtheria  Measles  Typhoid Fever
Don’t Spit Placards  Pellaabra  Typhoid Placards
Eyes  Residential Sewage  Venerable Diseases
Flies  Disposal Plants  Water Supplies
Fly Placards  Sanitary Privies  Whooping Cough
German Measles  Scarlet Fever

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)  Table of Heights and Weights
“Our Babies”  Baby’s Daily Time Cards: Under 5 months: 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
Prenatal Letters (series of nine monthly letters)  Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Minimum Standards of Prenatal Care  Instructions for N. C. Midwives.
What Builds Babies?  Breast Feeding
Breast Feeding  Sunlight for Babies
Sunlight for Babies  Hints to North Carolina Mothers who Want Better Babies
Hints to North Carolina Mothers who Want Better Babies  Infant Care. The Prevention of Infantile Diarrhea.

CONTENTS

Notes and Comment .................................................. 3
Increase in Malaria Imminent ..................................... 7
Mosquito Control and Minor Drainage by Open Ditches ........ 8
Vital Facts about School Sanitation in North Carolina ...... 10
Public Health Nursing from the Standpoint of a Practicing Physician ......................... 13
The Central State Hospital at Raleigh .......................... 14
The Soybean as a Source of Calcium ........................... 15
Fifty Years Ago ......................................................... 19
We do not know whether many of the people of North Carolina will go to the World's Fair in Chicago this summer or not. It is probable that thousands of our citizens will go. It would seem that this is a fine summer to hold the fair. The last one held in Chicago was about forty years ago, and large numbers of the people from North Carolina attended, although that year marked the peak of the "panicky" hard times 90's. It was well known at that time that, although the people had no money to pay taxes or the doctors or the preachers, it was the day of excursions, trains running from every point in the State to the mountains, to the seashore, to Washington City, and so on, and people found the money by the thousands to take advantage of these trips. The same year thousands of them went to Chicago. Quite a number of them came back from Chicago and developed smallpox and typhoid fever and other virulent diseases.

The purpose of this comment now is to suggest to people in this State who are expecting to attend the Chicago World's Fair this summer that they go about right now having their physicians give them vaccine protection against typhoid fever and smallpox. The Illinois State Health Officer calls attention to the fact in the current issue of the Illinois Health Messenger that forty years ago Chicago had a most unhappy experience as a result of the virulent type of infection from smallpox, brought in from several of the foreign countries, which served to infect many people throughout the country. In the city of Chicago alone 1033 people died of smallpox the year following the fair. It was a disease of deadly type, and there is plenty of it in the world today. We note that many boy scouts and other people are planning to attend this Fair, going in gangs on trucks, camping by the roadside to and fro and otherwise exposing themselves to typhoid fever and smallpox. To all such this suggestion should serve as sufficient warning to protect themselves completely, in so far as vaccination will protect against typhoid and smallpox, before starting to the Fair.

* * * *

From time to time we find it necessary to call attention in these columns to the menace of the open medicine closet in so many homes, placed within easy reach of very young, irresponsible children. Very frequently the daily papers carry the statement that some child, generally from two to five years of age, has died of some kind of poisoning left within easy reach by some careless adult. Not long ago the newspapers reported the death of one child, age three years, from strychnine poisoning. This occurred as a result of someone leaving within easy reach of the child a box of small cathartic pills, in popular use throughout the country.

It should be known by everybody that the proprietary cathartic pills of almost every character contain strychnine in some form, the much exploited "vegetable" ca-
Some of these packages have the formula printed on them and some do not. The writer was a practicing physician for nearly ten years. He dispensed his own medicine, and every day had occasion to dispense medicine of this character, which he invariably marked on the package “Poison,” and cautioned the patient to keep it out of the reach of children.

In this particular case each one of the pills contained one-sixtieth of a grain of strychnine. The pills were very small; and all of us know that babies naturally put anything in their mouths they get hold of. The bitter taste does not deter them at all. As a consequence, this little fellow obtained the box containing some one or two dozen of these pills. Four or five were sufficient to produce fatal poisoning.

Again we would urge upon everybody that they keep their medicine of every description out of the reach of children. In these days, when spraying of fruit trees, vegetables, and even rosebushes is an essential procedure in fighting insect pests, all the sprays being poisonous, it is more important than ever that all poison material, including lye used as a common household product, should always be kept out of the reach of small children.

The Slate Board of Health is greatly concerned about the continued high infant and maternal death rate in North Carolina. As previously reported in these columns, the “infant” death rate for 1932 was lower by more than six points than ever before in the history of the State. At the same time, it is considerably above the national average. The “general” death rate, on the other hand, in North Carolina is considerably below the national average; in fact, one of the lowest of any of the states of the Union. The maternal death rate in North Carolina is something like 30 per cent above the national average.

The only way to get these rates down is through continued and persistent and insistent public health education. To accomplish this effectively every agency in the State capable of rendering assistance must be commandeered. Even the parent-teacher associations can help through the promotion of programs, emphasizing the necessity for preparatory health work among the pre-school groups taking this right down to birth.

The Health Bulletin of the City of Dayton, Ohio, reports a decrease in maternal mortality of about 50 per cent between 1916 and 1932. The maternal death rate in North Carolina for 1916 was 7.2 per thousand live births. In 1932 the maternal death rate in this State was 6.8 (provisional) per thousand live births. While the city of Dayton, Ohio, was reducing its maternal death rate by about half, North Carolina only reduced its rate by about four tenths of 1 per cent.

We will let the health officer of Dayton explain in his own language what has accomplished the favorable result there in order to illustrate how far we must go to make the same showing in North Carolina. The health officer of Dayton makes the following statement:

“Many factors work together to bring about this favorable result. So highly organized is the prenatal, natal and postnatal work that practically every maternal case in this city has prenatal attention of competent physicians and nurses. More than one-half the births occur in the hospitals and all births are attended by physicians.”

In the foregoing statement you have in a nutshell the whole secret. The extension of prenatal, natal and postnatal work that practically every maternal case in this State has prenatal attention of competent physicians and nurses. More than one-half the births occur in the hospitals and all births are attended by physicians.”

In the foregoing statement you have in a nutshell the whole secret. The extension of prenatal, natal and postnatal work that practically every maternal case in this State is essential. Also equally as important is the necessity that more women in this State should have the attention of competent physicians at childbirth. Let us compare again. In the city of Dayton in 1932, every birth was attended by a competent physician; in North Carolina the same year nearly one third of the births in this State were attended by midwives, some of them incompetent, dirty, diseased, and impossible in every respect.
The dirtiest and most unscrupulous nostrum advertising in the world today is being carried right into the homes of a large majority of the American people through the medium of the radio: It is the most subtle and dangerous advertising it is possible to permit. Every hour through the day and night, until all the radio stations sign off, intelligent people are shocked to hear the beautiful, resonant voice of an announcer come in over the radio proclaiming the so-called virtues of some nostrum.

The worst of the nostrum advertising has been excluded from the reputable newspapers and periodicals of the country. This action followed a long period of educational work on the part of public health officers and the medical profession who were greatly aided by some forward-looking newspaper men like Samuel Hopkins Adams. The radio, however, has opened an entirely new field, one that is a thousand times more dangerous than the newspaper.

Some months ago this writer was enjoying some particularly good music over the radio one evening when suddenly the music ceased and a feminine voice came shrieking into the room, "Oh, I am dying! I am dying!" The voice of her escort was all sympathy, of course. The trouble seemed to be a violent headache developed while riding in the automobile right on the street all in a minute. The escort said: "Oh, we will hit it for Smith's drug store, right around the next corner; he has got some medicine there that will cure your headache in ten seconds."

In less time than it takes to write these words, this same feminine voice came floating in over the radio proclaiming to the whole wide world that she had taken a dose of Whoseits Famous Headache Cure; and, bless Patty, the headache was gone by the time she got the dope swallowed.

This was an actual occurrence, and the listening physician was shocked almost enough to throw him out of the chair. Any first-year medical student knows that a headache, or any other pain, cannot be relieved that quickly, not even by the inhalation of chloroform or ether within that time; it takes some minutes to take effect. And yet such loose statements and such advertising is common through the medium of the radio all throughout the country.

The suggestion here is that every physician and every intelligent layman that believes in truth in advertising make a note of all such impossible statements when coming in over the radio and sit down and spend a minute or two in writing a letter to the station through which the message comes protesting any such advertising.

Of recent months there has appeared considerable in the public prints, some of it going so far as to be quoted in the Literary Digest, about hookworm disease and whether or not it has been eradicated in the South. During the winter, in order to get some first-hand, accurate information on this subject, we directed the six school nurses engaged in school work at the time in six different counties, to obtain specimens from the children of the fourth grade in a single rural school of each county, the school to be picked at random. They were given instructions to obtain specimens from all of the children present in one room on a single day. Some of the children failed to return the specimens as requested, a few reached the Laboratory not in shape to be examined, but sufficient information was obtained to enable us to make an accurate report.

A total of 204 specimens was obtained of which 18 contained hookworm eggs. That is a little less than 9 per cent of the children infected with hookworm. Forty-two of the children were infected with other intestinal parasites, which indicated the need of medical treatment at the time. Following is the report by counties:

Alamance County—Of 34 specimens obtained and examined, none contained hook-
worm. Burke County—Of 30 specimens, 3 were infected. Lincoln County—Of 29 specimens, 4 contained hookworm eggs. Rockingham County—Of the 37 specimens, 4 contained the eggs. Caldwell County—Of 38 specimens, only 3 were found infected. Madison County—Of 36 specimens examined, 5 were infected. Of the 36 specimens examined from Madison County, however, 18, or one half, were found to be infected with parasites other than hookworm. In the rest of the specimens from the other counties, the infection from other parasites was nominal.

These figures indicate that hookworm disease in its severe forms, as manifested by the dirt-eating, pot-bellied children, is no longer present, except in rare instances. This infection of 9 per cent compares to about 90 per cent of infected children when the old Rockerfeller Hookworm Commission made its survey in the one hundred counties of North Carolina in 1910 and 11. The infection in these cases, for the most part, was light.

In our opinion there is sufficient infection among the children in the State at present to demand the continued attention of health officers and practicing physicians and sanitarians until the disease shall have been completely eradicated from the State. But it is no longer the major public health problem it was twenty years ago. It is our intention this fall and winter to greatly extend this survey to cover more of the middle and eastern counties of the State and also to include in the survey some of the Negro schools. We will report at a later day on the result of such survey.

* * *

The Legislature of 1933 has come and gone. It enacted into law more than seventeen hundred bills. Just how many of the new laws the people would be better off without is not within our province to say. There is one new law, however, which is encumbent upon the State Board of Health to condemn as emphatically as possible. We refer to the provision in the new School Law which allows the State School Commission and the County Boards of Education to add one hour to each school day or to teach six days in the week.

We earnestly hope the State School Commission will adopt as its Rule Number One, the first day it organizes, a regulation to forbid any such a health destroying expedient at any time in any county. The bill bringing in this provision ought to have been entitled “An Act to Increase the Practice of Physicians, Increase the Death Rate, and Overflow the Hospitals for the Insane.”

The editor speaks as a physician, a health officer, and the father of school children. We have consistently protested against the long school day for beginners and children in the lower grades under the present system. Now, to add one hour per day or one day a week to the already long hours in inexcusable. Some of our Old Timers (and the writer is glad to claim membership in that club) make the mistake of comparing the old time school day, which began at eight in the morning and continued until four in the afternoon, with our modern system of graded classes and high power teaching. Under the old system there was no grading. The infants and the Latin class more frequently occupied the same room at the same time. The children came into school at any time they could get there after a more or less long walk over muddy roads. During most of the hours of the day about as many children were outside the schoolhouse loitering around on the grounds as were inside. The whole system was leisurely arranged. The mass of them never learned more than the alphabet. The few bright pupils were able to shine by contrast with their miserable fellows in ignorance. As a result the business of education as well as money making for the mass of the people was largely carried on in the North. Our colleges and what little business we had was run for the most part by people who had educational training in the North. A large proportion of our children could leave school and enjoy
their hookworm and malaria to the fullest extent and have typhoid fever and go to heaven early. Today the pressure put on children by our modern system is terrific. Everything is systematized and standardized and every study is graded. The system observed daily in any one of a hundred high schools in the State is much more complicated and pressing than at the State University itself thirty years ago. The result is that unless the child has plenty of time to physically and mentally recuperate each day and over week ends many of them leave school with health damaged beyond repair.

Let us save the big taxpayers money in some other way or close the doors of our schools completely, rather than sacrifice the health of the children in any such a cruel manner.

Increase in Malaria Imminent

By D. F. Milam, M. D.
Epidemiologist, North Carolina State Board of Health

According to information reaching the Central Office the amount of malaria in the State has taken a sharp turn upward. This is of course directly related to a parallel increase in the number of mosquitoes. Several individuals, who have traveled extensively in the eastern counties of the State, have reported that not for years have they noticed such a tremendous annoyance from mosquitoes. Of course, not all mosquitoes are carriers of malaria, but in two or three surveys made in single communities the anopheles quadrimaculatus, which is our vector of malaria, is proportionately more prevalent.

Apparently, we are to experience a great increase in malaria in the State during the present summer and fall. This is a serious situation and much could be done to prevent it. The conditions leading to a sharp increase in malaria are directly related to the conditions favorable to the breeding of the anopheles mosquito. Probably one of the items most favorable to this increase in breeding is a moderately heavy rainfall (associated with a warm open spring) which leads to the formation of many temporary or semi-permanent collections of water. The anopheles quadrimaculatus prefers as a place to deposit eggs shallow, grassy ponds, preferably where there is considerable shade. Such a location is ideal for the development of anopheles mosquito larvae, especially if there is a large quantity of floatage which will serve as a protection for the young larvae against their natural enemies. The breeding of anopheles mosquitoes is, of course, not limited to such temporary pools, but it is the temporary pools which frequently are responsible for the great increase in the number of mosquitoes. However, no community should take the hopeless attitude and suffer this invasion of a disabling disease without doing something to stop it. The most effective point of attack in the series of events leading up to a malaria epidemic, or endemic malaria for that matter, is to destroy the breeding places of the mosquitoes. Many towns as a matter of general sanitation should pay much more attention to their land drainage. In times of a malaria epidemic it is imperative that they do so. Frequently, a few ditches will do wonders in relieving the situation. Straightening the banks of sluggish creeks, putting a ditch through a low-lying area, or opening a drain to a small swamp may be all that is necessary. Borrow pits made for road construction, particularly if they have grassy edges and some floatage, are potential hazards and should be drained. If the body water is such that it cannot be drained, its availability as a mosquito breeding place can still be destroyed by applications of oil or Paris green.

At the present time a really remarkable opportunity exists for municipalities to
do much permanent improvement along the lines indicated above, which will be of benefit not only as a malaria control procedure but also will serve to eliminate pest mosquitoes which do not carry malaria and other insanitary conditions due to low-lying, undrained areas. This opportunity is afforded by the relief funds available from the Federal Government for relief of the unemployed. These funds would well be turned into most productive channels by their employment for these public health betterments. Even local relief funds could well be turned into this channel and a great quantity of labor placed in this useful work.

The State Board of Health has for distribution pamphlets on "Malaria, its Cause, Prevention and Cure", and on "Minor Drainage for Control of Malaria", which are available on request. Anyone interested should write for these informing booklets.

Mosquito Control and Minor Drainage by Open Ditches

By M. R. Cowper

DRAINAGE is the removal through natural or artificial channels of that water retained on or in the soil which is of no service to plant life. This water is detrimental to the soil and presents a public health problem of great magnitude in that it is essential to the spread of malarial fever. The purpose of this paper is to bring out a few facts to those people who are doing minor drainage work so that it will render the land more productive and reduce mosquito breeding.

Malarial fever would not exist were it not for a certain species of mosquito known as the anopheline, which is responsible for its spread. Only the female mosquito will bite because she must have a meal of warm blood before she can deposit fertile eggs. If the blood happens to be from a human and the person has malaria infection, the mosquito, if it is an anopheline, becomes infected and persons bitten some days afterwards may become infected with malaria parasites. Unfortunately, the anopheline is found in most parts of North Carolina. Water is necessary for the development of the mosquito. The female must deposit her eggs in water and the female anopheline mosquito chooses such places as fresh water in pools, clogged ditches, ponds, lakes, slow moving streams and ponded swamps. Here the young mosquito, known to many as a wigglctail, proceeds to develop for about two weeks, after which time it emerges from the water an adult, its recognized form. From the above account one can understand the importance of allowing at least a minimum area for mosquito breeding.

Before beginning work on a drainage system the person in charge should have a thorough knowledge of (1) the boundaries of the watershed for making an estimate of the amount of water to be taken; (2) All possible inlets for the system; (3) all existing water courses and sloughs; (4) the highways and railroads; (5) location size and condition of all bridges or culverts; (6) Property lines; (7) areas under cultivation; (8) swamps and wooded areas; and (9) the relative elevations of all parts by the watershed. The location of an open ditch should follow the general course of natural drainage as nearly as possible with due regard to the alignment; however, there are times when this is not practical. When the growth along the natural drains is so dense that it is not economical to clear them then it is best to make a complete new location. There
are no fixed rules for location but a con­sideration of the following items will aid in making a final decision:

1. The value to stream flow of straight courses and gradual curves.
2. The desirability of locating drains along property lines whenever possible.
3. The damage done farms by ditches which cut off small inaccessible corners of fields; and extend across them in angling or irregular direction.
4. The economy of traversing natural depressions.
5. The injurious effect of unstable or caving soils on ditch construction and maintenance.

When the drainage system requires many branches the main ditch should ob­viously occupy the lowest ground and start at the outlet extending up slope to the upper end of the watershed following the most centrally located natural de­pressions. The lateral ditches should branch from the main and follow secondary lines of natural drainage. When the land has no marked natural depression then the main ditch should be located at the most central place and should follow property lines. There are two systems of ditches; the herring bone which is used in flat countries and where the land lies in two planes; and the contour or intercepting systems which drains swampy areas due to seepage from adjacent hill sides. The herring bone consists of a main ditch passing down the center with laterals entering alternately from the side and at an angle to the main. The intercepting sys­tem consists of a contour ditch located slightly above the base of the hill which intercepts the ground water before it reaches the ravine. This must be cut to hardpan.

The ditch must be of sufficient design to drain the land which it serves and have enough capacity and grade at all points to carry within its banks the water brought to it. Grade determines the velocity of flow and where the grade is less than ten feet in a thousand, it is neces­sary that some local surveyor be employed to run a line of levels over the location. In this case the surveyor shall be expected to instruct the foreman how to follow the determined grade. The velocity of the water should be fast enough to prevent sedimentation and mosquito breeding and slow enough to prevent erosion. When the grade is not uniform the current will tend to cut and form pot holes where the grade is steepest; and deposit silt where the grade is less. The grade lines convey­ing ditch water under roads and buildings should be slightly more than that of the ditch leading to them. Since the amount of water in a ditch increases as it ap­proaches the outlet, it is necessary that the ditch increase in accordance so that the velocity shall remain as uniform as possible.

The most desirable shape of a ditch is that with bottom and sloping sides unless the ditch is a small lateral then it should be narrow and a V or U shape used. Suggestive shapes are illustrated in the leaflet. The bottoms should never be flat and should be low enough to drain the land which it serves; also as narrow as possible to preserve velocity when the discharge is small. Sometimes, a small narrow channel can be cut in the bed of large ditches to take care of dry weather flow, where possible this is recommended. An extra depth of from 1 to 3 feet will provide for the settling up of the main channel which always takes place during the first few years of con­struction.

The side slopes depend on stability and method of construction. They must neither cave or slide. Sandy or loose loamy soil require rather flat slopes of about 2 feet horizontal to 1 vertical; stiff clay soils need only 1-2 foot horizontal to 1 vertical; while some peaty materials will stand nearly vertical; for the average soil a 1 to 1 will be sufficient. The slope required by the weakest earth through which the ditch runs shall be the slope adopted for the entire ditch. It is not wise to ever make the slope too flat, for such conditions favors the erosive action
of water. One ditch should never enter another at right angles for both would tend to reduce the velocity of the other and deposit sand and silt at the intersection. The lateral should enter the main ditch to form a sharp V angle with the point downstream as shown in the figure below. The earth excavated from the ditch and piled in a ridge parallel to the bank is called waste bank and the natural ground between the ledge of the ditch and spoil bank is called the "berm". Berms should be clean, covered with strengthening vegetation and as wide as method of construction will economically allow, for they protect the ditch from caving in, due to the excess weight of waste bank. Waste banks must have openings installed at each natural depression to allow surface water from the adjoining fields to enter unless conditions will permit their being spread out and leveled off. In case of ditches along a hillside the waste banks shall lie completely on the down side of the hill.

The best designed drainage system will give poor results unless it is properly maintained. Maintenance consists of; (1) keeping the bottom to grade, that is the frequent removal of excess sediment and the filling of pot holes with well packed stones; (2) keeping the cross-section of uniform width; (3) the removal of obstruction that affects the velocity of the water; and (4) the removal from the bottom and sides of grass and weeds that furnish food and protection for mosquito larvae. Ditches of soft soil and having low grade are the most expensive to maintain and unless given frequent attention may become the source of abundant mosquito breeding. Ditches straight having narrow bottoms with clean cut slopes are the least expensive and give the best results. Cattle and other bulky stock should be kept from the ditch. Fencing may be necessary.

Construction work on a ditch should always begin at the outlet and move up grade while maintenance work shall begin at the upper end so that the fine trash will float ahead.

**Vital Facts About School Sanitation in North Carolina**

*By Warren H. Booker*

The sanitation of our North Carolina schools is in a dangerous and deplorable condition. Over 1,000 of our public schools do not have sewerage of any kind—not even privies. This means that approximately 47,000 school children have to retire to the bushes, or disregard the calls of nature while in school. A survey of 76 counties shows that 19% of the schools have no sewerage; only 24% have fair to good sewerage, while 57% have dangerous, insanitary sewerage facilities.

The condition of the drinking water supplies at our schools is no better. 33% of our schools have no water supplies, only 30% have fair to good water, while 37% have questionable to dangerously polluted water. In some schools without water little children actually drink from nearby branches and ditches, sometimes scooping it up in their hands, and sometimes lying down flat and drinking directly from the stream, regardless of the sanitary condition of the water.

The details regarding our public school sewerage and our public school water supplies in North Carolina are shown in the following tables:

<table>
<thead>
<tr>
<th>Kind</th>
<th>No. Of Schools</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>City Sewerage</td>
<td>369</td>
<td>212,007</td>
</tr>
<tr>
<td>Pit Privies</td>
<td>2600</td>
<td>254,003</td>
</tr>
<tr>
<td>Surface Privies</td>
<td>825</td>
<td>63,100</td>
</tr>
<tr>
<td>Septic Tanks</td>
<td>559</td>
<td>203,120</td>
</tr>
<tr>
<td>No Sewerage</td>
<td>1009</td>
<td>47,041</td>
</tr>
</tbody>
</table>
Sanitary Conditions

Fair to Good 1283 395,388
Bad 3070 336,842

Public School Water Supplies

City Water 477 243,248
Drilled Wells 1233 258,852
Shallow Wells 802 91,008
Open Wells 437 33,267
Springs 631 43,664
No Water 1783 109,232

Summary

Fair to Good 1629 496,348
Bad 1951 173,691

Roughly, one-fifth of our schools have no sewerage facilities, one-fourth have fair to good, and over half have insanitary sewerage facilities of one kind or another.

Approximately one-third have no water supplies, slightly less than one-third have fair to good water, and slightly more than one-third have questionable to dangerous water supplies.

The percentage of typhoid fever deaths among North Carolina children under school age is lower than it is in the registration area of the United States. Likewise the percentage of deaths among North Carolina adults over school age is lower than it is in the rest of the United States, but the percentage of typhoid deaths of our North Carolina school children is higher than it is in the rest of the United States.

Chart showing relative percentages of typhoid fever deaths by age groups in North Carolina and the United States. Note that relatively fewer deaths from typhoid fever occur in pre-school and post-school ages in North Carolina than in the rest of the United States, but more during school ages.

Similarly a higher percentage of deaths from other filth borne diseases, such as diarrhea and enteritis, occur during school ages in North Carolina than in the rest of the registration area of the United States, but during the post-school ages our percentage of deaths is lower than that in the rest of the country. Hard cold facts like these suggest in no uncertain terms that there is something radically wrong with our system of school sanitation.

As a suggestion that our schools do not need to be death traps, it is only necessary to note what one active North Carolina county accomplished after sanitating their
schools. Durham County sanitized their schools in 1927-28 by supplying pure running water and adequate sewerage where haphazard sanitation, or none at all had existed before. The following table shows the number of deaths in Durham County from typhoid fever for the 5 year period immediately before this school sanitation, as compared with the number of typhoid deaths for the 5 year period since school sanitation by age groups. Note especially that typhoid deaths among school children were reduced from 12 to 0 following school sanitation.

<table>
<thead>
<tr>
<th></th>
<th>Before School</th>
<th>School Post School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ages</td>
<td>Ages</td>
<td>Ages</td>
</tr>
<tr>
<td>Before School Sanitation</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>After School Sanitation</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

Of course, it is not contended that by sanitating our schools we can banish typhoid fever among school children as completely as did Durham County. However, it should be borne in mind that during the last 10 years the actual cost of food, clothing, shelter, and care of school children who were needlessly killed off through our negligence by this one, single, needless filthy disease alone was between $3,000,000 and $4,000,000, or much more than enough to provide every school in North Carolina with pure running water and adequate sewerage. Even the loss to tax payers, due to teaching these little children in our schools, only to have their lives snuffed out by typhoid, estimated at $25.00 per year per pupil, has amounted to over $100,000.

The best efforts of health workers in the past to have our schools sanitized have usually been brought to naught particularly since the State has taken over the operation of our public schools—for one or more of the following reasons: (1) an ineffective law, (2) lack of centralized authority, (3) a feeling that this is a State problem, and finally (4) by reason of no funds with which to sanitize. What little law we have was written before the day of extensive highways and consolidated schools. It is a rather vague, unwieldy law, and neither direct nor specific. It divides the responsibility between 100 county school boards, 100 boards of county commissioners, and a host of school superintendents, principals and others. This has resulted in the past in a tremendous waste of public funds in haphazard, hit and miss attempts at sanitation, much of which is worse than wasted. In trying to follow our present, obsolete, unwieldy law, we encounter public opinion which takes the position that, "Let the State do it. They have taken over the operation of our schools. They can do it better, cheaper, and easier than we can. Let the State sanitize the schools". Finally, about the only source of revenue available with which to provide school sanitation is that derived from such uncertain sources as fines, forfeitures, dog tax, and poll tax, when and if collected. This meager fund in most counties has been in the past more than consumed in paying such charges as fire insurance and rents, leaving nothing for the protection of little children compelled to attend such schools for 8 months a year.

Under the 1933 School Law, in addition to funds derived from such sources as fines, forfeitures, penalties, dog taxes, and poll taxes, provision is made whereby local tax levying authorities shall levy an amount to meet the needs of maintaining the school plant and fixed charges. This is quite an improvement if maintenance of school plant and fixed charges can be interpreted to include adequate safe water supplies and sewerage.

But in the interest of economy and efficiency it would seem that we might well go one step further and place the whole matter of school sanitation under one central authority, in cooperation with or assisted by the State Board of Health. The wisdom of such a plan is suggested by the successful manner in which the State Highway Commission sanitized the prison camps in cooperation with the State Board of Health.

These prison camps are centralized under
one single, efficient, business organization, and they function like a simple, well organized machine. What has proven so highly successful for our prison camps should at least be suggestive for our schools.

In this day of centralized schools and state operated schools, it would seem that certainly matters as vital as the life and health of our school children should be reasonably well safeguarded. Aside from all factors of sentiment, it is plain business economy to do this. It is indeed difficult to understand or reconcile the absurdity of our striving to educate our children, only to weaken and sicken, and kill them off with typhoid fever, or some other easily preventable filth borne disease before they can become useful, productive citizens. What a mockery of education it is to be trying to teach our children hygiene and sanitation in the class room, and slaying them by the hundreds with insanitation on the school grounds.

Public Health Nursing From the Standpoint of a Practicing Physician

By R. W. Taylor, M. D., Oxford, N. C.

The public health department is an essential of a growing thriving community. It is the cheapest form of insurance. One of the integral and essential cogs of that machine is the public health nurse. It is to her that the patients come for sympathy and help in their problems—financial, religious, social as well as physical. A public health nurse's duties are vague and varied; they include instruction and social work as well as nursing; in fact nursing is only a small part of her duties. The public health nurse is a part of an organized community effort to prevent sickness, maintain efficiency, prolong life, relieve suffering and promote individual and public health.

In these days of economic stress when so many of our people are unable to afford medical attention and are turning to some one who is competent and capable of instructing them on matters of personal health, the nurse is even more important than before.

Sponsored by the Bureau of Maternity and infant welfare of the State Board of Health they are doing good work in their prenatal clinics where the prospective mothers are given instructions in regard to their diet, exercise and mode of living. When any abnormalities in their blood pressure, urine or blood are picked up, such cases are referred to a physician for treatment. The mortality rate for live births has decreased as well as the maternal mortality.

During the past two decades the infant mortality rate has decreased from 90.3 to 66.1, and the death rate from diarrhea and enteric colitis has decreased from 81.2 to 17.3. This has been accomplished by the care and feeding of infants and the immunization in early infancy against diphtheria. This education has been through the distribution of pamphlets on care of infants and the establishment of well baby clinics in towns and cities throughout the state, where the mothers are instructed in the proper care and proper handling of foods for infants. The public Health nurse is responsible for the success of these clinics, for it is she who stirs up the enthusiasm of the mothers to bring their children in and it is she who sees that the instructions received by the mothers from the physicians are carried out, and whether they are carried out in the proper manner.

In the pre-school clinics held for older children a further check is made on children in order that defects might be corrected before they enter school. The detections and correction of these defects is saving our tax-payers considerable money.
THE HEALTH BULLETIN

July, 1933

in prevention of repeaters in our public school systems.

After the panic of 1907, the first great outbreak of Pellagra in North Carolina was noticed; it had remained prevalent up to 1931. During the past two years, in spite of the depression, the incidence rate of pellagra has decreased. I firmly believe that the efforts of the Public Health department in stressing the value of an adequate diet of proteins, carbohydrates and fats with addition of vitamins, has been a big factor in the decrease of this dreaded disease.

My association with Public Health nurses has been always most pleasant, however, I wish to stress this point that a Public Health nurse should always remember that her work is educational. She should never attempt to treat a patient. Any patient who is sick should be referred to a physician. The work of the Public Health nurse is to prevent and not cure a condition. She should never show any partiality to any physician but should refer a patient to her family doctor, who if unable to treat a patient will refer it to a Specialist when necessary.

In conclusion I want to say that the Public Health nurses are an integral part of our community life, an economic safeguard of our health and happiness, and in conjunction with the physicians will help make this a better and safer world in which to live.

The Central State Hospital at Raleigh

Requirements for Admission and Brief Description of Routine Work

By J. W. ASHBY, M. D., Superintendent

The hospital at Raleigh is for the care and treatment of all mental conditions in the eastern part of the State. We also admit to this hospital inebriates (alcoholics and drug addicts), the criminal insane and the epileptics from the entire state.

It might be of some interest to you to know the process which is necessary for the admission of a patient to our hospital. When the conclusion has been reached that a person should be sent to Raleigh for care and treatment an affidavit should be made before the Clerk of Court, which is signed on a prescribed blank and sworn and certified to before the Clerk of Court. The blank should then be taken by a physician, who is familiar with the applicant, who gives the individual’s age, name, social condition and the details concerning the evidence of a mental abnormality. This is signed by a physician and two witnesses in all cases except for inebriates, in which case the application should be signed by two physicians instead of one. The blank should then be returned to the Clerk of Court, and on the fourth and last page it is again certified to by the Clerk of Court and the signature of three witnesses affixed. One of these witnesses should be a doctor. The patients are requested not to bring valuables of the State Hospital and when there is available space the Clerk of Court is notified that the patient will be accepted. When the patient reaches the hospital there is a certain rule of admission and routine that consumes a good deal of time, patience and personality on the part of the nurse or attendant, who makes the first contact with the patient. The patients are requested not to bring valuables with them as they are not segregated. They come in contact with other patients, some of whom may be at the time more afflicted than the new patient, and they might not be entirely responsible. Patient's clothes are then listed. The patient is given a bath and a close inspection made of the physical condition of the patient to get evidence of scars, bruises as well as operative scars. This, as you can see, consumes a good deal of time, and this is usually done before the patient is ex-
amined and a history written by the hospital physician. The clothing is listed and any abnormalities are also mentioned on the admission slip. As soon as possible the patient is given a thorough physical and mental examination by the physician in charge. A blood Wassermann is taken, a urine analysis is made, and a blood sugar and blood urea is run as a matter of routine. A spinal puncture is always made whenever there is an indication for it.

The admissions to the State Hospital have increased in recent years not so much probably for the reason that insanity has increased in proportion to the normal increase of population, but people are gradually getting away from the idea of thinking that it is a stigma to have their friends and relatives cared for in an institution, and the improvement in the service of mental hospitals has increased so materially that this dread has gradually been removed. It might also be added that although our population is increasing the number of employees has been decreased. This has been necessary on account of the limited budget that is allotted to State Institutions, and hospitals have simply been compelled to gracefully accept the same stricture that has been imposed upon other institutions. This statement is made with due apology and reservation, and not with the thought of criticism, but it might also be added that the hospital capacity has increased until at the present time we have little or no room for disturbed patients. Our capacity is 2,190. We have a few vacancies in the hospital, but they are nearly altogether on the better wards and not in the department for disturbed patients.

During the last year an effort has been made in our hospital to further acquaint the nurses in this district with the nursing procedure in this hospital. Clinics were arranged for the nurses from several general hospitals. The doctors in the hospital made brief talks on the different classifications of mental diseases and displayed types of mental conditions so that the nurses could witness praecox and the manic types, about which they have no doubt been instructed at home. We then carried these nurses through the wards so that they could have some further information on the subject. They were shown how the packs were used, and also the continuous baths. The packs are therapeutic measures and there are many patients who are greatly benefited by this procedure. One might think that enveloping a person in a sheet was somewhat brutal, but such is not the case and its benefit as a matter of therapy is extremely beneficial. The packs are never given by the nurse except upon the instruction of a physician. The continuous baths are also used constantly in the hospital. It is quite likely that continuous baths are the best type of therapy for nervous and excited patients. Recently a book on Hydrotherapy by Rebecca Wright, M.D., has been printed and it has been found of vast assistance to us in carrying out the packs and baths.

There is very little medicine prescribed by the doctors, as not any medicine is known that will cure or correct mental conditions. One might, therefore, inquire why should a patient be sent to a mental hospital instead of to a general hospital, but there is supposed to be a cause for everything and Dr. Adolph Myers teaches one of the first things necessary in the mental condition is to remove the patient from the scene of his conflicts. This is one of the reasons why visiting is discouraged for at least thirty days and then not too frequently. Occupational therapy is also used to advantage. The essential virtue in occupational therapy is that it restores confidence. A patient who is depressed should be encouraged to make something useful. We have an occupational therapy department in our hospital, but instead of having only one woman employed for this purpose it would be beneficial if we had four or five. In making these statements in regard to the care of the patients, of course, we can say that the nursing department is confined almost entirely to the female patients. We
also have a Medical Center for the care of surgical conditions and acute illnesses, and the personnel of this building is supplied by the nursing department. The nurse in charge of this building is a Registered Nurse. We have an operating room and frequently operations are performed.

The Soybean as a Source of Calcium

It has long been known that calcium, or lime, is one of the food minerals most essential for the maintenance of bodily health. Lime is needed, not only for bone-building and the maintenance of a healthy state of the bones, but for the nutrition of the brain and nerves. Calcium is also an essential element of the blood.

Many of our foods are greatly deficient in lime. This is a matter of serious consequence for the reason that the body daily loses through the kidneys and bowels seven to ten grains of lime, which must be replaced to prevent serious injury.

Certain foods are rich in lime, although many of our common foods are very deficient in this element. Fine flour bread, for example, contains only one grain of lime to the pound, or one-tenth of the daily requirements; while the fat of meat contains no lime at all, and the lean only half a grain to the pound.

Cow's milk, on the other hand, contains three-quarters of a grain to the ounce, or twelve grains in a pint.

The soybean is also rich in lime. A recent study made at the Yenching University of Peiping, China (Adolph) showed that the soybean curd known in China as to fu is equally as efficient as milk as a source of calcium.

The soybean is already well known in this country but to the present time it has been little used except as food for domestic animals. In China, it has been the staple article of diet for more than five thousand years. In due time, the soybean will win its way to public favor and will come to occupy a large place in the national bill of fare. In South China, the soybean almost completely replaces meat, including fish and fowl, milk and eggs.

—Good Health, Battle Creek, Mich.

FIFTY YEARS AGO

A COLUMNIST in the Reidsville Review sometime ago filled out his column with the following:

"FIFTY YEARS AGO—
Nobody ever got a wrong number.
Nobody ever got an electric light bill.
Nobody ever had a flat tire.
Nobody read titles aloud in a movie."

To the foregoing we would like to add the following supplement:

AND IN NORTH CAROLINA

Nearly everybody had typhoid fever at one time or another and a large number of them died.

There were no hospitals for the care of the sick. One baby out of every four born died before the end of the first year.

Not one full time health officer, either State, city or county, and not one public health nurse in all the State.

There were no screens for the houses, no bedroom nor dining room was ever free of mosquitoes or house flies; nothing was known about the prevention of malaria, and "chills and fever" was as common in season as July rains and Christmas drunks.

BUT

One thing the good old State had then which she has now, just as much alike as the Gold Dust Twins—The same kind of politicians.
A Thought-Provoking Report

A FEW weeks ago a dentist representing the State Board of Health completed ten weeks work for the school children in one of our State's most prosperous cities of the twenty thousand population class. The city is a medical center and has a number of well-qualified dentists of State-wide reputation. The dentist examined a total of 1,934 school children.

Here are some of his findings:

Grade repeaters worked for.................................................... 219
Children having abscessed teeth............................................. 129
Children who are milk drinkers............................................. 995
Number of children who have ever visited a dentist.................. 842
Number who went for emergency only...................................... 505
Total number under regular care of family dentist..................... 337
Total number of children who need dental work and who have never been in a dentist's office............................. 1,092

The parent who cannot be aroused by such facts is DEAD.
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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Table of Heights and Weights

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)
"Our Babies"
Prenatal Letters (series of nine monthly letters)
Minimum Standards of Prenatal Care
What Builds Babies?
Breast Feeding
Suntan for Babies
Infant Care. The Prevention of Infantile Diarrhea.
Table of Heights and Weights
Baby's Daily Time Cards: Under 5 months: 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Instructions for North Carolina Midwives.

CONTENTS

Notes and Comment.................................................. 3
Little America....................................................... 6
A Seaside Health Place........................................... 7
Sanitary Conveniences As Much a Necessity In the Country As in Town........ 8
Interesting Information About Prevention of Typhoid Fever and Diphtheria.... 9
Please Sign Your Name and Address................................ 12
The Endocrines and the Quacks................................ 13
Miss Nell Battle Lewis Confers An Honorary Degree On Dr. Clara Ernall Jones 14
Sanitation a Public Duty........................................ 15
Good Old Home Remedies.................................... 16
Letter From a Piedmont Farm Group................................ 16
Too Much Ethics.................................................. 16
Notes and Comment

SOMETIME ago we commented in these columns concerning the final conviction and incarceration of a notorious Raleigh cancer quack. Since that item was published, a woman who has been conspicuous in the criminal courts of Raleigh as a professional abortionist has been convicted in a trial in Durham and sentenced to the penitentiary. Such occurrences afford just cause for encouragement to law-abiding citizens. Our sympathy goes out at all times to the unfortunate of every class, and we have no desire to gloat over the downfall of any human being. We realize that the criminal courts have to deal with a sordid and miserable class of humans, taken as a whole. Many of them are warped in mentality; their moral development was dwarfed in childhood. All such deserve sympathy. It is only when their activities become offensive and dangerous to the public at large that it seems necessary to put such people behind the bars for the good of society. There is no knowing the number of victims of the cancer quack who are today resting peacefully in many a graveyard. There is no knowing, either, how far the activities of this woman abortionist have contributed toward the downfall of many a girl.

William Cullen Bryant, the great American poet, once gave as his reason for quitting the practice of law and going into literature as a profession that he soon became weary of "drudging for the dregs of men." The business of the lawyer enables him to see the sordid side of life without its sometimes qualifying considerations even more than the minister or the physician. The work of the criminal lawyer for the most part naturally tends toward the defensive side. This is human and understandable, and we are not inclined to find fault with such an attitude; but it mitigates against the conviction of criminals in many instances where the good of society would be best served by their incarceration behind prison walls.

As a rule, in North Carolina it has been very hard to secure convictions against persons who, for profit to themselves, have violated the Medical Practice Act in this State. It is refreshing to us, therefore, to record here that, since he assumed the office of Solicitor of the Raleigh District, Mr. J. C. Little has manifested a sympathetic attitude toward physicians and health officers who would rid the State of the various quacks preying on the public. If each one of the solicitors in all the judicial districts of North Carolina could see the situation as Mr. Little evidently does, the State would soon be rid of a number of notorious quacks still practicing without let or hindrance in some localities.

* * *

Reports of the bites of rabid dogs have been, it seems, of increasing frequency throughout the State this year. A large number of people have had to undergo the trying ordeal of the Pasteur treatment as protection after being bitten by rabid dogs. Quite a number of children in various sections of the State have been bitten and seriously injured by these animals. Valuable cattle have been de-
stroyed, even some mules and horses in one section, as a result of being bitten by stray mad dogs. One or two members of the recent Legislature undertook to draft some legislation which would better protect the people from such dangers. It is a hard question to deal with, and nothing much came of the efforts in the Legislature.

As stated in The Health Bulletin once or twice, before the World War the people of England definitely rid that country of mad dogs by the simple expedient of muzzling and confining every dog in the country for a period of one year and rigidly excluding the admission of any other dog from any other country. The late Dr. Shore felt that this was the most practical expedient to deal with the situation from the standpoint of the country as a whole. It would take national action to carry it through. Forty-seven of the states in the Union might enact rigid restrictions and the one remaining state refusing to do so would nullify the action of the other forty-seven.

In North Carolina it would be possible to greatly minimize this danger by the simple expedient of placing a tax on every dog which would produce sufficient funds to pay for the enforcement of the tax itself, provide for the tags and the inspections, and then for executing all untagged, unlisted, and stray dogs. It is our experience, however, that any member of the Legislature who undertook to deal with the dog question in any such practical manner would then and there forfeit his future political life. Possibly it is a matter for education.

A short time ago a friend told us of a case of pellagra in her section. She said that this woman, who was a middle-aged married woman, had lived on a good farm all her life, had had plenty of food from the products of a good farm in season all the time. Her table had been plentifully supplied with a variety of good food, including all the essentials which it is now claimed will prevent the development of pellagra. Our friend stated that this woman had been gradually declining in health for some years. Finally, in April of this year, her physician made a definite diagnosis of pellagra.

Our friend went on to state her skepticism, in view of this case, about pellagra being prevented through the expedient of the family having plenty of a variety of good food. We asked her one question: "Did the woman have plenty of fresh milk available the year round?" "Yes, indeed," replied our friend. Our next question was: "Are you sure that the woman was in the habit of drinking some of the milk every day all her life?" "No," replied our friend, "she never could drink milk from a baby up."

There, folks, you have it again. Dr. Edward Wood used to emphasize more than any other doctor in this section the necessity of every family not only having the proper food to prevent pellagra, but the necessity of consuming this food in sufficient quantities every day in every year.

The nurses in the employ of the State Board of Health are making a valiant effort this summer to hold a sufficient number of group meetings in the various sections of counties having no whole-time health departments at all, in order to meet with as many midwives as possible who are practicing in this State. Every year about 30 per cent of women in childbirth are attended exclusively by midwives. Such mothers never have the advice and aid of a physician through this important period. The only time a physician is ever called to such women is when the midwife detects complications and urges the calling of a physician. In many instances this is too late to save the life of the mother or the baby.

It is the purpose of the State Board of Health to try to impart needed instruction to the midwives concerning the simple requirements of cleanliness and to help them equip themselves a little better for the important work they do for such a large class of people. In most of the coun-
ties the officials and representative people are aiding and encouraging our efforts. The nurses are receiving the aid of the county physician and of many practicing physicians in nearly all sections in carrying on this little course of instruction. The midwives are requested to meet at a central point, convenient to them, and one or more physicians are urged to be present at every such meeting to aid the nurse in the work. This work is being undertaken only in the counties having no form of whole-time health service. There are at present about fifty-seven such counties.

Late in May it was the privilege of two of our nurses to attend a meeting in Robeson County, at Maxton. The meeting was put on by the Robeson County health officer and the county nurse there. It is a part of the semi-annual program, in which the midwife service of that big county has been brought up to a uniform standard of perfection probably better than any other county in North Carolina.

Before Dr. Hardin undertook that work down there, they had a very large number of irresponsible midwives of the dirtiest, most incompetent class, just as many other counties have now. One of our nurses, reporting this meeting, stated that a physician who accompanied the health officer made an inspiring talk to this large group of midwives and stressed the importance of their work. He contrasted the wonderful progress that had been made in the last few years.

At this particular meeting the health officer and this practicing physician were aided by the county nurse and a local practicing nurse. The county nurse stated that one of the midwives in Robeson County during the last year delivered fifty-two women. Robeson County is more plentifully supplied with competent physicians at strategic points than almost any other county, and yet a large class of women depend wholly upon midwife service, as clearly indicated in this case. It was brought out at this meeting that in the whole of Robeson County midwives attended the birth of twenty-two sets of twins in 1932.

We mention these items to illustrate the importance of midwife control work in this State. We will never get our infant death rate and our maternal death rate down to the low point of even the national average until a more competent class of midwives serve the 30 per cent of the population who feel unable to engage physicians for this service.

In the Robeson meeting mentioned, our nurse reports that every one of the midwives in attendance was “nice and clean.” Each one brought a well-equipped bag, showing that she knew how to carry on her work in a manner which would be safe for her patrons.

We here and now earnestly solicit the help of representative people in North Carolina in order to improve the character of midwives now practicing.

Now and then a report comes to this office of a child having diphtheria who had previously been given the immunizing treatment to prevent an attack of the disease. It is well to repeat from time to time the fact that the preventive treatment against diphtheria which has been given to children in this State for the last few years has been supposed to immunize about eighty-five out of each one hundred susceptible children given the treatment. At present we hope and believe that we are getting a higher percentage of immunity, possibly as high as ninety out of each hundred. This still leaves a margin of at least ten children out of any group of one hundred given the immunizing treatment who would still be unprotected. Why this is so we do not know.

Every physician and every health officer giving diphtheria preventive treatment should not promise the parent that the treatment will invariably prevent diphtheria. They should be told the truth, and that is that a large percentage—as just said, about 90 per cent—will be definitely
protected for certainly as much as ten years, and possibly for life. Even in case where the child develops diphtheria after having previously taken the immunizing treatment, almost invariably we find that such a case has been very light, the attack being shorter and no complications developed; and generally the child has been in no serious danger. That is a point that may be stressed for the information of the parent.

For a physician to definitely state, when immunizing a baby, that it can never have diphtheria after this treatment, is a mistaken policy. Imagine the embarrassment of the physician, after making such a definite assertion, to be called to the child, say one year later, and to have to make a diagnosis of diphtheria. This, of course, very seldom is the case, but it does happen once in a while.

In the meantime we want to urge again that the parents of every baby have it immunized immediately it is six months of age. In this way diphtheria will be eventually banished.

There are some diseases which are frequently spread in a family through the employment of infected domestic servants. The venereal diseases, typhoid fever, and tuberculosis may be mentioned as among the serious diseases easily spread in such manner. We have never over-emphasized these facts in these columns because we have felt that any family financially able to employ a domestic servant, such as cooks, maidservants, butlers, chauffeurs, and nursemaids, are financially able, and should be intelligent enough, to have the family physician make a thorough examination of all such prospective employees and certify to their health before the servant begins his or her work with the family. It is our duty, however, to emphasize again and again the danger which every family invites when it employs a domestic servant to come into intimate contact with children of the family without first ascertaining definitely that the person employed is free from the more serious communicable diseases.

The fact that more families do not exact such certificates of health concerning their employees is probably because they think little or nothing about the importance of such a procedure. A nursemaid who happens to be suffering from latent tuberculosis, coming in daily and nightly intimate contact with the babies of a family, can infect such children with tuberculosis. The result of such infection of the children may not be manifested until years later, when the nursemaid may be entirely forgotten.

The only practical plan to prevent all such sources of infection is to require a certificate of health from the family's own physician, who may be put squarely on his honor to protect the family at all hazards; but he should be given full opportunity to cooperate in ascertaining facts as to the physical condition of any employee.

LITTLE AMERICA

On his journey over life's uncharted sea, Little America faces perils as dangerous as those encountered by Admiral Byrd. His future depends on the intellectual capacity, the diligence, and the open-mindedness of his parents or guardians, but most of all on one leader, his mother. The interval of child growth is extraordinarily long as compared with that of other young mammals. This long period of childhood is of profound importance to the well-being of the young voyager if he is to attain the goal of optimal adulthood for which he is setting sail. The mother who develops a system of intelligent food administration to the youth in her charge must be guided, like Admiral Byrd, by careful study, conservative planning, and the dictates of moderation, comments Dr. Olive B. Cordua in the May Hygeia.
"A Seaside Health Place"

UNDER the above heading the Greensboro Daily News published an editorial a short time ago which reminds us that we have been thinking of this very thing for some years. Several times during the past year the necessity for some such institution as described in the editorial, which is quoted in full below, has been brought to mind.

In these days, when so many of the old established customs and habits of life are being discarded overnight, it is a good time for people to be doing some constructive thinking along the lines described in this editorial. A modern hospital of simple but solid construction, equipped with modern facilities, erected on some protected part of the eastern North Carolina coast and easily accessible over hard-surface roads, would be of great benefit to many of our people. The location of such an institution would have to be selected somewhere on a beach which would be reasonably free from mosquitoes and sand-flies in the summer and also well removed from high tides in the stormiest weather. If properly erected and managed and kept open the year round, it would pay its way from the beginning as well as be able to accommodate a large class of people in moderate circumstances. Good service, including the best of food and the attention of a trained nurse for a group of people, could be provided for a sum less than accommodations in an ordinary commercial hotel. If such an institution would cater to a class of people who felt the need of rest, with some medical attention, away from all the distractions of the large city institutions and the seaside and mountain resorts in which expenses are pyramided and the individual worn out and financially bankrupt at the end of a month, it could succeed from the start. If all modern facilities of making a complete medical examination, including X-rays and all the other things necessary, should be provided for middle-aged people or those in advancing years to have such service rendered in a satisfactory manner, at a reasonable cost, and to be taken leisurely over a period of two or three weeks or a month, while the individual is having a period of rest, such people would keep the institution full the year round. Such an institution would even be more desirable in the winter months than in the summer. In addition to having a staff of competent medical men in charge, its medical and surgical staff could be supplemented every week in the year by drawing from the very best in the profession all over North Carolina. Not one of the able surgeons and physicians in the State, including the specialists, but would be delighted to take a week off for rest and recuperation in such a place while offering for a few hours in the day his service in doing operations or as a medical consultant. In that way the institution could maintain a staff the year round of the most competent professional service the State has to offer anywhere. Such an arrangement would appeal peculiarly to physicians or surgeons who are fond of the sea or who like to fish and hunt.

Let us hope that we have started something which somebody with capital will grasp and follow through.

The editorial from the Greensboro News follows:

"Some day, maybe, there will be created for North Carolina a seaside health place—right out on the banks would be the best location—with facilities ranging from outright hospitalization for medical and surgical cases, through a nursing establishment for invalids to an isolated camp for vacationists who are not ailing, but wish to pass a fortnight or a month close to Nature and the salt water, running practically wild, and letting the children and dogs run wild, but still being afforded the necessary comforts.

"If we should call for any sort of hospitalization in the mountains,
there would be immediate response from fifty places: mountain sanitarium, colonies, camps, nursing homes, rest cures seem to exist in abundance. Well, there are always, in hot weather, numbers of persons quite sick who need less altitude instead of more, and others who simply do not wish to go to the mountains; much rather go to the coast. There are still more who are sort of puny and would like to go to the sea, but to whom the conventional summer resort is anathema, with its noise, greed, vanity, bad food, strutting, discomfort, and general fever of unrighteousness. There are well people, too, thousands of them in our millions of population, who would rather stay home and work and sweat than to go to the type of 'vacation' place that finds favor with the great majority.

"Seaside hospitalization, to be good and at the same time available to average people, at a reasonable cost, would have to be undertaken on a large scale. It would have to be an all-seasons affair, with enough work for tiptop surgeons and general practitioners. Even so, specialist treatment would constitute a problem; but then, few things are perfect in this world. But most people would rather recuperate out in the sea breeze than to die in a hot interior room, hospital or other, even if completely surrounded by specialists."

Sanitary Conveniences As Much a Necessity In the Country As In Town

TWENTY years ago the editor of THE HEALTH BULLETIN took over the job of whole-time health officer for Sampson County. He took this action following several years of practice of medicine in the town of Clinton and in the country surrounding that place. He became convinced that the most important work that could be undertaken at that time for the safety and protection of the health of the people of that section was embodied in that job. At the time there was a great deal of such diseases as typhoid fever and so-called summer diseases of children, and deaths occurred with distressing frequency, particularly among the infant and young adult population. There was almost a total lack of modern conveniences, including the safe disposal of sewage, in the country homes. The editor looked at the situation then as he has since and does now, that the whole problem is a matter of health education.

These intervening twenty years have seen more progress accomplished along these lines in the cities and towns of the State than in all previous history. Today the water and sewerage system for every town of more than two thousand people is safe and satisfactory. The sanitary privy law requiring some form of sanitary privy for every residence within three hundred yards of any other residence has removed one of the nuisances which menaced the citizens of every village and suburban area twenty years ago. These efforts, however, have not extended to the country homes, particularly of the poorer classes, such as tenant farmers and other small landowners.

The other day we were thinking along these lines and noting with satisfaction the continued service rendered by the whole-time health department of Sampson County for all of these twenty years, when we happened to see in a Clinton paper a statement from Dr. S. Glenn Wilson, the present efficient whole-time county health officer. Dr. Wilson's statement indicates that there is still much work to do in order to extend the protection to country people that they ought to have. In his statement in the local paper he said that there had been only ten cases of typhoid fever in Sampson County from the first day of January to the twenty-fifth of June. This in a population of forty thousand people is a good record. His statement was made, how-
ever, following the death of a ten-year-old child of a rather virulent type of typhoid fever just a few days previously. This child lived in the country about two miles from Clinton. We quote the following from Dr. Wilson's statement:

“We think that the people of this county will be interested in knowing what the conditions usually are where we find typhoid fever. In the first place, it is usually a tenant family. The home is not provided with a sanitary privy; the house is not screened to give protection against flies; the water supply is very often from an open well, and last, but not least, the family has not received the anti-typhoid inoculations.

“We wish to take this opportunity to appeal to the landlords and tenants of this county to do all possible to remedy such conditions as are given above. They can be removed in most instances with the expenditure of very little money. It will, though, require some thought and work.”

Interesting Information About Prevention of Typhoid Fever and Diphtheria

By J. W. Kellogg

It is a very significant fact that both typhoid fever and diphtheria have decreased enormously, both in the number of cases and also in mortality. The reason for this is that science has found methods of protection against both these dreaded diseases.

First let us consider typhoid fever. The word typhoid means a stupor-like fever. It is caused by a small germ called the typhoid bacillus, which was discovered by Eberth in 1880. Typhoid fever is one of the most widespread of the infectious diseases. It occurs in the tropics and in far northern and southern latitudes, in the city and in the country, and wherever man may go and local conditions do not prevent the dissemination of the disease. All races of man are equally liable to this curse of filth. Dr. Osler's saying, "Typhoid fever is the best index of the sanitary intelligence of a community," is axiomatic.

The disease is more prevalent in North Carolina in the summer-time for various reasons. Vacation time is here and the time when many people are leaving their homes to frolic at summer camps, or mountain resorts, or near the seashore. These trips necessitate a change in our daily routine. We will swim in streams and lakes where the purity of the water is not known. We will eat our meals in places where we know nothing of the sanitary conditions under which they are prepared. We will drink water and milk and other beverages of unknown sanitary quality. Flies will buzz in the kitchens and settle on the food in the dining-rooms, and we fail to realize the danger.

Filth breeds flies and flies transmit disease, carrying the bacteria of dysentery and typhoid to the food in the kitchen, or on the dining-room tables. Except for dysentery, the disease most to be feared under such conditions is typhoid. The three principal means of acquiring this disease are through filth, fingers, and flies.

The germs originate either from a previous case of typhoid or from a carrier, one who, while apparently well, continues to harbor and excrete typhoid bacilli. These germs find their way to our food by either the finger or fly route. Occasionally a water supply may act as a vehicle or carrier by which the germs are spread, but the finger and fly routes are shorter and usually more direct, therefore more dangerous.

A carrier handles or prepares the food. A fly deposits the germs on the prepared food. The raw oysters fatten in sewage-laden water. These
are some of the easy ways by which you may contract typhoid fever. What defense can you make against the peril?

You need not forego the pleasures of camping or the seashore. You provide screens against the malarial mosquito, or carry your quinine with you. Why not erect a defense against typhoid by taking the three injections of vaccine? Whether you intend to take a vacation or not, it is advisable to protect yourself and the members of your family against typhoid.

Dr. James M. Parrott, State Health Officer, has already sounded a note of warning through the press, and I want to emphasize the importance of everybody taking advantage of the protection to be gained through vaccination.

Campaigns against typhoid will be waged in nearly all the counties. It is a duty you owe yourself and family to take advantage of the opportunity of anti-typhoid vaccination.

The advantages of a pure water supply, sanitary methods of sewage disposal, and the protection of food from infection through typhoid carriers, or the fly menace (fingers and flies), should never be overlooked; but in all these things there may be some loophole, or accident, through which you or your family might be exposed and succumb to the ravages of typhoid fever. All sanitary precautions cannot be relied on to protect you, without the additional protection of immunization. As we read in St. Matthew's Gospel, "These things ought ye to have done, and not to leave the other undone."

The protection afforded by typhoid vaccination has been recognized for years. During 1909 and 1910 it was begun in the United States Army, and made compulsory in 1911. Since that time there have been comparatively few cases of typhoid fever in that large group. For the four years previous to 1911 the typhoid rate had been nearly three per thousand, dropped to 0.8 in 1911, 0.26 in 1912, and 0.03 in 1913, when there were only two cases of typhoid fever in the sixty thousand men serving in the United States proper. These figures, and others which might be given for later years, are absolute proof of the efficacy of the typhoid prophylactic.

During the Spanish-American War, 1898, there were twenty thousand cases of typhoid and over fifteen hundred deaths from that disease among the one hundred and seven thousand American soldiers. I will leave it to your imagination to conjecture the results had the same rates prevailed among the American soldiers who served in the World War.

The same Rawlings strain, which has been used in the army for making the vaccine, which has proven so satisfactory and reliable, has been used in making the prophylactic distributed by us until this year.

Now the vaccine made and distributed by the State Laboratory of Hygiene is made of three strains of typhoid bacilli, which are believed to confer as high a degree of immunity as any known.

The vaccine or typhoid prophylactic consists of a suspension of the dead bacilli in a salt solution to which is added one-fourth per cent of tricresol as a measure of safety. The vaccine is standardized by counting or estimating the number of the bacilli; 500 millions are in the first dose and 1,000 millions in the second and third. Severe reactions are exceptional, and do not occur in more than one to three persons per thousand. The occurrence of a severe reaction need not give rise to anxiety, since they all pass off quickly and leave no trace. No precautions are taken after vaccination, other than to warn against the use of alcoholic beverages and severe exercise.

The best time for inoculation is 4 o'clock, or later, in the afternoon, since any reaction will then come after bedtime. The vaccination of children and young adults is especially important, as they are in the most susceptible period of life, typhoid being a disease of youth and early adult life.

For several years we have attempt-
ed to secure information from the attending physician as to history of previous vaccinations in those who developed typhoid fever. Although our reports are not complete, the results obtained show that protection is afforded for from two to three years. Several weeks are required after the series of injections to produce a high degree of immunity. Full immunity cannot be expected immediately, and, as is the case in all acquired immunity, one hundred per cent protection is rarely achieved.

A case has been known where vaccination protected one woman against typhoid for a period of two years, at the end of which time the lady contracted the disease from her mother, who had been a typhoid carrier for years. Thus we see that immunity is a relative matter, and while partial immunity may last for three years, revaccination may be advisable under certain conditions as often as every two years.

A case showing the value and efficiency of typhoid vaccination came under our observation a few years ago. A young man who was found to be a typhoid carrier was committed to a corrective institution where there were about three hundred inmates, all of whom were inoculated against typhoid upon admission. For some reason the protective vaccine was not given to two boys immediately on admission, and about two weeks later these two, and no more, developed typhoid fever. Upon investigation it was found that the known carrier had been allowed to work in the dairy, or kitchen, for a short time, and doubtless this was responsible for the two cases. Had the others not been protected, a sizable epidemic might have resulted.

A small epidemic during the present year was also traced to a typhoid carrier who had recently moved upon the water-shed of a small community. The water supply contaminated by the typhoid carrier was the cause of some twenty or thirty cases of typhoid fever, in an institution which should have given the students the benefit of anti-typhoid vaccination in addition to the reasonable sanitary precautions against such an occurrence.

These and other instances may be cited to remind us that sanitation alone is not ample protection against typhoid fever. Some measure of personal prophylaxis is essential, and the best method at present is vaccination.

Diphtheria has long been known as one of the principal diseases of childhood, and until the discovery of diphtheria antitoxin nearly half of those who contracted it died. The antitoxin which came into general use in 1895 has greatly reduced the mortality from this disease.

The antitoxin produces an immediate immunity by neutralizing the toxin produced by the diphtheria bacillus in the tissues of the body; but this immunity is only transient, passing off in a few weeks. It was found that some children were naturally immune, while others were susceptible. The problem, then, was to produce a lasting immunity in those known to be susceptible. The Schick test is used to determine whether a child is immune or not, and consists of the injection into the skin of a minute amount of diphtheria toxin. The occurrence of an inflamed area around the site of injection indicates that the child lacks the protective substance and is susceptible to diphtheria.

Babies up to six months of age have a natural immunity, but from six months to three years practically all are susceptible. After this age those who have escaped an attack of diphtheria gradually become immune. The period in a child's life when immunization is needed is between the ages of six months and ten years. This needed immunity may be produced by either the toxin-antitoxin or toxoid. Both are efficient and safe. Three doses of toxin-antitoxin, at intervals of one week, will produce immunity in 85 per cent of children treated, while five doses will immunize over 90 per cent. This product is a carefully balanced mixture of toxin and antitoxin, while the toxoid is a toxin treated with formalin, which neutralizes the dangerous
parts of the toxin, but leaves the properties which, when injected, will increase the body's resistance to the disease. Two doses of toxoid at intervals of from two to three weeks will give a slightly higher percentage of immunity than three of the toxin-antitoxin, and for this reason the toxoid is becoming more popular, especially for use with infants and younger children.

Several weeks are necessary for the development of full immunity, after the series of injections (either of toxin-antitoxin or toxoid). The maximum is reached in about six months time, and children should be given the Schick test after this length of time to determine whether the desired immunity has been produced. Immunity, when once established, lasts for at least ten years, and probably for life. (An untreated child, or one whose immunity has not been established by the Schick test, when exposed to diphtheria, should receive a protective dose of antitoxin.)

There is danger in delaying the immunization of your children. Visit your physician or health officer and have them immunized as soon as they are six months of age.

The eradication of diphtheria depends on the immunization of all children as soon as they are six months old. There is no danger of a serious reaction in children of this age, and when parents realize that the greatest obstacle to the eradication of diphtheria is due to delay on their part, they will demand this immunization as the child's right.

Experience in the largest cities of the United States indicates that if 35 per cent of the pre-school children and 50 per cent of school children were immunized, outbreaks of diphtheria would be impossible. The most satisfactory method of diphtheria prevention seems to be with toxoid, two injections of which at intervals of from two to three weeks will confer immunity on 95 to 98 per cent of those treated.

Recently the alum toxoid, which has been perfected in New York State, has been found to be even more efficient, two doses of this product conferring immunity on 99 per cent of those treated within seven months.

Recent studies in Chicago show that 30 per cent of the diphtheria cases occur in children under five years of age, but that over 50 per cent of the deaths were in this age group. Therefore a concerted drive was started in 1931 to immunize the pre-school children, and through a system of education, by visits of nurses to the homes, from 60 to 90 per cent were induced to have their children treated. By this method the mortality rates have been materially reduced.

The object of this paper is to urge all parents to have their children immunized as soon as possible. The cost of the toxoid is negligible, and nothing should be allowed to prevent the immunization of the children before it is too late.

PLEASE SIGN YOUR NAME AND ADDRESS

On June 5 we received a postal card bearing the postmark of Chicoe, North Carolina. The card requested certain of our infancy literature which we have for distribution to the mothers of young children. The writer did not sign her name. If any person receiving THE HEALTH BULLETIN at the Chicoe postoffice will pass this word around so that the writer may again send us her name and request for literature, we shall be glad to send it to her at once. We sent this card to the postmaster at that place with the request that he endeavor to help us locate the writer. We have not heard from him. We want to repeat again that it is always necessary for the writer to sign his or her name and address correctly. We receive frequent communications of this character. The result is the writer fails to get a response to the communication and the State Board of Health is criticized and blamed for lack of attention to business.

Give your name and address.
DUE to the rapidity with which modern research has gone forward in the last few years in the field of endocrinology, many quacks sprang up almost like weeds in a garden after a rain.

The reason is obvious why a quack doctor would become a specialist in this field now. He knows that the average man of America has read something about the many discoveries that have been made in this field. Thus Mr. Common Man is easily persuaded by these quacks to buy some of his famous medicine that has cured so many people (to hear him tell it) of these gland troubles. But after the quack has sold the medicine we soon hear of him leaving the country. In a few months we find that the buyer of this drug is worse off than he was before he bought the medicine.

Realizing that the above things happen, I wish to set forth in the following paragraphs some of the facts concerning the above subject that are accepted by a majority of the medical men of this country.

The ductless glands, so named because they secrete a hormone directly into the blood stream, are found in various places in the body.

Some of the greatest discoveries of today have been made on the thyroid glands. These small glands are situated on each side of the neck and are connected by an isthmus just above the sternum. There is just one lobe on each side.

Goitre is the common name applied to a disturbance of this gland. Hypothyroidism is the name given to under-activity, while hyperthyroidism is the name applied to over-activity.

A person suffering from under-activity is very slow in all mental processes, while a person suffering because of over-activity is usually very nervous. In both cases there is usually an enlargement of the thyroids. A cretin is the result of under-activity. Thus we are able to see that the term goitre is a very large term to designate the above symptoms.

To the aid of those suffering from a disturbance of the thyroids we find that in some cases iodine is employed with much success, while in others it is very dangerous. Some physicians employ the use of the thyroids of certain animals that have been properly prepared. In certain types surgical removal is the greatest remedy. Thus we see that the person's physician must decide the mode of treatment to be followed.

Another gland that is probably the most important gland in the body is the pancreas and is treated under the head of duct and ductless glands. Its rôle in body metabolism is very important, although it is probably the most important duct gland of the body in digestion.

As a ductless gland it secretes a substance known as insulin or an anti-diabetic hormone. Without insulin in body metabolism a rise of sugar in the blood stream would very soon result in acidosis. As a result of the work of Drs. Banting and Best, with others, the active substance of this gland is now on the market for people who are suffering from under-activity of the pancreas.

Here again the quack doctor comes in to take his share. He comes to the homes of the less educated type of person with his kit full of bottles labeled insulon (not insulin) and tells the poor victim of diabetes that this medicine will cure him. After selling
a generous supply of his medicine to his customer he leaves and is not heard of in that community again. In several months we find that the sick man is worse, as a result of the neglect of proper medical attention that would have probably been administered if it had not been for the quack doctor. The preparation might have been a small compound of sweet oil, or some such chemical that was perfectly harmless when injected into the body.

We find that many quacks recommend the use of preparations that they claim to have been made from the glands of certain animals, for every trouble or disease that an old man has ever been troubled by or ever will be troubled by. Many quacks say that all troubles with the sex glands are a result of a thyroid disturbance. These troubles, however, are due to many other causes.

Thus we see that the quack is always alert to the things that the scientist is in the dark about, ready to take advantage of the person that is not well informed.

Miss Nell Battle Lewis Confers An Honorary Degree On Dr. Clara Ernall Jones

IN her column, "Incidentally," in the News and Observer sometime ago, Nell Battle Lewis embraced an opportunity offered by the conferring of degrees during commencement season to pay tribute to one of the faithful members of the North Carolina medical profession. Says Miss Lewis:

"The Good Wimmin missed out entirely this year on honorary degrees from the University of North Carolina. Of recent years the University has been pretty good to women.... I am especially sorry that no degree was conferred upon a woman at this commencement, since there is one case in which the LL.D. is abundantly deserved by a woman in this State. Once again the University passed over a public servant whose life and work has greatly enriched the Commonwealth. She is a person to whom worldly honors are of little moment, but, just the same, in admittedly inadequate compensation, this column wishes to make public citation of her merits.

"Clara Ernall Jones: Pioneer in the practice of medicine by women in North Carolina, selfless humanitarian, guileless Christian; for twenty-five years physician and friend to the members of one of the most helpless and pitiful groups in the State, the insane Negroes. Her service to her State, in her long ministry to these unfortunates which was infused with the true spirit of Christ, was as valuable as it was unostentatious. The extraordinary beauty of her character has made her a profound influence for good on those with whom she has come in contact. Presenting an example of a life peculiarly rich, a devoted wife and mother, the wife of a doctor, the mother of two doctors, and a doctor herself, she has combined the public and the private virtues to a remarkable extent. Upon her Incidentally delights to confer the highest degree of admiration and affection, in the hope that her great worth may receive during her lifetime at least a part of the recognition which it so truly deserves."

We take peculiar pleasure in passing this tribute along to the readers of The Health Bulletin. It is a fine tribute to one of the great members of the North Carolina medical profession who has made a contribution to the State which not only honors herself and her family, but all of the profession in North Carolina.
Sanitation a Public Duty

By Wm. H. Richardson, Editor, in The Agricultural Review

HEALTH is the best asset in the world. It is worth more than money. It is a necessity, in the rural districts and in the cities. War on disease is always justifiable. Modern science can combat many maladies which formerly claimed their thousands of victims annually. Sanitation, of course, is one of the chief weapons of both offense and defense. Cooperation with public health officials is equally as important.

One of the diseases which modern science can prevent is typhoid fever. In this season of stress, readjustments, and hope for the future, North Carolinians cannot afford to give this public enemy even a fighting chance. For this reason The Review feels it is not at all amiss, but a patriotic public duty, to call the attention of the farmers of North Carolina to the importance of wiping out typhoid fever. This paper has no desire to enter the field of the State Board of Health, and this article is not intended to be in any way a duplication of effort, but a gesture of cooperation on a subject that is so vital it ought to claim the attention of all forces at work for the good of humanity.

It is suggested that every reader of this article make inquiry as to how typhoid fever can be prevented, and that all join in the determination that it shall not gain a foothold in North Carolina this year. If you do not find it convenient to approach the subject through any other medium, you may write to the State Board of Health at Raleigh.

“Good Old Home Remedies”

By Eugene Ashcraft, in Monroe Enquirer

SOMETIME ago I published in Catch-All Column Dick Thomas's cure-all concoction, which was jes' as good for loose toenails as it was for gallopin' consumption, or what have you. It was so ridiculous that the "remedy" got into THE HEALTH BULLETIN; and since that time the editor of THE BULLETIN has had numerous inquiries from persons over the State wanting to know where they can secure the famous cure-all.

The editor of THE HEALTH BULLETIN relates that he once wrote sarcastically of an ordinary jug, filled with river water and called a "Radium Jug." The jug sold for $10, and people everywhere wanted to know where "Radium Jugs" might be obtained.

People love to be faked, and no doubt the old saying, "A sucker is born every minute," is true.

I remember years ago, during court week, a young fellow came to the Enquirer office and requested me to cut him a batch of long inch-wide strips of blotting paper. I was curious to learn what the fellow wanted with so many little strips of blotting paper.

"I'll show you," said he, "if you will allow me the use of this table. These belts are fine for weak backs," said he.

With his strips of blotting paper he began making belts from brightly colored oilcloth. He placed a strip of zinc on the blotting paper, soaking it with strong vinegar—thus producing a "galvanic battery." To make an extra strong "galvanic battery" the fakir added some cayenne pepper.

At 12 o'clock I saw the fellow sell a number of these "electric batteries" at $2 each. I remember asking several of those who had purchased belts and were wearing them how they felt. "Just as warm and comfortin' and our money well spent," were the replies.
Letter From a Piedmont Farm Group

The following letter, received from a group of farm people in the great middle section of North Carolina just as we go to press, goes straight to the heart of one of the pressing public health problems in North Carolina. We urge every one of our readers to read this letter before laying this copy of THE HEALTH BULLETIN down, and then pass it on to a neighbor:

"Has it ever occurred to you to think of the sanitary conditions prevalent in our country?

"Provisions within our cities for sanitary living have been made.

"Are not our country boys and girls just as human as the city ones?

"Yet you find numbers upon numbers of home grounds without toilet accommodations.

"Landowners erect tenant homes and exact long hours of work from the less fortunate family, and in lots of cases not providing a toilet.

"If you just stop and think of our pure-food laws, our helpless condition as laborers, our innocent children who can't provide for themselves, our fowls running at large, is it not enough to say that our Legislature should pass and enforce a law for the provision of sanitary toilets on living premises as the city people are provided for and as a means of prevention here in the rural districts also?

"Won't you please place this in the hands of the proper ones and use your influence upon our lawmaking body to this effect?

"Why not? Is a landowner not able to erect a toilet?

"Coming from a voice of the people in the rural districts of North Carolina, we do not feel that a boresome list of names is necessary. Just a peep into the lives of the people is enough.

"Don't deny us this protection because we are not situated in a large city."

"Too Much Ethics"

Under the above heading Dr. Julian S. Miller of the Charlotte Observer, in his personal column entitled "Event and Comment," sometime ago had the following comment with reference to the much-touted question of medical ethics:

"Physicians are hog-tied to their ethics, unfortunately for them and more so for the public.

"It is a well-intentioned rule they once made forbidding them to advertise themselves professionally in order to protect the people; but the way it has been worked out tends to upset the original logic.

"Legitimate medical publicity would do much toward suppressing the charlatan and the hi-jacker who is not bound by the rules of the profession or the proprieties of the equation.

"As things now stand, scientifically trained physicians, specialists in their particular fields, and more interested in promoting public health than in building up their own bank accounts, are compelled to stand by in silence while the less equipped run wild in front of the public grandstands.

"The ethics of this profession could stand such modification as would do away with such an absurdity."

The foregoing presents this question as one highly intelligent newspaper man sees it. It may be said to present one side of the question. There is another side to the question of medical ethics which the experienced, competent, and honorable physician may readily call to mind. We leave that, however, to the speculation of our readers and for some of the more competent members of the profession to present.
For fourteen years this group of State Board of Health nurses have taught the benefits of good health to the people of every community in North Carolina. They have traveled on foot, horseback, on rafts, by boat, tram car, ox-cart—any way to reach the “forgotten” children. They have exerted a profound influence on the public health movement of this generation. Reading from left to right they are: Misses Birdie Dunn, Cleone Hobbs, Mrs. H. P. Guffy, Misses Flora Ray, Cora Beam, and Katherine Livingston.
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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils
Cancer
Constipation
Chickenpox
Diphtheria
Don't Spit Placards
Eyes
Flies
Fly Placards
German Measles
Hookworm Disease
Infantile Paralysis
Influenza
Malaria
Meninges
Pellagra
Residential Sewage
Sanitary Privies
Smallpox
Teeth
Tuberculosis
Tuberculosis Placards
Typhoid Fever
Typhoid Placards
Venereal Diseases
Water Supplies
Whooping Cough
Diabetes

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)  Baby's Daily Time Cards: Under 5 months: 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 10 months; 19 months to 2 years.
"Our Babies"  Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years: 3 to 6 years.
Prenatal Letters (series of nine monthly letters)  Instructions for North Carolina Midwives.
Minimum Standards of Prenatal Care
Breast Feeding
Infant Care, The Prevention of Infantile Diarrhea.
Table of Heights and Weights

CONTENTS

Notes and Comment.......................................................................................................................... 3
State Board of Health Radio Program.......................................................................................... 4
Then and Now................................................................................................................................. 5
The Fight on Diphtheria.................................................................................................................. 6
Truth—Pure and Unadulterated......................................................................................................... 6
The Nurses' Page.............................................................................................................................. 7
To School for the First Time............................................................................................................ 8
Suicidal Wanted............................................................................................................................... 9
About the Infant Death Rate and Legislative Appropriations.................................................. 11
Rocky Mountain Spotted Fever.................................................................................................... 13
Report of a Health Project in a Salisbury School........................................................................ 15
War Against Malaria Is Needed..................................................................................................... 16
For several years there has been considerable agitation in North Carolina concerning the high infant and maternal mortality rate. For 1932, eight states and the District of Columbia had a higher rate than our State. Therefore the rank of North Carolina, with reference to infant deaths as compared with all the other states is forty-fifth.

There are many causes which undoubtedly contribute to this state of affairs. We have discussed from time to time in these columns some of the causes which appear to us to contribute most to our unenviable position. The editor has studied this question from the standpoint of a responsible position in public health work for many years. The result of his investigations has always invariably led him to the conclusion that the chief cause is the low per family income of our population. With the exception of possibly three or four other states, the income per family in North Carolina, according to the United States Census figures, is lower than that of the other states. Low income speaks poverty among the masses of the people. Long-continued poverty, of necessity, means ignorance. And ignorance, with lack of the necessities for the proper care of expectant mothers, and infants, naturally results in untimely deaths.

The birth rate in North Carolina for ten years, up to 1931, was the highest in any state in the Union. One other state now has a higher rate, and our State tied with our sister State of South Carolina for second highest rate last year. A high birth rate may or may not be a subject for congratulation; it depends on the point of view. We know one thing, however, and that is that a high birth rate without adequate facilities for minimum care of infants naturally means that many of them will die before the completion of their first year of life.

The incidence of syphilis in North Carolina is probably no higher than that of any other state. It is high enough to be disgraceful, and naturally the results are felt by society in a high stillbirth rate, many infant deaths, and the usual sordidness and misery which accompany such a disease. Lack of infant and maternal centers for the dissemination of information to expectant mothers and to mothers of very young infants throughout the State contribute to this high rate. Lack of competent medical service in the expectant period, at birth, and immediately following is another cause for this high rate.

To establish competent medical supervision for all expectant mothers and newly-born babies, and with the provision for an adequate number of properly trained nurses to carry on educational work among the people in the State, requires the expenditure of more money than our taxpayers have heretofore been willing to put up, as exemplified in the action of their representatives on the boards of county commissioners and in the halls of the Legislature.

We have our choice of providing adequate facilities for our expectant mothers and our infants or continuing to utterly neglect such an important responsibility to our peo-
The question may resolve itself into a matter of money or mothers, bankers or babies. It is up to the intelligent people of the State of North Carolina to decide which they will choose.

* * *

With the summer just closing, it seems to the editor that there have been reported a larger number of preventable deaths from drowning this summer than ever before. What we mean to say is that many of the deaths seem to have been more needless. The most tragic occurrence that has been recorded anywhere is the death of the two young senior college women, who were sisters, drowned near Greensboro in July. The tragedy in the drowning there lies in the statement, according to the newspaper report, that the bodies were recovered about fifteen minutes after going down. The heart-breaking part of the tragedy in that accident is, to quote the newspaper dispatch which describes the calling of an ambulance from Greensboro, the attaches of which “worked frantically with pulmotors for about thirty minutes in an attempt to restore respiration.”

It is discouraging to think that with all the information that has been disseminated during the last few years about how to resuscitate a drowning person, or a person overcome with electric shock and so on, that there was no one there capable of applying the Schaefer prone pressure method of resuscitation the moment the bodies were recovered from the water. If only a well-trained boy scout had been present, he would have known exactly what to do and how to do it. The time lost in sending for an ambulance and, when that arrived, the useless mess with pulmotors and so on, simply meant that the girls were not given a solitary chance for their lives.

Every school in North Carolina should put on at least once a week a demonstration by a senior boy scout of just how to apply the Schaefer prone pressure method of resuscitation for drowning persons. It would be the means of saving many lives.

The editor of THE HEALTH BULLETIN is informed that the Warren County Board of Health, at a special meeting called a few days ago for the purpose of adopting resolutions about two or three matters, enacted an ordinance requiring all children to be successfully vaccinated against smallpox before entering school this fall. This reminds us again, and it is well to repeat here, that no child is prepared for school until he is successfully vaccinated against smallpox, has been protected against the contraction of diphtheria, and all other protective measures have been utilized for the protection of the child’s health while in school. A competent dentist should see that the child’s teeth have been put in good condition. If the child is troubled with diseased tonsils and adenoids, a competent specialist should remove them. The family doctor should see that the child’s general health is up to what might be normally expected. If the child is suffering from any parasitic disease, it should be given treatment. If there is any nervous or nutritional upset in any way, the physician should have causes of all such conditions removed. In short, every parent should give his child the advantage of starting to school for the first time on equal terms, physically speaking, with every other child.

State Board of Health Radio Program

Through the courtesy of the officials of Radio Station WPTF, owned and operated by the Durham Life Insurance Company at Raleigh, North Carolina, the State Board of Health puts on a program every Tuesday at 1:30 p.m. These programs are very carefully prepared and put on the air by a member of the executive staff at the Raleigh office of the department. A different member of the staff goes on each week and a variety of timely subjects are discussed. Kindly tune in at 1:30 p.m. for a few Tuesdays and give the program a trial.
WITH the advent of September and the opening of the schools of the State for another term, it is a good time to take an inventory of what we have done, what we are doing, and what we expect to do for the health of the nearly one million school children enrolled in the schools of North Carolina.

Eighteen years ago, or during the autumn of 1915, this writer, as a member of the executive staff of the State Board of Health, made a survey, by personal travel and by mail, for the purpose of inaugurating some facilities which would benefit the large number of children in the early years of school found to be suffering from physical defects which could be removed. In that autumn and the following year he visited a large number of dentists, nearly all the part-time county physicians and whole-time county health officers, and a majority of the eye, ear, nose, and throat specialists of the State, urging upon one and all of them that something be done to discover these children and to provide treatment while it was possible to benefit them.

At that time, with the exception of one or two counties that had been making sporadic efforts to do something about this situation, nothing was being done. There was no public clinic to which children could be taken, either in city or county; there was no organization or uniform effort to reach these children; everybody agreed that something ought to be done, but nobody felt like taking the initiative. Out of the experience and knowledge gained in those years, the State Board of Health was forced to assume the leadership, and, as a consequence, the so-called dental clinics and tonsil and adenoid clinics were organized and put into execution, beginning in 1918 and 1919.

Up to 1931 the State itself had supervised the operation of more than twenty-three thousand children for removal of tonsils and adenoids in eighty of the State's one hundred counties. It had put on a dental clinic offering instruction as to the care of the teeth, teaching the fundamentals of mouth health, and treating, for minor conditions, more than three hundred thousand school children in nearly every school district in the State, both white and colored.

In 1931 the agitation for medical and surgical care had been sufficiently demonstrated for the State to withdraw from this field and leave the matter to the initiative of local people in the cities, towns, and counties of the State. The dental work, of necessity, must continue to be supervised by the State Board of Health. It is primarily an educational program and is rendering a remarkable amount of good. The dental program, too, at present is supported throughout the State by contributions from individuals and appropriations from county boards. The past year some fifteen thousand dollars was appropriated by local organizations for this work.

Reports have come to us from every section of the State this summer that correctional work for the children, both pre-school children and children of school age, has surpassed the wildest expectations of eighteen years ago. There is hardly a county in the State but that has had some organized effort put through this past summer to provide medical, surgical, and dental treatment for an increasing number of children. In other words, more correctional work has been done in North Carolina for the children of this State during the past three months than would have been thought possible as recently as five years ago.

We take pardonable pride in stating that this work is a direct result of the consecrated service and the sacrifices made by the group of nurses and their leaders of the State Board of Health in establishing the
wisdom and practicability of such a program. There can be no better service rendered for the public health than that which is carried on by properly trained nurses working under competent and responsible and broad-minded and sympathetic medical supervision.

When we launched our efforts here in Raleigh from the old red brick building on a corner of the Capitol Square, beginning in 1915 and extending throughout the State continually day and night, week days and Sundays, for more than ten years, we stated that it would take a generation to put this program across, and for the full benefits, such a program promised, to be felt by the children of that particular oncoming generation. The field has been white to the harvest; it is white yet; there are many thousands of children coming into the schools every year who have physical conditions of one kind or another which could be easily remedied, and for these children and this recurring annual procession it will continue to be necessary to exert every effort toward improving their physical health, all of which will repay all efforts in more ways than one.

In conclusion, let us repeat that we are proud and gratified beyond measure at the results achieved this summer in this important field. It is the most encouraging factor in present public health work in North Carolina.

The Fight On Diphtheria

An appeal was recently sent out through The Bulletin of the North Carolina Department of Health which should be of interest to every thinking citizen of this State. The appeal was directed to the parents of North Carolina, and we believe that it is of such importance as to be given space, that all readers of The Enterprise may have advantage of it. The statement is as follows:

"We want you to help us eradicate diphtheria from our State. It can be done. We are on the way, but we have not been moving fast enough. In the year 1922, one of our worst years, 8,136 citizens of our State had diphtheria; and 508 of them, mostly children, died. Ten years later, in 1932, one of our best years, 1,895 cases of diphtheria, with 150 deaths, occurred. The smaller number of cases and deaths resulted from constant efforts during the last ten years to immunize the children against the disease.

"The State Board of Health in cooperation with the local health departments and the physicians of the State is making an intensive effort to secure the immunization of every baby between the ages of six and nine months. The one thing necessary to get this done is for the parents, all of them, to take their babies to their physicians or the local health department and have the preventive treatment given. About 75 per cent of all deaths from diphtheria occur in children under five years of age; hence the importance of early immunization. Most of the deaths occur during the early fall months. A few weeks must elapse after the treatment is given before immunity is established. You should protect your children now. Take no chances; you might lose."—Mocksville Enterprise.

Truth—Pure and Unadulterated

Chills and fever used to be regarded as a necessary evil. Then medical science found a way to prevent them. Up to now depressions and panics have also apparently been regarded as necessary evils, but in the light of science's victories over epidemics we wonder if they are. Perhaps if the vaunted captains of industry were as sincerely interested in the welfare of mankind as the leaders of medical science are, panics would be abolished.—Upton G. Wilson in Winston-Salem Journal.
AFTER many years experience in public health work in our State the writer has come to the definite conclusion that the most valuable and far-reaching work which can possibly be carried on in the interest of the public health is the work done by competent and specially trained public health nurses working under sympathetic and competent medical supervision. For the past fourteen years a group of school nurses of mature age and fine training have been employed by the State Board of Health and devoting their entire time to work in the counties of the State having no organized whole-time health departments. Six of these nurses are still engaged in this work. They are all true veterans in the service. Their influence has extended into every community through personal contact. No mountain range has been too difficult for them to ride a horse over when they could not get their little automobile to the place they wanted to go. In the days before the good roads, no swamp or sand range in the east was too difficult for them to penetrate. They have given definite information to individuals and to groups of people concerning the practical everyday living problems which every family has to meet. They have been evangelists of the public health cause. Their influence will go on pyramiding for at least one or two generations beyond the present. They have been encouraged by numerous physicians and other public-spirited people; they have been discouraged by a few physicians and many politicians; but they have quietly gone on working with the enthusiasm and zeal of true evangelists. A large corner of the State Board of Health Building is filled with letters in the form of narrative reports made by these nurses throughout the years, which, if published, would read like an epic.

For the past two years the nurses have been devoting their summer months to work among the midwives of the State in an effort to eliminate the dirty and incompetent ones and to improve the character of service rendered by the remaining ones. When the nurses first commenced work fourteen years ago there were approximately nine thousand or ten thousand midwives at work in the State. This number has been reduced to about five thousand at present, or perhaps fewer. The number of physicians practicing in the State during these years has increased along with the decrease in the number of midwives. When the nurses commenced work there were not exceeding twenty whole-time county health officers at work in the State. As a direct result of their work several counties later on organized competent departments, which are still functioning. And they have worked incessantly for an adequate water supply and some form of approved sewage disposal for every schoolhouse of the State. Their work along this line is only recently beginning to bear fruit. When they commenced work very little effort was made anywhere in the State to ferret out and discover remediable defects for school children, and practically nothing done to have such defects remedied. They have witnessed the past summer a large number of local organizations of every description working with the local medical and dental professions in getting hundreds and even thousands of corrections done.

Some of their comments in a recent morning's mail follow. One nurse writes that she has seen about half the physicians in the county in which she is at work at present, a large county; that every one of them has been cordial and approved of her work for the midwives; and she says that some of the physicians have extended unusual assistance in this im-
important work. One doctor particularly insisted that more attention should be paid to this work, in view of the fact that almost one-third of the women of the State up to now are dependent on the service of midwives. Another writes that a doctor of State-wide reputation welcomed her to his county with the statement that he was gratified that at last the State was making a determined and practical effort to lift the midwife practice from the depths in which it had been in his section all the while. A vital statistics registrar in another county writes and extends all assistance in her power, stating that one baby had recently died in her section at the age of eleven days. The only attendance the mother had was an 82-year-old midwife. A nurse in another county reports that when she announced the State Board of Health hoped to be able to require a Wassermann test for all midwives before permits are granted in all counties one year from now, a very fine physician in that county remarked that he was pleased to hear this, because it had been his opinion that a great deal more blood examination should be made.

One year ago a nurse worked in a group of mountain counties. She wrote at the time that she had met what seemed to be the most hopeless group of midwives in a mountain section, more than fifteen miles from the nearest physician, that it had been her misfortune to encounter. She said that the difficulties of the situation seemed to demand unusual efforts on her part. But she said in her report at the time that the situation looked hopeless; that she did not believe that anything could be done. One year later she was sent back to the same community, and here are some of the comments she made:

"I wish you and the county physician of this county could have attended my meeting yesterday. You will recall my hopeless report of one year ago. Yesterday every one of these midwives was present. They came on time, some of them walking a long distance. They came with their white uniforms and caps on, and the most perfectly fitted and pretty bags I have ever seen. They report the most successful work they have ever done. Success for them is indicated by the fact that fewer babies and mothers have died this past year in their work than ever before; also that there has been less sickness and complications following their work."

Such a report is easy to believe, when we realize the ease with which fatal infections are spread at the time of childbirth, and that care and cleanliness are the chief preventives.

This nurse says that it seems that her quarreling about the lack of a water supply and the insanitary condition of the privies built over the streams and polluting the water farther down helped the school community to improve this situation. The nurse finds that this year three good springs have been directed into a concrete reservoir and piped down to the school, with a fine little fountain to serve all the children safely. And this same school has some fine new approved toilets of sufficient capacity to serve all of the children.

This fine old nurse, who has grown gray in the service, concludes her report with the following paragraph:

"I sometimes wonder if those who think we are 'excess baggage' have any idea how much real honest-to-goodness hard work we do, and if there is any way of calculating the worth of our work. True, it is not always so evident, but I believe it is more penetrating than even we know, judging by remarks mothers often make about what children go home and try to put into practice. One very poor illiterate mother told me the other day my trip to their school made lots more work for her, because the children insisted on cleanliness of body as well as of mind, but that she rejoices in her children's progress."
To School for the First Time

The fine little poem, published below and which is clipped from a paper that published it sometime ago with the statement that the author is unknown, expresses in lovely detail the kind of a world the child leaves behind him at home when entering school for the first time at the ripe old age of six years. We wish we knew the author's name so credit could be given here.

The writer of the poem describes such a home as every child ought to live in for his first few years. The dolls need not be made of china and dressed in silks. An old rag doll is loved just as dearly. The building blocks may be picked up from the back-yard scrap pile; but they house magical beings just the same.

Now, when the child is abruptly taken away from this world of his own where his "play" is just as much his "work" as any grown-up's work is to him, and put in school for the first time, it is a most important event in the child's life. The decision as to whether the change is to be a happy one or a tragedy rests largely with the teacher, together with the degree of sympathetic cooperation she gets from the parents. As a rule the teacher who is worthy of sympathetic support from the home gets it, which is fortunate for the child. The schoolhouse is literally a foreign land to the beginner at school. He sees new and strange people. Their ways are not his ways. Their language and customs are different. The only saving feature for the child is that practically all his fellows are experiencing the same violent revolutions at the same time. It is a grave responsibility for the teacher.

What wonder is it that many of us (pity that all cannot) look back as the author of the poem does on those golden first years and naturally gravitate in our memory to the kind of home described as follows:

The Toy-Strewn House

"Give me the house where the toys are strewn,
Where the dolls are asleep in the chairs,
Where the building blocks and the toy balloon
And the soldiers guard the stairs;
Let me sleep in the house where the tiny cart
With its horses rules the floors,
And rest comes into my weary heart,
For I am at home once more.

"Give me the house with the toys about,
With the battered old train of cars,
The box of paint and the books left out
And the ship with her broken spars;
Let me step in a house at the close of day
That is littered with children's toys,
And dwell once more in the haunts of play
With the echoes of bygone noise.

"Give me the house where the toys are seen,
The house where the children romp,
And I'll be happier than man has been 'Neath the gilded dome of pomp.
Let me see the litter of bright-eyed play
Strewn over the parlor floor,
And the joys I knew in a far-off day
Will gladden my heart once more.

"Whoever has lived in a toy-strewn house,
Though feeble he be and gray,
Will yearn, no matter how far he roam,
For the glorious disarray
Of the little house with its littered floor
That was his in the bygone days,
And his heart will throb as it throbbed before,
When he rests where a baby plays."
Suicidal was the word used today by Dr. Kendall Emerson to describe the cutting of government health department budgets to the extent of impairing their service. Dr. Emerson is the acting executive secretary of the American Public Health Association, and he spoke over the National Farm and Home radio network.

"The rule usually followed in effecting public economies is to make cuts where party or personal interests will suffer least," said Dr. Emerson. "Precious little attention is paid to the relative importance of the various functions of government, a great deal to the importance of the political neck upon which the axe of economy is to fall.

"We are all convinced that governments can be run on far less than some have led us to believe was necessary. Anyone who attempts to check the rising tide of economy will meet with instant popular disapproval. But we must separate the essential from the nonessential. Above all we must have protection against the menace of epidemic diseases which holds in itself far more public danger than the peril that lies in unjust laws, fire and banditry, all combined."

Dr. Emerson deplored the fact that the nature of public health protection is such that the individual goes about his business oblivious of what it costs in brain, energy, and skill.

"The public health service spends little time on publicity," stated Dr. Emerson. "Its thoughts are bent on scientific, not political, considerations. It is the least advertised of all our public services, yet it is the first of the fundamental necessities of government if we are to have healthy lives, happy homes, living children and grandparents in every family.

"The public health service wears no striking uniform; it does not break the slumber of the night with the clang of the fire patrol or the shriek of the siren. Yet without it modern life could not endure. Quietly and unobtrusively it goes about supplying the community with pure water uncontaminated with the germs of disease; it disposes of the city's waste and controls its smoke and dirt; it supervises milk and other foods and assures safety from the infections that such supplies may carry. Through the eternal vigilance of its quarantine it renders cities free from devastating plague, from typhus, cholera, yellow fever, and the like. Never sleeping, it guards the child from diphtheria, scarlet and typhoid fever, and other frequently fatal contagious diseases.

"Despite its vital importance, the public health service has always been underpaid and under-staffed. Yet its achievements have been beyond all praise. Had it shown extravagance or wastefulness comparable to that of other government departments, it should submit without protest to the reductions inevitable in times of financial stress. But it has not laid itself open to the charge. On its merits it has the right to demand from all good citizens such generous support that its basic services shall remain unhampered.

"If we people but knew the risk of decreased health protection, we would approve reduction in every other department of government before allowing ourselves to be driven to the suicidal procedure of impairing the service that watches with unslumbering vigilance over our comfort, our health, and our children's lives."

WANTED!

The State Board of Health would appreciate receiving a copy of the July, 1930, issue of The Health Bulletin. Any reader having a copy which can be spared would confer a favor on the Board by mailing it to the State Board of Health, Raleigh, North Carolina.
About the Infant Death Rate and Legislative Appropriations

On Sunday, July 23, the Raleigh News and Observer published the following editorial:

NORTH CAROLINA AND MISSISSIPPI

"Census figures for 1932 show that North Carolina can take what gratification may come from the fact that only one State exceeds its birth rate, but it cannot escape the shame of the high infant death rate which accompanies it. Only eight states in the Union reported a higher infant death rate than North Carolina.

"In the past in such matters it has been easy to attribute the high infant death rate in North Carolina to the large Negro population of the State. In 1932, however, North Carolina had a higher infant mortality rate than Alabama, Mississippi, Georgia, Kentucky, Louisiana, Arkansas, Florida, or Oklahoma.

"What can be done in a Southern State to reduce the infant death rate is shown by the fact that Mississippi, a blacker State than North Carolina and a State with a birth rate almost as high as that here, had an infant mortality rate of only 54.6 per 1,000 live births, while the North Carolina rate for the same number of births was 67.2.

"Difference in the character of population may explain the wide divergence between the infant mortality rate of 41.5 in Oregon and 67.2 in North Carolina. But the character of population does not explain the difference between North Carolina and Mississippi. Mississippi has attained a lower death rate than the national average of 57.9, while North Carolina's infant death rate is still far above the average for the Nation."

It will be noted in the foregoing statement that the editor presented us to the wide world in a rather unkempt, tousled, and ragged appearance — in our everyday working clothes, so to speak. In the main, his facts were on straight. However, he might have put one little bunch of roses in our hands by stating that the infant death rate in North Carolina was lower in 1932 than Virginia, Maryland, the District of Columbia, including Washington City, the capital city of the Nation, and West Virginia. It does not matter that he did not do so, as it would not have been much mitigation for our humiliation; and, what is more important, the aforementioned group of states and Washington may do better this year than we are doing — and we expect will do so. One other error may be mentioned: no responsible health officer has ever attributed our high infant death rate to our Negro population.

With reference to the above editorial, Dr. James M. Parrott, State Health Officer, published the following letter in The News and Observer under date of Wednesday morning, July 26:

"The facts set forth in the editorial in your Sunday paper entitled 'North Carolina and Mississippi' are approximately correct. I agree with you in your statement that 'it (the State) cannot excuse the shame of the high infant death rate which accompanies it (the birth rate).' It is also true that approximately only eight states in the Union have a higher infant death rate than North Carolina, and I concur in the conclusion which you evidently reach, that we cannot excuse ourselves on account of our large Negro population, because: (a) our Negroes are unusually intelligent; (b) in 1932, such states as Alabama, Mississippi, Georgia, and Louisiana, having a higher percentage of Negro population than North Carolina, had a lower infant mortality; (c) infant mortality in North Carolina is higher than that for the United States. Our infant death rate moved up nearly twelve points in the recent June.

Not All of Story

"This woeful tale does not tell all of the sad story. The maternal mor-
tality in North Carolina reflects no credit on any civilized state. Our maternal mortality rates are more than twice as high as those for communities where rates are considered good. Our rates are 30 per cent greater than those for the United States Registration Area.

"The general sanitation of our State is not commendably good. Typhoid fever is a fair index to social sanitary conditions. Take our schools for example: Before school age the typhoid fever mortality for North Carolina is 4.5, definitely lower than that for the United States. After school age typhoid deaths in North Carolina are 58.8, and those for the United States are definitely higher. During school age the typhoid deaths in North Carolina are 36.7, and those for the United States are definitely lower. In other words, relatively fewer deaths from typhoid fever occur in pre-school and post-school ages in North Carolina than in the rest of the United States, but more deaths occur during school ages. This is explained in a large measure by the fact that the privy conditions in the schools which more than a third of our children attend are bad, and the fact that nearly a third of the school children in North Carolina have to drink their water from open and shallow wells, or lap it up from springs and branches like dogs.

Death Rate Rising

"The general death rate in North Carolina appears now to be definitely on the increase—the first time in several years. We closed 1932 with the lowest death rate in the history of the commonwealth, and the lowest of any state, save three or four, in the United States. The first six months of this year found us with a death rate three points higher than ten.

"While I deeply regret all the above—regret it more than I can possibly express, and have in it no comfort at all—I think that in justice to this department and the medical profession I should state definitely and positively that these misfortunes are due to no fault of the Board of Health or the physicians of the State. Be it known, definitely and certainly, that they are to a large extent fairly chargeable to the reduction in available funds to this department during the recent years. Due and timely notice of these disastrous results has been given through the press, from the platform, and in private conversation.

"Public health is purchasable, and that too at a very, very low monetary price.

May Expect More

"Let me again solemnly warn that we have every reason to expect an increase in sickness and in deaths with a continuation of the insufficiency of appropriations.

"The public will be interested in knowing that the average per capita appropriation to the state health departments of the United States is 13 cents, while we are spending less than 8 cents. Our sister states are spending much larger amounts per capita than we. Of our tax dollar, 39 cents is dispensed for debt service, 20 cents for highways, 4 cents for eleemosynary institutions and pensions, 4 cents for other institutions, State and local, and for public health 7/10 of one cent.

"The people of our State are spending six times more for funerals and tombstones than for health.

"Because North Carolina has the lowest general death rate of any state in the Union except four, it is hardly an excuse or reason for now relaxing our efforts in order to save just a few dollars and letting more of our good people die, and greatly increasing the number of sick. Frankly, we are just as interested in reducing the amount of illness as well as the number of deaths."

It will be noted in the foregoing statement of Dr. Parrott that he believes in adequate funds with which to carry on the very important educational and advisory service to the expectant mothers for the benefit of them and their infants in this State.

There are a multitude of causes which it is impossible to discuss here which contribute toward this state of affairs; but Dr. Parrott is unquestionably right in putting his finger on the one essential need for the correction of this state of affairs. Public health work cannot be carried on without the expenditure of money. We have repeatedly published that
declaration in the columns of THE HEALTH BULLETIN for the past twenty years. People sooner or later get exactly what they are willing to pay for, and no more. In the long run it means that there must be adequate appropriations, consecutive, intelligent, and persistent work spread over a period of years and ramifying to every community in the State.

It is interesting to note the following editorial discussion in The News and Observer, under date of July 26, with reference to Dr. Parrott's communication of the same date:

**Seven Tenth's of One Cent**

"Attention has been called in these columns recently to the shamefully high infant mortality rate in North Carolina. That is only one item in North Carolina's cause for shame in considering its public health conditions.

"Upon the authority of Dr. James M. Parrott, secretary of the State Board of Health, whose statement is printed in full elsewhere in today's News and Observer, other items may be added:

“Our infant death rate moved up nearly twelve points in the recent June. The maternal mortality in North Carolina reflects no credit on any civilized state. The general sanitation of our State is not commendably good. The privy conditions in the schools which more than a third of our children attend are bad. Children of school age in North Carolina are in much greater danger of typhoid than in other states or those persons not in school in North Carolina. The low general death rate in North Carolina appears now to be definitely on the increase for the first time in several years.

"For such conditions there must be a cause, and Dr. Parrott states it frankly. He charges these conditions directly to the reduction in available funds for public health work in North Carolina during recent years. Already suffering from the results of this so-called 'economy,' Dr. Parrott declares that the State has 'every reason to expect an increase in sickness and in deaths with a continuation of the insufficiency of appropriations.' He declares:

"The public will be interested in knowing that the average per capita appropriation to the State health departments of the United States is 13 cents, while we are spending less than 8 cents. Our sister states are spending much larger amounts per capita than we. Of our tax dollar, 39 cents is dispensed for debt service, 20 cents for highways, 4 cents for eleemosynary institutions and pensions, 4 cents for other institutions, State and local, and for public health 7/10 of one cent.

"The people of our State are spending six times more for funerals and tombstones than for health."

"There have been North Carolinians who have said that the State was too poor to educate. Now North Carolinians are acting upon the principle that they are too poor to provide for public health. They will remain ignorant and sick so long and only so long as the people wish to remain so. Health is purchasable, but North Carolina is refusing to buy it, though the lack of it is far more costly to the people and the State."

**Rocky Mountain Spotted Fever**

*By D. F. Milam, M.D., Epidemiologist, North Carolina State Board of Health*

ROCKY MOUNTAIN spotted fever showed a rather startling increase in North Carolina in July, a total of twelve cases with four deaths being reported in that month. Since cases were chiefly of the severe type, it is quite probable that many mild cases escaped reporting, and that the mortality is not as high as the above figures indicate. Previous to 1923 only one case of the disease had been reported in this State; in fact, the disease was made reportable only three years ago. It
has just been brought out, however, that many physicians have been seeing similar cases at intervals for as far back as twenty years, so that it seems probable that the disease has been with us for at least that long.

Rocky Mountain spotted fever has been known to exist in the eastern United States for only three years. It is not a disease spread from man to man, but man gets it from the bite of an infected tick. The fact that so few people get the disease is evidence that infected ticks are not very common. At present infected ticks seem to be limited to certain areas spotted over the State. All reported cases to date have come from eight counties, but others will undoubtedly come in for a share. Individuals developing the disease have been rural dwellers or those living temporarily in the country. These are the people most exposed to tick bite.

The tick responsible for the transmission of the eastern type of the disease is believed to be chiefly the dog tick. But other ticks may also play a part. Only a small percentage of the ticks are infected and, of course, only the infected ticks carry the disease. In addition to tick bite, mashing ticks between the fingers could also lead to the disease, particularly if there are any breaks in the skin. Ticks are not seen during the winter. In this State the tick season is said to run from April to September, and this is just the season when this disease occurs in man. Ticks are said to be absent from deep woods and to be found chiefly in low bushes, particularly along roads, trails, and the edges of woods. From these locations men and animals pick them up. A dog infected by one tick will, in turn, infect other ticks. But the dog is probably infectious to ticks for only about one week, and this undoubtedly accounts, in part, for the rarity of the disease. The dog is not made sick by this disease, but only transmits it to ticks. Other four-footed animals carry the infection, and for several species it is quite fatal. Any age is susceptible, but there does seem to be a preponderance of children affected. The spotted condition of the skin in this disease is different from that of any other disease that we know about, except typhus fever. A terrific headache has been a characteristic feature of our cases.

There is no reason to be unduly afraid of this disease, since it is not transmitted from man to man and a few precautions will protect the individual from getting it, even in areas having infected ticks. Avoid getting ticks on the person by staying away from areas likely to be infested, and by wearing clothing that will protect from them—that is, by wearing high boots or leggings, with clothing of thick texture such as khaki, which will keep ticks off the body except on the hands and neck. From these locations they should be picked off at least twice a day. When it goes on the body, the tick is said to wait quite a while before feeding, and also is seldom infectious unless it has been attached for a few hours. Thus, if picked off at noon and night the danger from infected ticks is greatly decreased. Children playing in spots infested with ticks should be bathed daily and carefully inspected for ticks, particularly on the scalp. Ticks removed should never be mashed with the fingers, since the blood of infected ticks is dangerous. It is a good plan to keep weeds, grass, and undergrowth cut very short for a considerable distance from dwelling houses.

In tick season care should be taken to keep dogs free from ticks, not only by deticking them, but also, if necessary, by confining them to keep them from roaming at large. It is also worth mentioning that persons going on camping trips should pick camp-sites in safe locations. A deep woods where undergrowth is scanty is probably the safest location. Where wild rodents are numerous, ticks are also likely to be prevalent.
We are here publishing a résumé of a health unit conducted last winter in the sixth grade of the Frank B. John School at Salisbury by Miss Ruth C. Pierce, teacher. This report was sent to us by Dr. Armstrong, the health officer, who states that "This work on the part of Miss Pierce was purely voluntary. She started the whole thing on her own initiative and put the whole project through on her own."

We are pleased to publish the report as an illustration not only of what a considerable number of teachers carried through with more or less success last year, but of what almost any live teacher with determination could do in every large town and city school in the State.

One of the needs of the North Carolina school system is for more Miss Pierces. Salisbury should be proud of this record hung up by Miss Pierce and her fine young sixth-graders.

Miss Pierce's report follows:

Existing Conditions Fall of 1932
Forty-four per cent of the class of 46 was underweight.
Four children ranged from 1 per cent to 10 per cent underweight.
Seventeen children were found to range from 10 to 33 per cent underweight.
Fifteen children needed the removal of tonsils and adenoids.
Three children needed the services of an eye specialist, while five needed an expert to test their eyes for a change in glasses.
Two children wearing glasses unsuited to eyes had not been adjusted by a physician.
Three children had never been vaccinated against smallpox.
Nine children needed the typhoid serum—all others having had it during the previous summer or in the last three years.

All the children in the grade with one exception needed to consult a dentist.
Posture was extremely poor.

Results of Year's Project
Twelve per cent of the class was underweight in the spring of 1933, the highest range being 19 per cent. (This child was 33 per cent in the fall.)

Thirteen children underwent operation for removal of adenoids and tonsils. One child ran such a high temperature all the time that for weeks and weeks the doctor would not remove tonsils, but after it did not abate, he performed the operation and found pus sacs behind the tonsils. Up to this time her temperature had seldom been normal. Another child ran high temperatures at times and suffered from headaches frequently and a serious kidney trouble. Temperature returned to normal and big improvement noted in general condition after removal of tonsils.

One child had never been able to see out of one eye, and his eyes were terribly crossed. After four months treatment by a specialist, normal vision was restored and the weak muscle strengthened so as to draw the eye practically in line. The child did not have to have glasses. In a similar case where a child had no vision in one eye, glasses were adjusted that enabled the child not only to see, but to come from a below-average pupil to one above the average of the class.

The other seven children were carried to oculists and treated or had eyes examined for glasses.
The nine children needing the typhoid serum were given it.
Every child in the grade consulted a dentist, with the result that every child in the grade had the necessary work done and received a certificate stating their teeth were in perfect condition with the exception of two.
Every child in the grade took the Schick test for diphtheria, but all proved negative.

Every child in the grade took the test to determine whether or not he or she had the tuberculosis germ in the body. Only one positive case was found. This was reported to the home. An X-ray was made immediately to locate the germ and the child placed on a diet under the care of the family physician.

Ears were tested and no trouble located.

Posture was improved greatly during the year. Children were taught correct posture, and constant attention was given to this matter both in the classroom and on the playground.

This required about one hundred visits to the homes of parents and the writing of around two hundred letters. In the visits to the homes the matter of food and rest was discussed with parents and children.

Days were spent in discussing balanced diets, charts were studied and prepared. Posters were made and discussed at length with children, and a study of foods and their relation to and reaction on the body made. Out of this study grew a course in Botany. Study of roots, herbs, plant life, and plant food. How to use it to best advantage, and still further, a study of table manners and etiquette.

Our goal by the end of the school was set as a grade 100 per cent perfect physically. Since school closed one month sooner than we anticipated, we had remaining only two children to have tonsils removed and two children yet to secure certificates from the dentist. We felt that we might have accomplished our goal had we had a little more time.

War Against Malaria Is Needed

The Health Bulletin for July, published by the State Board of Health, furnishes the information that from tests made in six counties among school children less than 9 per cent were found to be infected with hookworms. This is a decided improvement over conditions existing some twenty years ago, when the Rockefeller Commission made a survey and found that about 90 per cent of the children were infected. The Bulletin expresses the opinion, though, that this disease should be completely eradicated from the State's population.

As to another plague, however, The Bulletin does not bring us very good tidings. We refer to malaria. An article by Dr. D. F. Milam, epidemiologist, states that "the amount of malaria in the State has taken a sharp upturn." The reason for this seems to be that for several recent years there seems to have been a decided increase in mosquitoes. The increased mosquito output is probably due to more favorable breeding conditions than had hitherto been the case. Mosquitoes breed only in water such as is found in holes, clogged ditches, ponds, slow-moving streams, barrels, tubs, etcetera. There are many kinds of mosquitoes, but only one kind, the female of the anopheles species, carries the malaria germ. Could the anopheles be totally eliminated it is possible that malaria might also be abolished.

It does not seem possible to exterminate mosquitoes in a country where they are as prevalent as in the coastal region, but there is no doubt but that their numbers can be greatly reduced. Drainage of marshes, so the tide can flow freely in and out, opening up ditches and ponds, would help mightily. It is possible that help for this purpose can be had from the R. F. C. relief. Money spent for such purposes would improve the health of a great many people. Malaria is a great evil and should be fought intelligently and vigorously.—Beaufort News.
If beauty alone were considered, the Garden of Eden might very well have been situated on the west bank of this river, where the Cherokee Indian School is now located. Please see the article in this issue on "Health Work Among the Cherokee Indians."
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FREE HEALTH LITERATURE

The State Board of Health publishes monthly The Health Bulletin which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils  Health Education  Scarlet Fever
Cancer  Hookworm Disease  Smallpox
Constipation  Infantile Paralysis  Typhus
Chickenpox  Influenza  Tuberculosis
Diabetes  Malaria  Typhoid Fever
Diphtheria  Measles  Typhoid Placards
Don't Spit Placards  Pneumonia  Venereal Diseases
Eyes  Residential Sewage  Water Supplies
Flies  Disposal Plants  Whipping Cough
Fly Placards  Sanitary Privies
German Measles

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)  Baby’s Daily Time Cards: Under 5 months: 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
Our Babies*  Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Prenatal Letters (series of nine monthly letters)  Instructions for North Carolina Midwives.
Minimum Standards of Prenatal Care
Breast Feeding
Infant Care. The Prevention of Infantile Diarrhea
Table of Heights and Weights

CONTENTS

Notes and Comment .......................................................... 3
Health Work Among the Cherokee Indians .......................... 6
In the Morning’s Mail ....................................................... 8
False Advertising About Cancer ........................................ 10
See Bladenboro Article .................................................... 11
Book Review ................................................................. 13
Birth and Infant Death Rates, 1932, by States .................... 14
Sea Food Contributes to Health ........................................ 15
Health Examination Is Important for Excellent Start .......... 15
Milk-Borne Diseases ...................................................... 16
Birth and Infant Death Rates, 1932, by Counties ................ 16
DURING the summer of 1932 six State nurses, engaged in school health supervision work during the school months of the year, were sent into a large number of counties having no organized health departments, for the purpose of holding classes for midwife instruction. They made personal and group contacts with a large number of midwives in a number of counties where such work had never been undertaken before.

During the present summer these nurses have gone back to the same counties that they worked in last year, for the purpose of doing a little more intensive work along the same line. Their work has been a kind of follow-up work to their efforts last summer. Almost without exception the reports of the nurses indicate a gratifying improvement in the class of midwife service in many of the communities of such counties. Naturally the improvement has been in spots. Some of the midwife groups who made the worst showing last summer have revealed a remarkable improvement in their personal qualifications and in their equipment for the work. The classes this summer have been attended by a much larger number of midwives and also many physicians, and all of them have manifested a great deal of interest in the work.

Many of the people in the State do not realize the importance of this character of work. We may again repeat that the infant and maternal death rate in North Carolina is entirely too high. The importance of midwife service is plainly revealed in the fact that slightly more than one-third of the mothers giving birth to babies in 1932 were attended solely by midwives. The following table presents the facts.

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<th>Physicians</th>
<th>Midwives</th>
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A glance at the above figures should serve to convince anyone that unless the midwife service is fairly competent the price that will be paid is a very high death rate among infants, particularly during the first few days of life, and among mothers. Practically all such deaths are preventable.

The primary objectives in the nurse work among midwives is to try to make their services safer for the class of people who are forced by circumstances to depend entirely on midwife attention, although the aid of a competent physician would be much more desirable.

RECENTLY two items from widely separated areas reached the editor's desk at the same time. The first was a clipping from the Durham Herald, which published a report of the health department, giving a summary as to conditions of the first seven months of this year in Durham County. The second item was a report from the health officer of the Virgin Islands of the United States. The two items of comparison which most interested the editor are as follows:

The Durham health department reported for the first seven months of the year that out of 509 white births
40 were illegitimate, and of 332 Negro births reported 128 were illegitimate. In the same statement the health department reported that the infant mortality for the whites was lower than one year ago, but that the Negro rate was higher. The Virgin Islands report covered the month of July, and in connection with that report we were reminded that 60 per cent of the births in the Virgin Islands are said to be illegitimate. It has been explained that the reason for that state of affairs is that among the large primitive class of the population they make their own marital arrangements, not going to the trouble and expense of securing legal marriage. It is said, however, that about the same proportion of fidelity between couples exists as in other lands among people of similar social conditions. But the children born to such couples, of course, are illegitimate.

It seems that a Negro rate of 128 illegitimate births out of a total of 332 for a county like Durham is an unusually high rate of illegitimate births. Under such circumstances no one could be surprised at the infant mortality increasing over the previous year. The Durham paper quotes the health officer of Durham as very properly attributing the increased infant mortality rate to the excessive number of illegitimate births. The comment follows:

"Health officers say there is little doubt but that the Negro infant mortality rate is greatly influenced by the large number of illegitimate births. They say cases of dire neglect frequently are called to the attention of the health department, many of them resulting in death during the first year of life."

The other comparison in the Virgin Islands report refers to malaria. It will be noted that no mention was made of any malaria occurring in Durham County. It is probable that there was no case of malaria in the county during this seven-months period. On the other hand, the Virgin Islands report states that for the month of July there were 164 cases of malignant tertian malaria reported. It is said that there was no malaria in the Virgin Islands until about two or three years ago, when invalids were imported from Porto Rico, which served to infect the mosquitoes of the islands, and since that time malaria has scourged both the islands of Saint Thomas and Saint John.

These items are recorded here for the purpose of illustrating again to the people of North Carolina that the maintenance of public health up to a high standard is dependent on a number of geographical, professional, sociological, and economic conditions, all of which must be intelligently handled to protect the health of the people.

* * *

As the eight-months State-wide, State-supported schools are now in full swing in North Carolina, it is a good time to mention again that every child in the schools should be protected against smallpox, diphtheria, and typhoid fever. It is said that in the State of Maryland they have a State-wide compulsory smallpox vaccination law. Not only do they refuse to permit the entrance of children to school who have not been successfully vaccinated, but any teacher who permits such a child to enroll in the school is liable to a fine of $10 for such an offense. For the past three years only one case of smallpox has been reported in the State of Maryland.

It is a cause for pride that in the State of North Carolina a number of counties, and practically all of the large city schools, require successful vaccination of the school children. Smallpox in this State has been cut to a very low minimum. People now in middle age remember that not more than twenty years ago scarcely a solitary school anywhere in the State could continue in session five or six months without having to suspend because of an outbreak of smallpox in the school. The death rate was high. It was a source of trouble for everybody concerned.

Since the widespread efforts at vaccination during the last few years, the
disease has been almost wiped out. At the same time a number of counties still handle the matter carelessly, and no efforts are made to protect the school children. In such counties it is inevitable that sooner or later smallpox in virulent form will return. It would be a good idea for every county to adopt the Maryland idea. That is the only way that a completely vaccinated population can be secured. The simple expedient of requiring children to be vaccinated before entering school, in the course of twenty years, will assure a completely vaccinated population. Another important point to consider is that children under six years of age may be successfully vaccinated with very little inconvenience to the children or to the family. The fact is, the younger the child when vaccinated the better it is for the child and his family.

At this time the nurses employed by the State Board of Health, who have been visiting the schools and teaching health education largely in the rural sections of the State and exclusively in counties having no organized health departments, are busy with their work. These nurses have carried the story of better health in a practical manner to the children of the poorer classes as it has never been done before. It is hoped that this year they will receive the cooperation of the public, particularly the medical profession, sympathetically and wholeheartedly.

One of our nurses reported a most significant story a year or two ago. We repeat it here, because it illustrates that many times physicians and others have criticized the work of the nurses for the simple reason that they were totally ignorant of what the nurses are doing, why they are doing it, and how they are doing it. This particular nurse was assigned to her home county where she was on friendly terms with all of the practicing physicians. The county-seat, a town of under ten thousand population, boasted a splendid medical profession. These physicians were all her friends. One of them was practicing as a pediatrician. He was particularly critical about the nurse's work. He was honestly of the opinion that the nurses were serving to agitate more than to instruct. Finally the nurse got him out to the schoolhouse at the time she was inspecting the grade in which this physician's little girl was a pupil. She got the physician to go to the schoolroom with her and stay throughout the period. She told him that she simply wanted him to see what she saw and what she was seeing every day.

Let us repeat again, this occurred in a town of a splendid medical and dental profession where children were supposed to have every advantage that children anywhere could have. On entering the schoolroom the physician called to his little girl and told her to stand aside, that she was "not to be examined by that woman." That over with, the nurse proceeded in her usual manner. Height and weight and matters of nutrition and parasitic infection and all such items were dispensed with in regular style. The physician became interested, and the nurse asked him to examine every throat and the teeth of all the children. Before he was half through he stood up and said that he wanted to apologize to the nurse for any criticism that he had ever offered, that never in all his life had he seen such conditions. The large percentage of decayed teeth simply horrified him. The throat conditions were little better. The conclusion of the whole matter was that the physician stated that he had honestly been mistaken, that never again would he criticize the work of the nurse or of the State Board of Health in making an honest effort to do something for the children. If every honest and competent physician in the State, with an open mind, could attend a few such demonstrations by these experienced nurses, the medical profession would not rest until all such children had the benefit of competent medical and dental service.
A few cases of septic sore throat have been reported every month this year. This is a condition that is about as dangerous as diphtheria. No age is immune, but the disease is more prevalent among children during the school period. It may be transmitted in milk, by direct contact, and in other ways. It is often followed by complications in the kidneys which are fatal and, when not fatal, leave the patient with marks of the attack for a long time afterward. Any child in any school having any symptoms of sore throat should be immediately sent home, and unless the attack quickly passes off, the services of a competent physician should be secured. In the beginning of an attack it is frequently hard to differentiate it from scarlet fever and sometimes even from diphtheria. It occasionally follows an attack of diphtheria, possibly four to six weeks afterward. In such cases it is even worse than the attack of diphtheria.

All cases of septic sore throat should be very promptly reported to the local health officer, and definite action should be immediately taken by that official to protect the other children of the community. A safe milk supply, safe food, pure water, avoidance of crowding, particularly in the schoolrooms, care about ventilation and heating will help to avoid a spread of septic sore throat.

Health Work Among the Cherokee Indians

From June 5 to June 17, 1933, a general health survey was conducted for the Cherokee Indians at the Agency Headquarters, Cherokee, North Carolina. The Cherokee Indian School is situated on the Oconaluftee River in Swain County. The purpose of this study was to ascertain the physical condition and health status of this group of Indians with a view to determining with some degree of accuracy their public health needs and to define, if possible, the responsibilities of the Federal and State governments in safeguarding the health of this racial group of our population. The work was a cooperative enterprise on the part of the United States Public Health Service, the United States Department of the Interior, Office of Indian Affairs, the Cherokee Indian Agency, the North Carolina Tuberculosis Sanatorium, and the North Carolina State Board of Health. Representatives from each of these agencies took part in the general survey. The response on the part of the Cherokee Indians was very gratifying.

This work is of more than passing interest, particularly on account of the nation-wide interest in the development of the Great Smoky Mountain National Park in that locality. The population of the Park and Extra Park Zone includes some twenty-eight hundred Indians, whose health status has been such as to cause some anxiety on the part of the white residents in that section of the State. Dr. M. V. Ziegler says in his report:

"It has been insinuated that the health conditions existing among the Indians were prejudicial to the sanitation of this locality. It has also been alleged that the prevalence of tuberculosis, trachoma, venereal and other diseases existing among the Indians was detrimental to the fullest usage of the Park and Extra Park Zone by the residents in this section as well as by tourists and vacationists frequenting this area."

Dr. Ziegler further states:

"The counties in this section of the State have sustained considerable loss in tax revenue on account of the fact that certain Indian lands are held in trust by the Federal Government for the Indians, and as such are non-taxable property. Furthermore, large tracts of land within the confines of these counties have already been included in the Great Smoky Mountains National Park, which has reduced considerably the taxable lands in these
counties. Therefore, the State Board of Health felt that it could properly devote considerably more attention to public health work in this area, as a central health department activity, than in other counties in the State where the State Board of Health is now cooperating with the local authorities in health work. In view of these several circumstances, it was deemed advisable to undertake an official health study of the Indians and the Indians' environment, with a view to establishing definitely the character and scope of the public health problem and the needs which should be met in properly safeguarding the health of the Indians, preliminary to establishing appropriate health and sanitation measures in the Great Smoky Mountain National Park and the area adjacent thereto.

The reservation proper on which these Indians live lies in Swain and Jackson counties and consists of about fifty thousand acres of land. There are some scattering tracts in Graham and Cherokee counties which aggregate about thirteen thousand acres. While the Indians on this reservation are direct charges of the United States Government, they have to comply with certain State and local laws, such as the quarantine and vital statistics laws and other civil laws. In addition to this, the Indians have a government of their own, which they call a "tribal council." All of these varying governmental responsibilities have added more or less to the difficulty of ascertaining the exact health status of these Indians. The Government maintains a boarding school with a capacity of four hundred children, also a hospital, a whole-time physician, and three nurses, including a field nurse.

During the two weeks period above mentioned, a complete physical examination by physicians and dentists, including experts on tuberculosis, venereal diseases, eye, ear, nose, and throat, was offered to the people of the reservation. Every applicant for examination was offered free immunization against smallpox, diphtheria, and typhoid fever. A total of 1,155 applicants were registered and received examination. Of this number 967 were Cherokee Indians. The remainder were white persons living on or near the reservation.

Blood specimens for Wassermann testing were obtained from 908 persons, and the specimens were examined by the State Laboratory of Hygiene at Raleigh. A positive infection of 4.6 per cent was reported. It will be noted that this is lower than the average established for the general population of the State, although there has never been made a complete examination for any cross section of the public embracing all classes, white and colored, in the State. So the estimates for the rest of the State are estimates only. It may be noted that of the positive reactions 5.3 per cent of the examinations for Indians were positive, as against 1.7 per cent for the whites. These blood specimens were obtained from men and women and children of all ages. If the syphilis rate had been calculated only on specimens obtained from the sexually active age groups, it would be natural to assume that the incidence of this disease among this group of people would be much higher.

Tuberculin skin tests were made for 433 pupils attending the boarding and day schools on the reservation just prior to the inauguration of the general health clinic. During the health clinic 859 people were given the tuberculin skin test, making a total of 1,302 people receiving this test. The test resulted in a positive reaction in 467 people. This was followed by x-ray examinations in which 193 people were found to be suffering from tuberculosis in the active stages—that is, 9 per cent of the total examined. An additional 66 were considered suspicious, as noted on the x-ray examination. Twenty-nine were found in actual need of sanatorium care at this time.

The result of the examinations for eye, ear, nose, and throat defects indicates that this population are not abnormal sufferers from these conditions.

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have regular dental attention in the reservation school. The adult population not having the advantage of dental treatment as do the children in the boarding school on the reservation, a much higher percentage was found in need of dental work. Very little pyorrhea was found among the children, but among the adults 228 people were found to be suffering from advanced pyorrhea.

The number of people found to be suffering from goiter or allied glandular troubles and from trachoma (a serious disease of the eye) was small. This fact is very gratifying to the Federal and State health authorities.

During the period 356 people were vaccinated against smallpox, 154 immunized against diphtheria, and 760 received the preventive typhoid treatment.

In completeness of detail this clinic surpassed anything of like nature so far undertaken in this State. The examinations were thorough in every particular, the registrant receiving a thorough examination from a competent specialist, each in his own line. If it is possible to establish exact health conditions among any group of people, this effort should be an illustration of what can be done on a large scale.

It will be interesting to note that many of the Indians could not speak English. A very competent interpreter was present throughout the period. This was necessary in order to get a complete family history and all the clinical data necessary.

If all the recommendations of those in charge of the clinic may be carried out, the work should result in much good to that whole section of western North Carolina.

In The Morning's Mail

EVERY day in the year the State Board of Health receives numerous inquiries from citizens of the State for information on various subjects. Every letter received is referred to the head of the department responsible for that kind of work. Every letter receives careful attention, and a reply is sent as promptly as possible. Questions are sent in for information on every conceivable subject. Naturally many of them cannot be answered satisfactorily, but in every case where it is possible to supply definite information it is done. Frequently, in order to supply reliable and accurate information it is necessary for the head of the department to spend many hours in research work in order to give the writer the best and most accurate information possible. A large portion of the letters concern every-day problems with which every householder has to contend. Almost every day an unusual letter is received having to do with a very commonplace subject.

We think it advisable now and then to publish in The Health Bulletin extracts from some of the letters. The letter published below, together with our reply, is a sample of some of the very intelligent queries that we receive. We are sure the writer will not object to our using her letter. We are not even mentioning the county in which she lives. No one except the editor of The Bulletin knows whom the letter is from. We feel sure, however, that many a mother is having to deal with the same problems this woman writes about.

We make an effort each month to supply helpful information in the columns of The Health Bulletin. That is why it is published. We have evidence from every section of the State that an increasing number of intelligent people are reading The Health Bulletin monthly and obtaining information which helps them with
their daily problems of maintaining the health of the family and preventing disease.

Following is an extract from a letter on one of the most prosaic subjects any householder has to discuss:

"Sometime ago I saw in THE BULLETIN something about killing bedbugs. The house I rent is ceiled, and behind this ceiling is where they are. I have sprayed the walls in gasoline, oil, and different kinds of bug killers. Also I burned sulphur twenty-four hours. But not anything has killed them. Won't you tell me just what to do? Is there a kind of gas I could use? Would a coat of paint help? I have nine children and am in desperate need of some way to kill the bugs, and anything you say try, I will try, and will be more thankful than I can tell you. I do not know of a house to rent but that it is full like mine. Is there not some way of fumigating before a family moves in which would kill anything and everything? You do not know of the suffering the poor mothers have because of so many bedbugs, and I fully believe the death rate of infants could be changed by killing bedbugs and thereby giving the mother more rest and the baby protection.

"There have been lots of questions that I would have liked to ask you, after reading THE BULLETIN. Do you like to receive and answer questions?"

**Answer**

In the first place, let me say to you that we shall always be glad to receive any question that you want to ask, and to answer it if we can. This is one service that the State Board of Health has been rendering for several years and which we do our best to keep up at all times. I have been editor of THE HEALTH BULLETIN for more than ten years, and nothing pleases me more than to have people write here and ask questions about things they have read in THE HEALTH BULLETIN. That is the purpose of THE HEALTH BULLETIN, and it is the reason we publish it every month.

Now with reference to the bedbug plague. I cannot encourage you much. It seems that you have done about everything that could be reasonably expected to destroy these pests. The trouble is, your gasoline spray does not reach down into the crevices in the woodwork as far as the bedbugs' larvae travel. The larvae hatch out from the eggs deposited deeply in the woodwork, and in the larval stage the gasoline spray does not reach them in sufficient quantity to destroy them. It will kill any adult bedbug, but the larvae is where the trouble comes. There is only one kind of gas that could possibly reach them. That is a dangerous gas known as "hydrocyanic acid gas," and it will kill any human or animal that inhales it. Even that, to be effective, has to be used in a more or less air-tight house, and a druggist or health officer has to prepare it and supervise its use. I would not advise it to be undertaken in your case. A thorough coat of paint, covering all the crevices in all the woodwork inside, following another thorough spray of the gasoline, might help a great deal. It is one of the meanest pests in the world to get rid of once a house is thoroughly infected with it. Soap and boiling hot water can be made to reach all of the crevices on the floors and lower parts of the walls, but you cannot get this into places like the ceiling and high-up places in the walls of the room. I believe, while it is summer, I would try again the hot water and soap cleaning. At the same time, all sheets and clothing and bedding which could be boiled, to be so treated, and such things as the mattresses and blankets and quilts which could not be boiled could be thoroughly shaken out and sunned in the hot sunshine for three or four days in succession. Then, after this treatment, to again spray with gasoline or oil might reduce the pests to a degree where you could keep them down. I have no doubt your statement, that so many houses are infected and that it is helping cause the infant death rate to be higher than it ought to be, is true.

Any other questions that we can answer, or suggestions that we can give you with regard to health problems, will be gladly undertaken at any time.
False Advertising About Cancer

In recent weeks there has appeared in two or three North Carolina weekly newspapers unsigned advertising, generally placed in the classified columns, claiming that the use of electrical refrigeration is a direct cause of cancer. The State Board of Health has received some inquiries from people who have seen this advertising and who own electric refrigerators. Should this false propaganda continue, we shall, of course, receive more inquiries; hence this article. We wish to here and now go on record as stating that, so far as any scientific evidence is concerned, there is no reason to suspect that the use of food kept in electrical refrigerators is in any way a cause of cancer.

When people go to the expense of putting advertisements in a paper and paying for it and at the same time refraining from revealing their identity, the reading public may immediately conclude that there is a "Nigger in the woodpile." In other words, when such advertising is placed, those who are paying for the advertising have an ulterior motive in spreading such propaganda, and the motive is generally a financial consideration in which the advertisers are more interested in themselves than in the public health or the interest of the general public.

On first receiving copies of this advertising and requests for information as to the reliability of the claims made, we wrote to the American Medical Association for any information their scientific department might have. We immediately received a reply to the effect that there was no scientific ground for any such claims. On August 12 the Journal of the American Medical Association published the following editorial:

REFRIGERATION AND CANCER: A FALSE PROPAGANDA

"Recently an attempt has been made to connect the apparent increase in cancer, the prevalence of dental caries, and certain other less definite types of ill health with the growth in the use of mechanical refrigeration. Whenever industries are involved in propaganda in the health field, the commercial motive is naturally suspected. The Journal has no brief for any interest involved in the dissemination of such claims, nor is it concerned except from the point of view of the public health in the claims made for mechanical refrigeration as opposed to the use of ice. It does have an interest in proper interpretation of statistics concerning the public health, in order that the public may not be led into fallacious beliefs or unwarranted fears. Inquiries have come to The Journal from physicians, health officers, and better business bureaus in widely separated parts of the country relative to the propaganda concerned. Claims are made that mechanical refrigerators devitalize the food and that this alleged devitalization of the food may be responsible for the increase in cancer, the prevalence of dental caries, and a list of ills vaguely indicated as 'toxic poisoning, constipation, acidosis, pyorrhea, rectal troubles' which 'plague the American people.' It is alleged that the 'respiratory' gases from foods refrigerated in hermetically sealed chambers 'as dry as Death Valley' devitalize the food and render it toxic. Some highly colored pictures of a cemetery are accompanied by statements that cancer mortality has doubled since 1900, as have deaths from appendicitis. Vague references are made to 'many leading authorities,' but these are not named. Acknowledgment is also made by the promoter, Mr. Teigen, to 'that great international authority on refrigeration, his former associate and employer.' This gentleman is not named, but information in the possession of The Journal indicates that the reference is to a Mr. J. M. Cattanach of Minneapolis. The Journal has no evidence as to Mr. Cattanach's scientific attainments or those of Mr. Teigen.

"A letter was addressed to Mr. Teigen asking him to elucidate certain of his claims. No answer was received, so a copy was sent again by registered mail. A return receipt for the registered communication is all the reply
that has thus far been received, though six months has elapsed since the date on the return receipt.

"The circular to which reference is made appears to be sent unsolicited. Mr. Teigen, however, publishes a brochure which may be had for a dollar. This is an amplification of the claims made in the circular. It is characterized by the same definiteness in quoting fragments from recognized authority, coupled with vagueness and indefiniteness in the conclusions drawn from such quoted matter. In no place is the claim definitely made that cancer, appendicitis, or carious teeth are attributable to the increased use of foods mechanically refrigerated, except in the title of the booklet. The inference, however, is drawn so that the uncritical reader will inevitably make his own deductions to that effect.

"Whatever may be the motive which inspires this propaganda, it may be said definitely that there is no scientific evidence to support the claims. The circulation of such unfounded literature conjures weird phobias among its readers and is prejudicial to the public health because it diverts attention from real problems and discredits genuine health education. If there is any method by which it can be reached, it should be stopped."

The above is a dispassionate, scientific statement which should set at rest the fears of anyone concerned. The last paragraph particularly is clear and definite, coming from the highest scientific medical authority on the face of the earth.

In addition to the foregoing editorial, we wrote the American Society for the Control of Cancer for a statement concerning this propaganda. We immediately received information that, although some of the advertisers had quoted some statements of theirs, the quotations were taken out of the body of their articles and used in an entirely false sense. They concluded their letter with a copy of an editorial appearing in their official journal, the final paragraph of which follows:

"Finally there is frequently encountered an especially pernicious type of unscientific and faulty reasoning. A recent example of this has been encountered in a statement that the increased use of electrical refrigeration has a causal relationship to the statistical increase of incidence of cancer during the past few decades. It is certainly true that the use of electrical refrigeration has increased during that period. So has, apparently, the incidence of cancer. So has the use of automobiles and airplanes, of cosmetics, of football tickets, of moving pictures, and of ocean liners. It is quite as logical to assume a cause and effect relationship between cancer incidence and any of these items as it is between electrical refrigeration and that phenomenon. The intelligent public can and does, at once, see the fallacy involved. The unintelligent public, however, may, for a time, be deceived. Cause and effect do not trace their ancestry to assumption. The wise individual uses them with great caution and only after they have been proved by unassailable evidence."

See Bladenboro Article

In the September issue we published an account of the excellent health work done in the Salisbury schools last winter by one of their wide-awake teachers. In this issue we are publishing a description of a cooperative plan of health work in the Bladenboro schools. The Bladenboro enterprise comprised the whole elementary school of seven hundred and fifty pupils in sixteen classrooms. One distinctive feature of the work was the employment of a special "health teacher," who, instead of teaching a "health class" once or twice a week to a few sleepy, uninterested volunteers, bored to death with the dull presentation by the teacher, presented her subject to the individual classes daily. In that way the very practical, interesting, and helpful course became a part of regular school work. This fine program was carried out by the superintendent of the schools, Mr. Albert E. Lee, and the health teacher, Miss Eunice Fowler. The teachers had the sympathetic assistance of Dr. Cromartie, county health officer, and Miss Breze, the county nurse.
Health Program in the Bladenboro Elementary School

By Miss Eunice Fowler, Director of Health, and Albert E. Lee, Principal

Our school considers that health is one of the vital factors in the seven cardinal principles of education because the other six principles are an outgrowth of health. Keeping this in mind, we planned a program that we hoped would be practical and meaningful to the child. We stressed not only good physical health, but also good mental health.

Organization

There are seven hundred and fifty children in our elementary school, and sixteen classrooms. One special room is equipped for health. Here we have scales, charts, reference books, first-aid equipment, and records. We have a complete individual record for each child.

Health cannot be confined to one period a day, but a special teacher conducts a regular fifteen-minute period each day in each classroom.

There are four groups of physical education a day. This means that each child has fifteen minutes of instruction and fifteen minutes of application. The primary purpose of the gymnasium is to correct defects.

Every room in the school is a member of the Junior Red Cross.

During the winter we help the children who are in need of food and clothing. For this we solicit help from business firms and homes.

Tangible Results

The pupils in the Bladenboro school by the use of graphs, weight charts, and health charts take a vital interest in health. Frequently a fact may be more clearly expressed by a drawing or a symbol than by words. We have a graph to show the daily progress in cleanliness.

A uniform weight chart is found in each room. These are simple, so that each child can see whether he is reaching his standard or falling below it.

Each teacher has a chart, which is an incentive and a check for keeping the fundamental rules of health.

The school building and grounds are kept as clean and attractive as possible.

At least 95 per cent of the children come to school clean.

It is encouraging to see how well they care for their hair and scalps.

During the second week of school the sixth and seventh grades were the only grades in which practically every child brushed his or her teeth daily. Three weeks before school closed the majority of children in every grade were brushing their teeth.

Have fire drills.

Teach safety first, and especially about school busses. Give instructions in the care of cuts, sores, and wounds.

School has a first-aid kit.

The children enjoy texts and stories.

The importance of vaccination and quarantine is stressed.

One hundred and sixty children were vaccinated this year for smallpox. One hundred and sixty-five were vaccinated for typhoid fever, and a number of primary children for diphtheria.

Eighty children had their tonsils and adenoids removed in clinics. From observation the children at once see the importance of removing diseased tonsils. They are anxious to have physical defects remedied.

There are two crippled children who are to be carried to Goldsboro at an early date.

One hundred and sixty children have gotten hot soup and milk for lunch all the year. This improves attendance as well as the attitude, expression, and health of the children.

After testing eyes of all the chil-
In filling the health cards, two children got glasses. The ten-year-old girl gained two pounds the following month after wearing glasses.

Three hundred children were given a physical examination by the county doctor.

Two hundred of this group were placed in a special class of physical education.

The children have a feeling of freedom from illness by daily physical education, and a feeling of general progress in health.

Proper diet is emphasized as a preventive of pellagra, as well as the importance it has in aiding growth, since each child is interested in growth, physically and mentally.

The importance of right use of toilets and fountains and hand-washing is taught.

Sixty children were given cod liver oil at school for a number of weeks.

One fourteen-year-old girl, who was suffering with heart trouble, after an examination, is under the care of a local doctor at the present.

The pupils keep the temperature of the rooms about 68 degrees.

Fifty children brought milk for lunch that was covered in a sanitary way.

Due to this there was a noticeable improvement in attendance during the year.

**Examples of Visual Aids Used for the Health Program**

We feel that health should be taught with visual aids. Below are a few samples of the type of work we do.

- **Fruit Men.**—Toothpicks to show the structure of the body. A marshmallow for the head, a fig for the trunk, and raisins for the arms, legs, and features.

- **Food House.**—Oatmeal is pasted on a pasteboard box to make it look like stucco, and dried peaches make the blinds. Beans are used for the roof and dried apples for the shrubbery. Rice makes the walk.

- **Modeled Foods.**—Foods are modeled in clay to show proper diet and the six food families necessary for a well-balanced diet.

**Menu Booklets.**—These are made of colored construction paper, size 8x12", and are filled with menus.

**Caloric Needs.**—We estimate the caloric needs for each child and plan how to fill these needs.

**Health Scrap-Book.**—To show ideas we develop during the year. Each child is given one or more pages in the book to show the things he considers most important.

**Health Play.**—We give a play based on foods. About twenty-five children take part.

**Our Graveyard.**—We make a graveyard on construction paper. The gravestones are cut-paper. With them we bury many bad health habits. One tombstone reads: "Here lies coffee. Died in a fit of jealousy because milk took its place."

**Conclusion**

In our health program this year we did not accomplish all the things that we had hoped to do, but we feel that there was progress made. The children grew in ideals and attitudes of health, mentally and physically. One concrete way of measuring, however, was that attendance improved considerably during the year, and this, we feel, is due to our health activities.

**Book Review**

A recent publication of the White House Conference has just been issued by the D. Appleton-Century Company of New York City. The title is "Fetal, Newborn, and Maternal Mortality." It is the result of a most thorough study of conditions in this country. It presents the considered opinions and recommendations of the noted authorities who composed the subcommittee. They devoted about one year and a half to the preparation of this work. It contains much information of value to physicians, nurses, health officers, and all others concerned with our high infant and maternal mortality. The book contains 486 pages and sells for $3.90.
Birth and Infant Death Rates, 1932, by States

The following "provisional" birth and infant death rates were supplied by the U. S. Bureau of the Census. The states of Massachusetts, Texas, Utah, and South Dakota are not included. The rates are "provisional," meaning subject to later adjustment. For example, in the table below North Carolina is credited with 76,812 births; 5,162 deaths under one year, with a "provisional" infant death rate of 67.2 per thousand live births. The correct and final figures, that is, the "adjusted" figures, completely tabulated by the division of Vital Statistics of the State Board of Health at Raleigh, show that there were 77,880 births and 5,176 deaths of infants under one year, giving us an infant death rate for 1932 of 66.5 per thousand live births. The wider discrepancy between the figures for births than for deaths is due to the fact that deaths are more promptly reported, and therefore fewer "delayed" death reports are received after the end of the year than birth reports. As the figures for all the states are "provisional," the comparison is fair. Read this table carefully and see just how we stand as compared with our sister states, and then turn to the back page of this issue of The Health Bulletin and read the table showing just how your county compares with the other counties of North Carolina.

Sea Food Contributes To Health

In our coastal section the people of North Carolina have available an abundant supply of salt fish, oysters, and other sea food. More of it should be utilized by the up-State people. This food, together with a great variety of vegetables produced throughout the trucking belt in the eastern half of the State, is rich in natural iodine. Iodine is an element absolutely necessary to normal health. It would be impossible for a person to obtain a sufficient quantity of iodine through food consumed alone, but such food is much to be preferred and does contribute some of the necessary iodine to maintain normal health. The principal source of natural iodine for the people is found in the drinking water. The water throughout the eastern half and in most of the south central section of North Carolina contains a sufficient amount of iodine to supply normal needs. When the supply of natural io-
dine found in the drinking water is supplemented with sea food and vegetables from the eastern half of the State a plentiful supply of iodine is assured. In such people goiter is seldom seen. In one or two sections of northwestern North Carolina, notably some parts of Wilkes County, the goiter problem among children is a serious one. If the people of that section could exchange some of the glorious Wilkes County apples for Carteret County oysters and salt-water fish it would be an exchange which would benefit the health of the people in both counties. The people of eastern North Carolina should consume more apples and other products from the western half of the State, and those of the west should eat more sea food from our coast.

Health Examination Is Important For Excellent Start

"Are They Ready for School?" is the question which Beulah France, R.N., asks readers of Hygeia in the September school number. The physical examination is so vitally important that no child should enter school without it. To assure your child a fair start and continued school attendance, take him to your doctor immediately, if you have not already done so.

The annual health examinations reveal tendencies toward many conditions which through knowledge may be warded off, but which may easily become serious if they are unrecognized or neglected.

It is at this time that the doctor may detect the beginning of tuberculosis, eye-strain, malnutrition, heart disease, poor hearing, diseased tonsils, difficult breathing, dental decay, and other incipient conditions. At this time the doctor can protect the child from the communicable diseases, inoculating him against diphtheria and vaccinating him against smallpox.

The parents also go on trial when the child goes back to school. Are you, as parents, ready to cooperate fully with your school child, his school teachers, and your family doctor?

Parents must watch the child's habits of conduct, sleeping, resting, and eating, for good habits pave the way for the child through school trials and problems of later life.—Hygeia.

Milk-Borne Diseases

A letter just sent out by the State Board of Health carries valuable information. We need to have it frequently called to our attention that bovine tuberculosis, undulant fever, anterior poliomyelitis, dysentery, and septic sore throat are transmissible by milk. Diphtheria, also, may be transmitted in this manner; but the fact that we have a specific cure for it places this disease in a separate category.

Many will be astonished to learn that rabies may be conveyed by milk.

When any unusual number of cases of any of these diseases develop in the course of a very few days, it is well to suspect that the infection comes from milk, and to follow up this clue. Very pertinently and wisely, the letter instructs that no conjectures be given out to the public; that only after facts are in hand to show conclusively that a certain milk supply is contaminated is anything to be done which can alarm the public or cause the dairyman loss.

Investigations all over the world agree in indicating that pasteurization robs milk of no property value, and that pasteurization is the only feasible method of reducing to a minimum the conveyance of disease by milk.

Our State Board of Health has long insisted on the pasteurization of milk. This letter continues to emphasize its value and desirability.—Southern Medicine and Surgery.
### Birth and Infant Death Rates, 1932, By Counties

**Note:** The rate is higher in a few counties, as Durham, because of the large hospitals located in those counties.

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Starting Life With a Handicap

ONE of the tragedies of this earth is a malnourished, diseased, or handicapped child. We have many of this type of children in our State. They start life, at a disadvantage from the beginning. During the past twenty years much has been done for these children, but much more remains to be done. With the exception of inherited mental incompetence, nearly all the handicaps are preventable and removable.

We have an immense amount of malnutrition in North Carolina. We have always had it. A few counties report an increase, but the average for the State as a whole is about the same for the past ten years. Most of it is due to the total ignorance of parents concerning food values. Good, wholesome food is frequently ruined in preparation. There is a deficiency in milk. Parents and children indulge the whims of appetite, and a deficiency diet results. It is unthinkable that any child in North Carolina should go without essential food. Climate and soil are perfect for the production of food crops. But children are helpless and they must depend upon the efforts of their parents and the social-minded leaders of the State for protection from preventable diseases and for the provision of adequate food.
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FREE HEALTH LITERATURE

The State Board of Health publishes monthly The Health Bulletin which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils
Cancer
Constipation
Chickenpox
Diabetes
Diphtheria
Don't Spit Placards
Eyes
Flies
Fly Placards
German Measles
Health Education
Hookworm Disease
Infantile Paralysis
Influenza
Malaria
Measles
Pellagra
Residential Sewage
Sanitary Privies
Scurvy
Smallpox
Teeth
Tuberculosis
Tuberculosis Placards
Typhoid Fever
Typhoid Placards
Venerable Diseases
Water Supplies
Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)
“Our Babies”
Prenatal Letters (series of nine monthly letters)
Minimum Standards of Prenatal Care
Breast Feeding
Infant Feeding. The Prevention of Infantile Diarrhea.
Table of Heights and Weights

CONTENTS

Notes and Comment......................................................... 3
Malnutrition................................................................. 5
Tuberculosis in Children................................................. 11
“Pilgrims' Progress”...................................................... 13
Deaths from Tuberculosis of the Respiratory System by County and Race: 1932........................................ 16
November is the month of Thanksgiving, and it is not amiss for us to take stock and catalogue some of the items for which we have reason to be thankful from a health standpoint. The observance of the Thanksgiving festival is ordinarily dated from the Pilgrim Fathers in New England, although the Cherokee Indian tribes probably were celebrating some such festival hundreds of years before Columbus sailed west.

It is a useless repetition to state that the world has been in a topsy-turvy condition for several years. In many respects this year has tried the souls of people more than any year since 1918.

It is well to point out, however, that we have many things for which to be thankful. One is that we have a government in which provisions are made for safeguarding the lives and the health of the people. We in North Carolina should give genuine thanks for the fact that our general death rate for the past year was lower than ever in the State's history, and also that our infant death rate was the lowest ever recorded. The latter, however, is still entirely too high; but, with the educational start made, it is only a question of time, provided efficient work is continued throughout the State, before our infant death rate will be down closer to the average for the country as a whole.

We are grateful that there has been up to now no widespread epidemic or outbreak of communicable diseases, such, for example, as the infantile paralysis scourge in New York in 1916, and as the sleeping sickness in St. Louis this year. It is true that the West Indian hurricanes ruined many of our people on the eastern coast this year, but we are truly grateful that the loss of life was so small compared to the area involved. And we should also be grateful that, owing to the quick and intelligent work of those responsible throughout the area, there has been no outbreak of communicable disease as a result of the storm. Property damage can be repaired, but loss of life is irreparable.

For many years past it has been our custom to publish a synopsis of the tuberculosis work either in the November or December edition. For the past few years this has been published in the November edition in order for the workers who put on the sale of tuberculosis Christmas Seals to have attention called to as many people as possible of the purpose in the sale of these seals. We have published on the outside back cover of The Health Bulletin each year a table giving the number of deaths from tuberculosis of the respiratory system by county and race. The table will be found on the outside back cover of this issue, as usual. Those of our readers who are in the habit of keeping a file of all copies of The Health Bulletin will find it very interesting to compare these tables back, say, for ten years, year by year. It will be noted that the fight is a winning one, although comparatively a slow one.

In 1931 there was a total of 2,299 deaths from all forms of tuberculosis reported in this State. It will be seen
by turning to the table in this issue that in 1932 the number was reduced to 2,200. Many of our people are apprehensive in these times of suffering and hardship and privation that one result will be an increasing number of deaths from tuberculosis instead of the gradual annual reduction. Dr. McCain, superintendent of the State Sanatorium for Tuberculosis and one of the foremost authorities in the country on the question, does not entertain much fear on this score. Dr. McCain makes the point that tuberculosis is a communicable disease and that, particularly in children, it may be found in the overweight children as well as in the underweight children. We hope that this will prove to be the case, and that tuberculosis, being communicable, may be controlled just as other communicable diseases, and gradually eliminated.

We would suggest to our readers that they study the table on the back cover and see just how their county stands. There are some counties—for instance, Buncombe and Hoke—in which a large number of tuberculosis patients assemble for treatment in which the death rate is out of proportion to that in other counties. This will be understood by intelligent readers as bearing no reflection on the efforts in those counties to control the disease.

* * *

We have repeated in these columns, so many times that we fear some of our readers are coming to feel that our repetition is monotonous, that the efforts to control typhoid fever must be continued if the State is to remain reasonably free from this distressing disease. A day or two ago we picked up a paper with a South Carolina date line, coming from some small town in South Carolina, which had the following headline: "Fever Wipes Out Entire Family." The article stated that the entire community had been saddened by a family tragedy. On a Saturday evening the only daughter of a prominent farmer and his wife died of typhoid fever. She had been teaching in the schools of her community and was a brilliant young woman with bright prospects for a long and useful life. On Monday following, her father and mother both died of the same disease. Thus the entire family were wiped out within a period of two days.

Such a headline, and such a newspaper report, was quite common throughout North Carolina twenty-five years ago. The fact that it is so rare in occurrence now makes it news, bearing big headlines in the daily papers, to be sent all through the country. The only reason that it is rare is because of the hard, persistent, and intelligent efforts directed toward its eradication.

Typhoid fever can be controlled, but it requires efficient and persistent and eternal efforts. There are carriers of the disease here and there which health authorities sometimes are unable to locate until a disastrous epidemic appears in their wake. The control of typhoid fever must be brought about through safeguarding the food, particularly the milk and water. Its prevention requires constant efforts. Vaccination against the disease has helped, has helped a great deal, but it alone will not control the disease, because of the impracticability of vaccinating everybody every two years as is required, and because of the fact that in virulent types of infection the vaccination is not sure protection. An alert, efficient, competent health department is the surest safeguard for any city or county against this disease.

* * *

Some hundreds of years before Christ, Israel's great king announced that there was nothing new under the sun. As the archaeologists dig up more history of ancient times, it would seem that Solomon was justified in his statement. In our day we are prone to enlarge upon our modern advantages—at least so-called advantages—and the thought that this is the only period in the world's history in which progress has been
made. It is good for our complacency to be reminded now and then of some of the facts of ancient history which prompted Solomon's declaration.

These remarks are provoked by a recent issue of the *New York Times* magazine. A writer describes, in language of absorbing interest, some of the findings which the archaeologists have discovered in their excavations in one of the buried cities of ancient Iraq. This writer, after describing the culture and accomplishments of those people in such things as carving and gold and jewel work in the city which flourished five thousand years ago, has one paragraph of particular interest to health workers. The paragraph follows:

"Particularly striking are the sanitation arrangements, not only in the women's quarters, but all along. There are several lavatories of the modern type. They were built of baked bricks, and were connected with drains which all ended in the main sewer, a colossal structure, one meter high and fifty meters long, vaulted over with baked bricks which ran alongside the outer wall of the palace underneath the pavement of a street. The bathrooms also drained into this sewer, and in each lavatory there was found a large water vessel, generally built into the pavement, some with pottery dippers still in them. "The reception room of the palace contained a low dais, into which a jar was built, no doubt to drain the water poured over the hands of guests before meals. In this reception room, under the floor, a hoard of jewelry was hidden."

We hope the reader will turn back and read this paragraph again and again. There is one lesson that may be learned in reading this paragraph which is a concern of every modern health department today. The lesson is that the Sumerian people, twenty-five hundred years before the birth of Christ, appreciated the necessity of protecting themselves from communicable diseases by thorough washing of their hands before meals, or before eating anything at any time. It is also good for us to know that sewage disposal and a protected water supply was common in the cities of that section of the world so many thousands of years ago. After all, we have not come so far and done so much. There is plenty left to be done.

**Malnutrition**

*Some Extracts from Reports of Various Communities of the State On Extent of Malnourishment Among Children*

On September 12, Secretary of Labor Frances Perkins issued a call for a National Conference on Child Health Recovery to be held in Washington under the auspices of the Children's Bureau of the United States Department of Labor on October 6. In the announcement of the Secretary of Labor, in issuing this summons to representatives of all state departments of health and to many pediatricians and representatives of the medical profession everywhere, the Secretary stated that indications of a marked increase in the number of malnourished children reported to the Labor Department at Washington, D. C., prompted her to take this action. She further stated in her announcement: "We have no exact figures to answer the question of how many malnourished children there are today, because no universal method of measuring the children's nutritional condition has been ordered."

On receiving the official invitation to represent the North Carolina State Board of Health at this National Conference, the Director of the Maternity and Infancy Work of the State Board of Health wrote a letter to a number of health officers and physicians, particularly children's specialists, requesting definite information as to the extent to
which malnourished children had become a problem, if any. These letters were sent to representative places in every section of the State. In the letter of inquiry the Director requested the recipients to “Please write me your opinion as to the increase, or otherwise, in the number of malnourished children in your section, and the extent of such increase, if any, as you have observed during the past two years. I am anxious to go to Washington with the exact facts, as far as possible to obtain, on the subject in North Carolina.”

With three or four exceptions, the response to every letter was prompt. Some of the information received is so interesting, and is of such importance, that we herewith present extracts from some of the reports. In most cases we refrain from giving names and places, because we have not received permission from the writers to quote them directly.

Reports From School Nurses
The six school nurses who have been in school health work for the past fourteen years carried on their work during the last school year in fifty-three counties. They examined a total of 70,222 children. Of this number a total of 17,333 were found to be 10 per cent or more underweight. We realize that weight is not in every case a trustworthy index to a child's physical condition, but it is the first and most apparent gauge to the child's nutritional condition that may be observed. It has been pointed out that frequently a child may be overweight and still suffer from malnutrition. On the other hand, a child may be underweight and present a picture of health and nutritional perfection. Heredity, season of the year, the age of the child—all must be taken into consideration. Frequently decayed teeth, diseased tonsils, and such conditions cause malnutrition. On the other hand, much more frequently malnutrition is a direct cause of decaying teeth.

One of the nurses comments as follows:

“I do not believe there is any increase of malnutrition of children coming under my observation these past lean years. It is probably true that there may be even less malnutrition for the reason that food values are stressed more and more. A great many schools are serving lunches, and poor and shiftless families have been forced by relief agencies to plant gardens. This has enabled them to carry over vegetables for winter consumption as never before. I have been in this work nearly fifteen years, and we have always had lean and hungry children. In pioneer days I have wept over their lunches. There is still reason for tears, but many of these children have fared better since the depression than at any time before, perhaps.”

Another one of the nurses, after stating that she does not believe that there has been so much increase in malnourished children on account of the progress made in teaching people an appreciation of food values during the last few years, emphasizes the fact that she still finds children consuming much less milk than they should to maintain good health. This nurse, who has also worked for nearly fifteen years in this service in almost every county in the State, states that there are thousands and thousands of children who could not get milk because it is not produced in their sections. This we know to be true. It is an old story. She reports that in a recent examination of the pupils in three white schools and five Negro schools the children who were underweight and malnourished ranged from 29 per cent to 62 per cent in the Negro schools, and from 20 per cent to 37 per cent in the white schools. These schools were situated for the most part in the same general section of the county in which she was at work. She stated that these children were much more than 10 per cent under normal weight, and that they presented many other symptoms besides underweight which indicated malnutrition.

A third member of our veteran nurse force writes:
"I myself am very undecided about the conditions I find among children. I almost decided last winter and spring that perhaps after all, not having so much money to buy 'nonsense' at the stores with and being forced to eat plain, home-grown food was a blessing in disguise, as it seems to me the children as a whole average better than usual. There always has been, and always will be, a certain class that simply refuse to be anything but 'down andouters.' I just happened to have my book with me that I used several years ago, and in comparison I see very little difference in average weight then and last year and this. Now, I am certain this does not sound reasonable, but it is just what I found."

Reports From Pediatricians

A pediatrician in one of the larger cities writes: "Judging from my own private practice and my experience in one white and two colored baby-feeding clinics held in this city each week, there is no increase in malnourished children in the group under two years of age." Another well-known pediatrician of State-wide reputation in another city makes the very same point. Both agree that there may be slight increase in malnourishment among pre-school and school children. They both point out that local agencies are providing milk and other supplies—not only in school lunches, but at the homes—which is, so far, taking care of the problem in a satisfactory manner. The pediatrician from one of the larger cities of the State, in conclusion, says: "Physically, the children in my practice seem no different from what they were two, four, or six years ago."

In the opinion of the Editor, this physician puts his finger on one of the spots where investigative work is more needed than any other. Naturally people who have not sufficient money to buy food will not likely be found consulting a private baby specialist. It is only in the free clinics or baby centers, which are few and far between in this State, that such parents would be encouraged to bring their babies.

Still another pediatrician, with an extensive practice in another one of the State's larger cities, writes: "There are no available figures which I may cite to, but in conducting two charity clinics—one white, one colored—I have obtained some definite
impressions. One is that either the poorer people are becoming more 'malnutritious conscious' (which I doubt very much), or else there is considerably more undernutrition in children one to six years of that class. I see an astonishing number of children of this age brought in because they are underweight or are not growing properly. Almost invariably they are getting no milk. Either the family can afford none at all or only enough for the infants. In the case of Negroes I have seen a great number of children one to six years with stomach trouble (pain, nausea, etc.—symptoms suggestive of malnourishment), due, I believe, to their subsisting on a deficient and indigestible diet. The symptoms are relieved in a majority of instances by a period of milk and nourishing diet. I think it essential that milk be furnished to children over one year of age as well as to infants. Another thing that I consider as essential is that intelligent families be furnished cod liver oil for the infant along with milk. This is not generally done, and is just as badly needed. I see a vast amount of rickets.”

From one of the State’s most important cities a pediatrician writes that in his opinion, and that of others whom he has consulted among the medical profession, he finds that “In so far as we are able to determine, there is no appreciable increase of malnutrition during the past two years. In this we are governed by observation in our own private practice. The opinion of my partner is that even though we are not able to see an increase as yet, there may be more malnourished children as a result of the inability of many families to weather the economic storm. This may take several years to definitely show up.”

Finally, a nationally-known pediatrician who conducts a clinic for babies in the western part of the State in the summer months writes that in his opinion, and that of his colleagues, “There are about 15 per cent fewer children and adults in difficulties for food now than this time last year.” He gives as a reason for this that “last spring practically all of these people were induced to plant some land, and so, in addition to what they lived on, they have had a pretty good supply for canning.” At the same time, this physician says, there has been a great increase in undernourished children in his section during the last three or four years. He further states: “The outlook for this people is not quite so bright as it was last year, for while they have their vegetables, the other things they need have enhanced in price—flour, meat, sugar, etc. And as we have no industries and very little private employment, the situation leaves them with more to pay and less to pay with.”

In response to our request for suggestions as to how best adequate food could be placed within the reach of all the people who need it, we pass along three or four practical suggestions. Dr. Frank Howard Richardson of Black Mountain suggests that the efforts to induce people to plant small gardens, emphasized throughout the State during the past few years, be kept up; and he makes the novel suggestion that families who are close neighbors combine in the joint ownership of a good milk cow. This would require cooperation with a vengeance, something that the farmers so far have not been able to achieve very successfully.

Doctor Thomas J. Sasser of Charlotte says that it would be “a good plan to have a part of each school set aside for taking care of the undernourished children, paying particular attention to physical development rather than trying to overload with too much school work. Dr. Sasser further emphasizes the necessity for supervised rest periods in order to prevent over-fatigue, which often leads to malnutrition. We heartily join with Dr. Sasser in his recommendations. It has been one of our objectives for many years.

Doctor A. McR. Crouch of Wilmington offers a constructive suggestion to the effect that “Wherever public funds are available for pur-
chase of foods and medicine, it should be deposited with the county boards of health for distribution through the associated charities upon direct order of the physician." This would seem a practical suggestion for the physicians in city practice at least, because they could be assured that the patients could receive the necessary food and medicine. This would apply, however, only to those who are actually ill and come under the observation of physicians.

Doctor E. R. Hardin of Lumberton, the veteran Robeson County health officer, gives a suggestion that should receive careful consideration. It is the following: "As to the remedy, I hardly know what to suggest, but I do know that the great majority of our malnourished children are from tenant homes. It seems to me that if the Federal and State governments could work out some plan whereby the tenant might be able to borrow money to purchase milk cows in a similar way that they have secured loans for seed and fertilizer, it might go a long way toward solving the problem."

Reports From Health Officers

One of the county health officers, who has been head of the county health department in his county for more than ten years, says that on checking his records of children examined in rural and small-town schools in all parts of his large county in 1930, he classified 17 per cent of them as suffering from malnutrition. From these same schools in the spring of 1933 his records show that of the children in the same schools examined 29 per cent of them were classified as suffering from malnutrition. This is an increase of 12 per cent. Incidentally, we may remark that in a report made in the New York Times from a New York City school about the time this report came, the percentage of increase in the same period of time was 13 per cent. This is definite information and represents exact conditions found by a competent health officer.

The school physician in a near-by city reports, through the health officer, that he has found numerous instances in which children have been discovered in the schools without the proper food. "During the latter part of the last school year the relief department in a measure furnished the school lunch rooms to the extent of taking care of destitute cases. "Had this not been done," the health officer says, "I am confident that the number of malnourished cases would have shown a marked increase. Likewise, many private agencies furnished free lunches for school children, which further alleviated this situation."

The health officer of one of our largest coastal cities writes: "My own personal opinion, from having examined our pre-school children for a number of years, is that the number of cases of undernourished children is about the same, or possibly somewhat smaller at present." This health officer goes on to commend the various relief organizations which are providing hot, well-balanced lunches at the schools.

In one of the secondary cities of the State having a competent city and county health department, a city in a large manufacturing center, the health officer writes as follows: "I have taken the children in the first grades in five of our county schools and compared them in weight. In the school year 1930-31 we examined in these first five grades 468 children, and of this number 77 were 10 per cent or more underweight. In the first grades, in the same five schools, during the last school year—that is, two years later—we examined 457, and of this number 73 children were 10 per cent or more underweight, or in both cases almost exactly the same percentage—a bit smaller in the recent examinations." The health officer comments that this indicates an almost 1 per cent gain made in these two groups. He offers as his explanation in the face of the unemployment situation in his section that an extensive effort has been made to teach nutrition in schools since 1929. This was emphasized in the Milk-for-Health campaign put on by the State Board of Health in March, 1932.
Another competent health officer in a secondary city in one of the great industrial centers of the State reports that "in 1930-31 we examined 2,670 school children. Of this number 574 were judged by the doctor or nurse to be undernourished, or approximately 1 in 5. Of 2,515 children examined in the school year 1932-33, 949 were considered undernourished, or about 1 in 3. There has undoubtedly been an increase in malnourishment, due to lack of proper food, during the last few years."

The health officer of one of the eastern cities and counties reports: "Very little, if any, malnourished children in this immediate section."

The health officer of one of the largest piedmont counties says: "Doctor, it is my opinion, based on observation rather than technical data, that there is less malnourishment among the children in this section than in the years previous, due to the fact that each consolidated school in the county has a cafeteria. In a good many instances the cafeterias were operated primarily for the undernourished group. We wonder what would have happened if it had not been for the aid given to these children. Should this aid be withdrawn this year, I am of the opinion that nothing short of a tragedy will occur to a great many of these unfortunate children."

The welfare officer of the same county, at the request of the health officer, writes: "We do not think we have had any considerable increase of malnourished children in this county during the past year or so. Our program touches over 1,200 families. We have tried to arrange the budget needs of these families, always being mindful of the fact that young children need certain kinds of food not included in the budget for families composed entirely of adults."

The county health nurse in one of the eastern counties recently severely stricken by the hurricane of September 16 says: "I think I can safely say the percentage of undernourished children for the past two years has been at least 50 per cent higher, due to the unemployment situation and distressing farm conditions."

The health officer of one of our northern border counties and a veteran in the service says that in 1932 he made 191 examinations of preschool children. Of this number 40 were definitely malnourished; that is, a little over 20 per cent. In 1933 he examined 170 children of the same class; that is, pre-school children representing all sections of the county. He says they were thoroughly examined. Of the 170, 60 were found to be malnourished, or 40 per cent of the whole number. This health officer makes the pertinent observation that in dealing with this problem there are two factors to consider. The first, which may be called a "constant factor," is the ignorance of the laws of nutrition; and the second, a somewhat "variant factor," which is poverty. This health officer concludes his report with the statement that the superintendent of schools in his town expressed the opinion that malnutrition is decreasing. The health officer says that, disregarding the value of the school superintendent's observation, it ought to be mentioned that the superintendent quoted put on a child-feeding program in the school, which must be credited with some effect on malnutrition. This health officer passed along to us in his report an expression from the county welfare officer of that county, the gist of which is that the first step in overcoming malnutrition is educating the people as to the proper diet. Folks, don't we all know that to be a fact?

The health officer of another one of the State's largest cities says: "I have no definite figures or survey to back up the opinion, but judging from my observation of the children I am seeing who come into this office to be immunized against various diseases, and from the babies that I see coming to the well-baby stations, there is considerable undernourishment among the children, and it is possibly on the increase." This health officer recommends that "a more liberal and better balanced ration be
November, 1933

THE HEALTH BULLETIN

issued to the families who are on relief”; and the other recommendation is to “provide for needy children in the schools a more liberal lunch than has been provided during the last year or two.” He says that in their schools the last year the lunch was cut down from a 15-cent lunch to a 10-cent lunch, and while the food the children received was all right, the quantity was insufficient.

The trouble about meeting all these needs through school lunches is that the schools now run only eight months a year and the lunch is simply for one meal a day; that is, five meals out of the twenty-one for the week. It will help, but it is inadequate to make much of a decrease in malnutrition among schoolchildren.

One of the most clear-cut statements received in response to our letter comes from a county health department nurse. This in one of our border-line counties. She says: “This county with a population of about 23,000 people has 1,200 families with 1,800 malnourished children, and an increase of 600 children since 1931. That you may know how short our food supply has been, 2,500 families have been fed, or partially fed, by the RFC. Our milk supply was very low in 1932, and since that time many cows have been sold for tax and other debts, leaving innocent children with very little to eat and many times actually hungry. This nurse further says: “I believe the problem of malnourishment of children in a rural section such as ours can be corrected more economically by some means of increasing their milk supplies and by teaching these mothers to prepare food properly.”

Tuberculosis In Children

By J. C. Knox, M.D.

From the title one is led to think that tuberculosis as it occurs in children is different from that found in adults. Generally speaking, this is true. There are two types of tuberculosis: childhood and adult.

Childhood type of tuberculosis represents a primary infection with the tuberculosis germ. The area of the lung involved is usually near the outer edge of the lung on one side, with a consequent involvement of the lymph nodes or glands at the root of the lung on that side. The root of the lung is that part at which the air tubes enter the lung tissue. This area or spot of first involvement usually is quite small, and often is soon encased or surrounded by scar or fibrous tissue. Moreover, a child with such an infection with tuberculosis may look and feel perfectly well. There are often no symptoms that will lead one to suspect anything wrong with the child. Not infrequently a child may have the adult type of tuberculosis. This form of tuberculosis in children is much more serious than the former; however, if this form is found early and properly treated, recovery usually takes place.

The question now arises as to how one is to find out if tuberculosis is present in a child. Of course, the history of intimate exposure to a known case of tuberculosis is of value; however, this fact is not always known. A child may be in very close contact for a long period of time with some individual who has a chronic form of the disease and no one be aware of it. This type of exposure may exist for a number of years with the tuberculous individual performing his or her regular duties without knowing the existence of the infection, due to the absence of acute illness. Such an individual can be most dangerous to those about him when he has an ordinary chest cold, for it is then that the germ is brought up by coughing.

The tuberculin test is one of the best known ways to locate the child who has a tuberculous infection. It might be well to state at this time
that there is quite a difference between tuberculous infection and tuberculous disease. One may have the infection, yet never at any time show any evidence of the disease. The tuberculin test is quite simple and can be easily made by your family doctor. The material for making this test will be supplied free of charge by the North Carolina Sanatorium, upon request of the physician. The tuberculin test, when positive, indicates tuberculous infection. The test is quite simple, harmless, and leaves no unsightly scar. Any individual who has had considerable exposure to tuberculosis, or who has a heavy infection, or who has the disease, may have a quite marked local reaction at the site of the test. One cannot be infected with tuberculosis by this test. Those showing a positive test are not necessarily suffering with tuberculosis disease. The studies made by the North Carolina State Sanatorium show that a total of 16 per cent of an unselected group of school children showed positive reactions; yet only 2 per cent of these positive reactors showed any evidence of the disease.

After we have used the tuberculin test to find those who are infected, we are just beginning in our efforts to locate those who have tuberculosis. The ordinary means of examination by "thumping" and listening to the chest are of little value in helping us discover cases of tuberculosis in children. The spot on the lung is usually so small that it is impossible to locate it by the ordinary methods. The surest way to find such cases is by the X-ray picture. X-ray pictures will show the area of the lung involved and the extent to which it is involved. All children having a positive tuberculin test should be X-rayed. By this method, also, one is able to advise as to the treatment necessary; that is, whether to spend a period of time at a sanatorium or to employ home treatment. The X-rays can be taken by the local hospital or the doctor in the community who has an X-ray machine. Of course, these pictures can be and are made at the State Sanatorium; however, this entails a cost for travel to and from the Sanatorium, which is not necessary when facilities for making the pictures are nearby.

There are two sources of infection with tuberculosis: man and the cow. The danger of infection by milk from tuberculous cows is not so great as it once was, for now all milk for public consumption must come from herds free from tuberculosis. Infected animals are killed off. The one- or two-cow milk supply, where the regulation requiring testing cows for tuberculosis is not applicable, is still a potential source of infection. The most dangerous and most prolific source of the disease or infection is from a human case in an active stage.

The mode of infection is by having the organisms come directly in contact with the mucous membranes of the nose and throat. Close contact with one sick with the disease affords the surest means of infection and of acquiring the disease. The material coughed up by a person ill with active tuberculosis is teeming with the germs. Coughing and sneezing by such a person spray the germs about so that one can readily see how the air, floor, furniture, and anything within a few feet of him can hardly miss becoming contaminated by this dangerous material. The intimate contact that a child has with its parents affords a most dangerous opportunity for becoming infected, if that parent has tuberculosis. This is, of course, the picture one would find if the parent were unaware of his tuberculous condition, or if he were careless or negligent in carrying out approved precautions. The germs are transferred from the lips to eating utensils, drinking cup, or any other thing that might come in contact with the mouth of another person. Kissing of children can be most dangerous to their health. If the child is fortunate enough to escape infection until he reaches the crawling or creeping age, then the opportunity for infection is increased. A child has no inherent sense of cleanliness and puts into its mouth any and everything that is not
of too great size, or is not of decidedly unpleasant taste. He spends a goodly portion of his time on the floor, where eventually most of the droplets from coughing and sneezing fall. This adds greatly to the chance of his picking up the infection. No child should be allowed to grow up in such surroundings. The development of tuberculosis has a direct relationship to the intensity of exposure to such conditions as just described. If this exposure is broken early and not reestablished, the chance for coming down with tuberculosis is decreased. A mild infection of the primary type in children has the tendency to take care of itself, if the child is separated from the source of the infection and proper hygienic surroundings and conditions are provided. A child under such conditions may, if he is of school age, continue his work at school without being a source of infection to his playmates.

If a child is found, upon X-ray examination, to be suffering from tuberculous disease, it may be necessary that he spend some time in a sanatorium. Should this be necessary, there should be no hesitancy on the part of the parent in securing this form of treatment. Other children may, under proper conditions, remain at home and follow out the instructions of the physicians and make an uneventful recovery. Children who do not have evidence of the disease, but only have the infection, should be under the supervision of a physician, and should have X-ray pictures of the chest made at intervals ranging from six months to one year. Older children, between the ages of eleven and sixteen years, with the infection, should be especially watched, for at this period the disease may show itself in a most dangerous state, and one which may terminate fatally unless proper treatment is instituted promptly.

Let us remind ourselves of a few of the precautionary measures we should follow out when a child is in close contact with a case of tuberculosis. The patient should know the proper way to protect others from material that is coughed up or sprayed about when sneezing. Shielding the mouth and nose when coughing or sneezing is of primary importance. Burning of all material that is spit up when coughing is also most important. Children should never be fondled or kissed by such a patient. Sleeping in the same bed or room should be prohibited. The child, especially the crawling child, should not be allowed in the room of the patient. No dishes or other things used by the tuberculous patient should be handled by the child. It is better even if the young children as well as the older ones live in another home than that of the patient.

A few reminders of what should be done with a known tuberculous-infected child may be recalled. Keep the child under the care of a physician and follow out the regimen as outlined by him. Have repeated X-rays about every six to twelve months. Insist upon the proper rest and diet for this child.

As to the care of that child with tuberculosis, his care should be directed by a physician, either in a sanatorium or at home.

“Pilgrims’ Progress”

By Mary B. Cheatham

The primary reason for the institution of Thanksgiving Day was health. How often do we think of that fact today, when Thanksgiving has come, for all too many of us, to be synonymous with football games, over-stuffed turkeys, and hang-overs the next day? Of course we all know the story of the first Thanksgiving Day—we have been raised on it since the days of our early childhood. We know how Governor Bradford called together the people—those few of them who
were left after that terrible first year of death and disease—to give thanks to God for all His mercies. And the greatest of these mercies was health, the fact that their lives had been spared where others were taken.

The old Pilgrim Fathers were human, and they were like many of us in that, as a people, they never realized the importance of health until they came near losing it. They simply took it for granted, as many of us, all too often, do even today (just as we take the family car and the telephone for granted without ever stopping to think what life would be like without them).

They were a pious people, those old Pilgrims, and they were famed for offering long prayers to God; but it is not recorded that they ever gave public thanks for public health; at least they never set aside a special day for it until death and disease walked unchecked through their midst and took heavy toll. Then the few whose lives had been spared came together, humbled, and gave thanks.

Today we have progressed far in the pilgrimage of health since that first Thanksgiving Day three hundred years ago. We still give thanks, or should, that our lives have been spared after disease has taken its toll; but more, we now give thanks that diseases have been prevented before they could take their toll.

One of the diseases for the prevention of which we can be most thankful, when we pause to take stock of our mercies, is tuberculosis, the dread "Great White Plague" of former generations, and until twenty years ago the first ranking cause of death in the United States. Today it has been reduced from first place to sixth among the causes of death. In North Carolina the tuberculosis death rate has been reduced from 139.3 in 1914 to 67.4 per hundred thousand in 1932. This record is no accident, nor was it easily obtained. It is a result of unceasing efforts and cooperation between men of science and laymen, school men and club women, civic organizations, and just people. But perhaps more than any-

thing else responsible was a change of technique. We have reversed our strategy, thrown over the old passive defensive technique of waiting until the enemy captured our stronghold and then trying to dislodge him. Instead, we have become the aggressor. We attack where formerly we waited to be attacked, and by attacking before the enemy can dig his trenches and fortify himself, we are steadily driving in his outposts and strengthening our own lines. We are striving to cut the enemy off from his base of supplies.

In other words, our present tuberculosis campaign is one of prevention even more than of cure. We are going out into the highways and byways, as well as into the schools and homes, seeking incipient tuberculosis and general conditions which might foster any infection.

The two chief weapons in the attack on tuberculosis in its incipiency are the tuberculin test and the X-ray. These in the hands of a competent physician can detect tuberculosis in its earliest stages when a complete cure is possible. When the case is discovered, then the sanatoria, preventoria, special diet classes, or supervised home care can look after the cure according to the needs of the patient. And with each case found, efforts are made systematically to trace the infection to its source and effect a cure there, too; or if it is too far advanced for a cure, then hospitalize it to prevent further infection. Doctors estimate that with our present facilities for fighting and knowledge of tuberculosis, if our efforts continue as they have in the past quarter of a century, deaths from tuberculosis in another twenty-five years could be made as rare as yellow fever.

Each year the tuberculosis crusade has saved thousands of lives by its preventive and curative measures. Of course each case cared for properly prevents dozens of other infections, any one of which might prove fatal. Did you ever stop to think that the thousands of deaths thus averted might have included your own, or
that of that little child of whom you are so proud, or that cute little curly-haired baby next door? Or that the next case of infection might be one of you? Remember that the next time someone tries to sell you a Tuberculosis Christmas Seal.

But the actual reduction of the tuberculosis death rate is not the only thing the movement has given us for which we can be thankful. Meat packers tell us that the by-products of a cow, the hide, bones, tallow, etc., bring in more money than the meat itself. Similarly, the by-products of the tuberculosis crusade are no less valuable than the main issue. The greatest of these by-products is perhaps the newly-developed health consciousness of the public. Thanks to the tuberculosis drive and the dissemination of health knowledge and literature by the State Board of Health and its affiliated local agencies, the North Carolina State Sanatorium and its extension service, and the North Carolina Tuberculosis Association, and the efforts of schools, civic organizations, and private individuals, thousands of people all over the State are realizing as never before the importance of general health. They have learned the part which sunshine and fresh air, rest and proper food play, and they have learned the dangers of undernourishment, diseased tonsils, defective eyes and teeth, and other such things which tend to weaken general health and make one more susceptible to diseases of all kinds. Consequently, as a result of the health consciousness and the better general health, the likelihood of contagion from other diseases as well as tuberculosis has been lessened.

Another by-product of the health consciousness is the new attention being paid to milk and its purity. And, just in passing, we might add that if you are counting reasons why you can be thankful, you might include the fact that North Carolina was one of the first states to get rid of all tuberculous cows, and that there is now little or no danger of infection in this State from that source.

Still another by-product for which we should be thankful is the change of attitude and public morale. In the old days when the doctor diagnosed a case of tuberculosis, the patient wrote his will and began bidding tearful farewells. Now the patient turns his attention to the nearest sanatorium and thinks of getting well and not of dying. And now he has an excellent chance of getting well if his case is discovered in time.

And, finally, we should be thankful for the opportunity of cooperation under able leadership, and the chance for each one to do his part, no matter how small. Fifty years ago there was no such chance. The layman who was interested in tuberculosis, but who had only a few dollars or a few cents which he could give towards the work, could do little good. Today the work is financed largely through the proceeds of the sale of little stamps at a penny each. In these days of NRA we hear a great deal about cooperation and its effect on public morale of the Nation; we hear of the necessity of each man’s doing his part, and of the importance of the “little fellow” in the general welfare. The little fellow is important. If you think a penny Tuberculosis Christmas Seal is small, just remember that the germ which causes tuberculosis is even smaller, but they are equally powerful.

MEMORY GEMS

By M. B. C.

Though I have the wealth of Ford and the fame of Lindbergh, and have not Health, they are become as dust and ashes to me.

And though I have the ambition of Hitler, and though I have the understanding of all science and all knowledge, and have not Health, of what use are they?

And though I build great houses and own fine cars, and have not Health, I enjoy them not.


## DEATHS FROM TUBERCULOSIS OF THE RESPIRATORY SYSTEM BY COUNTY AND RACE: 1932

### TOTAL DEATHS (TUBERCULOSIS, ALL FORMS), 2,200

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**Footnote:** John W. Gray, M.D., Director, Bureau of Vital Statistics, Department of Health, Raleigh.
THE State Board of Health nurses in their work last summer, in counties having no full-time health departments, made an appeal to the different local women's organizations to help provide some equipment recommended by the Board for midwives having none. The above picture shows a group at Edenton properly fitted out. This was done by the local Red Cross Chapter there under the leadership of Mrs. J. N. Pruden, chairman, with the assistance of a Circle of the Edenton Baptist Church, which made the caps and aprons. The local Federal Relief Office contributed $8.50 toward the purchase of medical supplies for the eleven model bags. When the bags were presented to the midwives, Dr. J. A. Powell, Chowan County physician, instructed them as to the use of each article in the new equipment and impressed upon them the importance of proper sterilization and sanitation.

These good people deserve the highest commendation for their helpful contribution toward better care for the mothers and babies of their county.
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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

- Adenoids and Tonsils
- Cancer
- Constipation
- Chickenpox
- Diabetes
- Diphtheria
- Don't Spit Placards
- Eyes
- Fles
- Fly Placards
- German Measles
- Health Education
- Hookworm Disease
- Infantile Paralysis
- Influenza
- Malaria
- Measles
- Pellagra
- Residential Sewage
- Disposal Plants
- Sanitary Privies
- Scarlet Fever
- Smallpox
- Teeth
- Tuberculosis
- Tuberculosis Placards
- Typhoid Fever
- Typhoid Placards
- Venereal Diseases
- Water Supplies
- Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

- Prenatal Care (by Mrs. Max West)
- "Our Babies"
- Prenatal Letters (series of nine monthly letters)
- Minimum Standards of Prenatal Care
- Breast Feeding
- Infant Care. The Prevention of Infantile Diarrhea.
- Table of Heights and Weights
- Baby's Daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years; Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
- Instructions for North Carolina Midwives.

CONTENTS

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<td>&quot;Right Kind of Home&quot; is First Article in New Series</td>
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<tr>
<td>Change of Address</td>
<td>16</td>
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<td>Noted Men On Conservation of Life and Health</td>
<td>16</td>
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Maternal and Infant Care

DECEMBER, the closing month of the year, the natal month of the Christ child, is a suitable period for people all over the earth to stop long enough in the mad rush about things and consider what is being done for the mothers and babies of the world. The concern here is with the conditions surrounding maternity and infancy in North Carolina. We are endeavoring to set forth in this article some of the pertinent facts which should weigh heavily on the mind and conscience of every responsible citizen of this State.

In addition to facts, statistics, and records having to do with the question, we are publishing below some statements from physicians, and also the opinion of one of the high officials of the State Federation of Women's Clubs. In recent months the statement has been repeated often enough for every reading citizen of the State to know it by this time, that the maternal death rate in North Carolina is higher than the national average. The same statement applies to the infant death rate. Therefore, a study of the causes for this situation is in order.

The question of maternal mortality and infant mortality is so closely interrelated that one cannot be discussed without a study of the other. To prove this statement, let us take a look at the statistics for 1932. In that year 555 mothers who went down in the valley of the shadow for the perpetuation of the race never came back. The death rate from this cause was 7.2. It varies from year to year, some years higher and some lower, but the average running along about the same. It means in simple terms that of the 77,880 births recorded in North Carolina for the year 555 mothers died as a direct cause of accidents incident to maternity. During the year 5,459 infants died before the end of their first year of life. But we invite your attention to the fact that of this number 2,424 of these babies died before they were thirteen days old. What is still worse, 1,209 of them, or more than one out of five, died before they were one day old. This statement should be sufficient to impress upon everybody that the problem of maternity and infancy are inseparably joined together. Who is responsible for this situation? Opinions may differ, but all thinking citizens realize that the question is a rather involved one and that the blame cannot be placed on anyone doorstep. A number of causes contribute to the high infant and maternal mortality. It is natural to assume that the first place for an investigation is in the kind of attendance and care each expectant mother has from the inception of her pregnancy to and including the safe delivery of a normal baby.

Midwife Responsibility

Let us first consider the extent to which midwife responsibility may contribute to the high mortality. This responsibility may be estimated
by reading the following tables from 1929 to 1932, inclusive.

<table>
<thead>
<tr>
<th>Births attended by physicians</th>
<th>Births attended by midwives</th>
</tr>
</thead>
<tbody>
<tr>
<td>w—white; c—colored; i—Indian</td>
<td>w—white; c—colored; i—Indian</td>
</tr>
<tr>
<td>1929</td>
<td></td>
</tr>
<tr>
<td>47,047 w</td>
<td>6,219 w</td>
</tr>
<tr>
<td>7,617 c</td>
<td>15,775 c</td>
</tr>
<tr>
<td>232 i</td>
<td>274 i</td>
</tr>
<tr>
<td>1930</td>
<td></td>
</tr>
<tr>
<td>47,133 w</td>
<td>6,382 w</td>
</tr>
<tr>
<td>7,225 c</td>
<td>15,456 c</td>
</tr>
<tr>
<td>246 i</td>
<td>275 i</td>
</tr>
<tr>
<td>1931</td>
<td></td>
</tr>
<tr>
<td>44,898 w</td>
<td>6,908 w</td>
</tr>
<tr>
<td>6,367 c</td>
<td>15,993 c</td>
</tr>
<tr>
<td>244 i</td>
<td>333 i</td>
</tr>
<tr>
<td>1932</td>
<td></td>
</tr>
<tr>
<td>45,540 w</td>
<td>8,121 w</td>
</tr>
<tr>
<td>6,082 c</td>
<td>17,514 c</td>
</tr>
<tr>
<td>219 i</td>
<td>404 i</td>
</tr>
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</table>

An examination of the table for 1932 will show that midwives delivered about 34 per cent of the women of North Carolina for that year. It will be noted that 8,121 white women were attended exclusively by midwives. That means an average of more than 80 white women to a county. Of the 34 per cent attended by midwives, of course none of them had the benefit in any form of medical prenatal service except in the instances where literature was supplied to them by the State Board of Health on direct request of the midwives. We have no exact figures to prove the following statement, but it is a safe estimate that of the remaining 66 per cent attended by physicians about one-half had the services of the physicians only from the onset of labor, except, as above noted, where someone wrote to the State Board of Health and obtained some prenatal literature. In short, it means that about two-thirds of the women in North Carolina go through their pregnancies without any form of direct personal medical prenatal service whatever.

For several years the State Board of Health has been doing its utmost to meet the responsibility resting squarely upon the Department for improvement in the services of midwives. The extent to which this effort has been applied practically may be understood by the fact that during the past summer six competent nurses were sent into fifty-six counties of the State in an effort to impart some instruction to each midwife carrying on her vocation. This was the second summer in which this work has been undertaken along these lines. These nurses held 193 group meetings for midwives. They examined in these meetings and at individual homes 1,108 midwives. They found of this number, as a result of their work the previous summer, that 224 had the fully equipped bag which the Department recommends for midwives to carry. Four hundred and three of these midwives had partially equipped bags, but 454 had no equipment whatever, not even a bar of soap or a pair of scissors.

In every one of the aforementioned counties except two the county board of health readily agreed to adopt resolutions conferring authority on the State Board of Health and the official county physician the power to regulate the practice of midwifery for a period of one year. In one of the counties in which this was not done the county physician rendered valuable assistance and help in every way, but did not think it necessary to have special rules and regulations. In only one county was the county physician antagonistic to the work and refused to agree to any instruction being given to the midwives of his county or to the regulation of their practice in any way. It is only fair to state that he took the position that no woman should be attended by a midwife, but that all should have the benefit of the services of a competent physician. This would be an ideal solution of the problem, but it seems to be a long way off. In the meantime those women of his county who are unable to secure the services of a physician will continue to suffer at the hands of dirty and ignorant midwives.

The main essential the Department through its nurses has been trying to impress upon these women through-
out the State is, first, a policy of non-interference. They are urged not to handle the patient; therefore no gloves are recommended for midwife equipment, as they are urged not to make any examination whatever of the patient, but simply to assist nature in the delivery of the woman; and, second, to coach the midwives in the very first symptoms of danger to the mother, and to urge upon them the advisability of securing the services of a competent physician at such times at all hazards and at the earliest possible moment.

It is not the purpose of the State Board of Health to encourage in any way the competition of midwives with doctors; this could never be done. But it does undertake to encourage the competition of midwives with each other to the extent of equipping themselves and gaining a knowledge which will make them safe in their conduct of the cases depending solely upon them. It is the aim of the State Department of Health to some day achieve the now impossible: that is, the ideal of competent medical service and competent prenatal service for every expectant mother in the State. To do this a long period of persistent and consistent educational activities will be necessary, and to some extent a redistribution of practicing physicians throughout the State will have to be brought about. That is a problem for the physicians themselves. In other words, there must be a diffusion of medical centers enabling physicians to practice within the reach of thousands of these women who now find it impossible under any circumstances to obtain the services of a physician.

Letter From a Practicing Physician

We have requested recently a statement from a few physicians in different sections of the State. We have asked these physicians to feel free to express their opinion about some of the causes of this high mortality of our mothers and babies. The Editor of The Health Bulletin, who is director of the maternal and infant service of the State Board of Health, has recognized for a long time that this is a medical problem; that if conditions are to be materially changed the organized physicians must bring it about, aided, of course, in every way by the State Board of Health, particularly in an educational capacity; but the burden will rest upon the profession.

We are very grateful to Dr. Charles Z. Candler, an experienced practicing physician of Sylva, North Carolina, for permission to publish a letter just received from him in response to our request for an opinion on the subject. Dr. Candler's letter is literature of the highest order. While he criticizes some of the habits of some of his fellow-physicians, he is privileged to do that; it is the privilege of the votary of any profession to criticize his fellow-members. Following is Doctor Candler's remarkable letter:

"If the maternal death rate is 30 per cent higher in North Carolina than anywhere in the United States, then there must be something radically wrong. And if 37.1 and 17.6 per cent of this death rate is due to sepsis and eclampsia, respectively, then there is a state of affairs existing that one could say is little short of criminal.

"There is one place only, Doctor, that the responsibility for this can be placed, and that is at the door of the medical profession in North Carolina. I make this statement because I believe it is true.

"My experience with doctors, which has extended over a period of thirty-two years, has led me to believe that we have at least two classes with which to deal: (1) The energetic, progressive fellow who keeps abreast of everything pertaining to his profession. He is to be found at every gathering of medical men, when it is possible for him to attend. He is conscientious and painstaking in his work. If he is in doubt as to his diagnosis, or his ability to handle any given case properly, he insists on consultation. The welfare of his patient comes first, and he is always willing to make any reasonable sacrifice for his comfort and relief. Unfortunately this type of physician at-
tends but few obstetrical cases. (2) The fellow who goes along the even tenor of his way, either standing still or actually retrogressing. He will have a consultant only when one is urgently demanded. This is especially true if he thinks the patient is going to die and he can shift the responsibility to another. He reads when it suits his fancy, which is seldom; but to hear him talk one would think he is the fountain-head whence all medical knowledge flows. Not unlike the wasp, he was bigger the day he was hatched than he will ever be again. He carries with him through life only the rudiments of medical knowledge which he obtained while in school, adding nothing to them, but on the contrary permitting this substantial foundation on which it was supposed he would build his future edifice to become moth-eaten, as it were, and slowly perish away. Into the hands of these men, who assume the role of physician, falls the responsibility of caring for the expectant mother and her unborn child.

"With no regard for the principles of asepsis, he washes his hands after the birth of the child, and like the Pharisee of old, he loudly proclaims a duty well done, and thanks God that he is not as other men. Right here, Doctor, lies an uncultivated field, the improvement of which, if such be possible, will materially lessen the appalling maternal and infant death rate in North Carolina.

"My opinion of the midwife is that she is a God-send to thousands of expectant mothers in the outlying districts of our State. It is true that she is lacking in the knowledge of many things pertaining to the lying-in state, but her duty, though its confines be limited, is one that is performed with the sole object of giving relief and comfort to one of her own sex. Having, perhaps, 'gone down to the Valley of the Shadow' herself, she instinctively, and almost invariably, uses every precaution of which she has knowledge to insure a clean delivery for a sister sufferer. She rarely hesitates to call for needed assistance, which, in many instances, she doesn't receive as promptly as she should.

"There seems to be a difference of opinion as to whether these midwives should receive instruction from any one except a nurse. Like the old woman who kissed the cow, I grant to everyone the privilege of following his own inclinations. As for me, I believe these women should be given every instruction possible, having in mind at all times the object of preserving the lives of mothers and babies who are oftentimes of necessity entrusted to their care. A physician who would refuse to give this instruction, as you heard expressed by one in particular the other day, is certainly unfair to the expectant mother to whom he refuses to go when called, but recommends that she secure the services of a midwife he has openly condemned and refused to instruct. I fail to see the consistency of such an attitude.

"The foregoing are my views on this subject, Doctor. I have endeavored to be fair to my profession and at the same time just to the midwife. Paraphrasing Isaiah 55:7, I would say, Let the careless forsake his way, and the unclean man his habits, and let him return unto his disinfectants and other preventive measures. Then will the high maternal and infant mortality, of which we are ashamed, be reduced to a minimum, thereby placing us on a par with other progressive states of the Union."

A Letter From the State Federation of Women's Clubs

Coming in almost the same mail was a letter from Mrs. J. Henry Highsmith, executive secretary of the State Federation of Women's Clubs. We requested Mrs. Highsmith to favor us with an expression coming from a high official of the Women's Clubs, setting forth their conception of this problem. Mrs. Highsmith's letter is also literature of high quality. The reader will note that Mrs. Highsmith criticizes the expectant mothers themselves and that she says that the remedy is one of education to help mothers know what constitutes adequate maternity care and how to get it. Again, Mrs. Highsmith, as an official of the Women's Clubs and as a mother herself, puts her finger on another one of the causes which contribute to so many unnecessary deaths. Following is Mrs. Highsmith's letter:
"Club women in North Carolina are very much concerned over the unusually large number of deaths of mothers and of infants which occur annually in the State from causes incident to maternity. We feel that such a condition ought not to exist. That you say about 90 per cent of these deaths can be prevented is the hopeful side to the situation, and club women are willing and ready to cooperate with you and your agents in your program to make motherhood safe for mothers.

"Your proposal to go straight to the cause of the trouble, or a great part of it, which in this case is the ignorant and untrained midwife, I am sure, will get results. And I can think of no greater benefit to humanity today than that of improving and making safe the services of midwives, who, according to statistics, attend one-third of all the mothers in the State. In round numbers they attend 8,121 white women and 17,314 colored women. Incidentally, I notice that the death rate of colored women from puerperal septicemia is about double that of white women from the same cause. Is not that a heavy indictment against the dirty, careless midwife?

"In your plan to hold institutes for training midwives for their jobs in counties where there are no health officers to take charge of this work, I feel sure that the local club women will give you all the cooperation and support of which they are capable. Mrs. R. H. Latham, president of the Federation, is urging club women throughout the State to lend their efforts in every way possible to decrease the death rate of mothers. Mrs. Charles R. Whitaker, chairman of Health of the Federation, is also calling on the club to study the causes underlying the high maternal and infant mortality rates as a special feature of their club work this year.

"The fact that only one-third of all mothers have the services of a physician to give them instructions in prenatal care shows the problem to be a much larger one and involving more than ignorant midwives. It is one of ignorance, carelessness, and neglect on the part of the expectant mothers themselves. The remedy here is one of education to help mothers know what constitutes adequate maternity care and how to get it.

"Club women's services will be invaluable if they can help to arouse a public opinion that will not tolerate conditions as they are today, but will demand better care of mothers at a time when their lives are worth more to their families and to the State than at any other period."

State Board of Health Efforts

For many years this burden has lain upon the heart and conscience of the State Board of Health as an organization, and particularly upon the officials responsible for improving the situation. Recently Dr. James M. Parrott, head of the State Board of Health, in cooperation with his subordinate department officials responsible for the work, arranged for a few group meetings of physicians, particularly of the younger and middle-age group, about over the State. At these group meetings the physicians were asked to discuss thoroughly all phases of maternal and infant hygiene in North Carolina and to offer opinions and constructive suggestions as to what can be done to lower the mortality. In reporting one of these group meetings, Dr. M. V. Ziegler, who met with the physicians of that group, makes the following report, which is encouraging and promises much for the amelioration of the hazards of maternity:

"Each member present was called upon to discuss the problem and offer such solution as he deemed advisable. The response on the part of the members was most gratifying, indicating their enthusiastic interest, and all agreed that the problem was a medical and technical one and should be approached by and through the organized medical profession, with the cooperation of the State Board of Health, the State Medical Society, and the county medical societies. Their discussion revolved around the following points: adequate prenatal care; education of the expectant mother as to the need for appropriate medical attention; more adequate supervision of the midwife; provision to be made for obstetrical care of indigents; presenting the problem,
the facts, and the solution to the public through the press."

It will be noted by a careful reading of the foregoing that the physicians of the State recognize their responsibility and seem ready to meet it; that the leading women of the State, as embodied in the expression of their club officials, realize their responsibility and are ready to meet it. The problem is one for all the people of the State to solve. It cannot be done by any one department or agency, and it cannot be settled in one county and neglected in another. Work must be simultaneously carried on from one end of the State to the other. The remotest communities must receive the same intensive efforts that are carried on in the most progressive city of the State.

This symposium is already too long; it should not be closed, however, without mentioning the statement that more than three thousand stillbirths occur every year. A rather large percentage of such casualties is due to syphilis. Control and eradication of venereal diseases must move right along with other prenatal services if this high stillbirth record is to be lowered. Please let it be understood that not all stillbirths by any means are due to syphilis; but, as stated above, a large percentage of them are. Most of the conditions resulting in stillbirth can be definitely prevented through adequate prenatal and obstetric medical service everywhere.

In conclusion, we want to urge upon every city, county, and township in North Carolina that adequate prenatal medical service be placed within the reach of every expectant mother in the State from the beginning of her pregnancy and extending on to and through a safe confinement to the delivery of a healthy baby. The establishment of prenatal centers where expectant mothers can receive medical advice at frequent intervals is not only possible, but it is practical, and it would be easy to establish in every county of the State. We will not here go into details of how such services may be established, because that is another story and one that we will discuss with any interested group of citizens in any county of the State upon request.

Reduction of the Maternal Death Rate In North Carolina

(Paper read by Grover Wilkes, M.D., before the Tenth District Medical Society of North Carolina, at Burnsville, N. C., on the 27th day of September, 1933)

This paper is not written by one specialized in obstetrics, or one who has given the subject more than the ordinary study. I want to call to the attention of the profession that more than three thousand stillbirths occur every year. A rather large percentage of such casualties is due to syphilis. Control and eradication of venereal diseases must move right along with other prenatal services if this high stillbirth record is to be lowered. Please let it be understood that not all stillbirths by any means are due to syphilis; but, as stated above, a large percentage of them are. Most of the conditions resulting in stillbirth can be definitely prevented through adequate prenatal and obstetric medical service everywhere.

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A study of vital statistics reports for North Carolina for the year 1931, which is the last year in which the death rate for this State has been completely classified according to cause, reveals that for every one thousand live babies born in North Carolina eight mothers die. A comparison with the State of Utah shows that for every one thousand live babies born in that State only four and two-tenths mothers die. In Connecticut only four and three-tenths mothers die for every thousand live babies born. In Wisconsin, Oregon, and North Dakota the maternal death rate is only four and five-tenths, compared to North Carolina's eight.
In Georgia, Florida, and Alabama the maternal death rate is ten per each one thousand live babies born. It is to an extent pleasing that the death rate of mothers in North Carolina is not the highest in the Nation; still it leaves us no grounds for gratification.

The maternal death rate for the entire registration district of the United States for the year 1931 was six and five-tenths per each one thousand live births. This may be compared with that of Canada, where the maternal death rate was five and six-tenths per thousand births. In England, for the same year, the maternal death rate was only four and two-tenths per thousand. In Sweden the death rate was even three mothers for every one thousand live births, and in Denmark still lower with only two and five-tenths maternal deaths for every thousand live births.

Among the Chief Causes of Deaths of Mothers in North Carolina Are Those Listed Below

Puerperal albuminuria and eclampsia lead with 198 deaths.

Puerperal sepsis is second with 117 deaths.

Puerperal hemorrhage, 76 deaths.

Abortion with and without septic conditions, 55 deaths.

Ectopic gestation, 12 deaths.

Puerperal phlegmasia alba dolens, embolus and sudden death, 42 deaths.

Other toxemias, 33 deaths.

Accidents of pregnancy and childbirth, 103 deaths.

Among all these causes of death the percentage of Negro deaths approximates twice that of the white mothers.

If the death rate in Utah can be reduced to four and two-tenths and in Denmark to two and five-tenths, there is some way to reduce this appalling death rate in North Carolina.

I believe some concessions by the physician and some by the patient or her family will have to be made. I would like to suggest a few for each of the parties. Among those of the physician I would suggest: That no physician engage in obstetrical work if he is not willing to give the mother a reasonable chance to deliver her baby by natural processes, unless there are definite indications for intervention. Among these, I would suggest that pituitrin be not used until all the indications for its use have been met. These indications are familiar to all of us. The use of forceps, with its great liability to carry infection into the birth canal and its greater danger of causing lacerations, be delayed until its indications are met. A strict observance of all aseptic precautions, or as near as possible with surroundings, and immediately after delivery of placenta, examination for and immediate thorough repair of any laceration. Caesarean section where indications are not sufficient should not be done, vaginal examinations during labor reduced to a minimum. The patient or her family could greatly cooperate with the physician by engaging her physician as soon as she is aware of her conception, so that he can make a proper check-up on her physical condition, and that she may be properly instructed to take the proper care of herself as to diet and exercise, etc. Some will need to be instructed when to send samples of urine for examination and how often, and to report any symptoms that are unusual or out of the ordinary, such as severe headaches or excessive edema. She should be made to feel free and at home to consult him on any condition that affects hers or her baby's welfare. This also aids the physician to be on the lookout and anticipate such things as renal insufficiency, impending eclampsia, or any flare-up of an acute or chronic condition that might endanger her life. This will be a great improvement over the fast-disappearing custom of waiting for the onset of labor pains, or some serious or even fatal complication before her physician is aware of her condition. Another thing is dependent on the patient. The physician must live and keep up appearances more than that of any other profession. He must pay his bills, and his expenses are heavy. He must lose from at least
one to twenty-four hours of his time and other expenses, which are quite heavy when he has a long distance to travel over bad roads. He is justly entitled to a fair remuneration for his services.

I would like to make a comparison of the maternal death rate of our State as compared with that of many of the major operations as performed in our hospitals. I very recently read a report of one of the surgeons of our State covering over six hundred complete hysterectomies, and his death rate was only two and five-tenths per cent, or only three times greater than the maternal death rate. When we consider the more advanced ages of the greater part of these patients, a great number of them cancer and the much more unsafe surgical risks, I would venture, had he performed these same operations on patients of the same age and physical condition as that of the average confinement cases of this State, his death rate would have been very little greater than was the maternal death rate of this State. I believe that if the people of North Carolina knew or realized the danger to the mother in having a baby, they would make the necessary sacrifices to see that their prospective mothers were better taken care of. There are probably a few families in North Carolina that cannot manage to get somewhere in the neighborhood of twenty-five dollars to pay a physician to look after the prospective mother, but there are a lot more who don’t care or try, depending on beating some physician or midwife out of their fee.

This brings me to the question of the midwife. To her I would here give the full honor commensurate with the character of the services she performs. In my mind, she is at present of great service to humanity, especially in the remote sections of the State, where it would be almost impossible for a physician to arrive in time to be of much service, and this more especially in winter when the roads are difficult to travel. I am thoroughly in sympathy with the program now being carried out by the State Board of Health in their effort to improve the quality of the work being done by the midwives of this State. It was my pleasure to address about fifteen midwives of my county during this summer, under the direction of the State nurses, and I took great pains to give them the best information I was capable of giving, and I also encouraged them to study carefully all the literature mailed them by the State Board of Health.

About seventeen per cent of the white births in this State are attended by midwives, and about seventy per cent of the colored births are attended by them.

The one great quality of the midwife’s service is that she has no means to hasten delivery. This as compared with an acquaintance of mine who had a tremendous practice, is emphasized by the following statement of his technique in primipar a and the slow delivery that is natural to some mothers.

As I have said, this physician is extremely busy all the time, so I asked him his technique in the prolonged cases. It was as follows: “I give them a shot of morphine, return in a few hours and do a manual dilation of cervix, give a shot of pituitrin, administer chloroform, repair the laceration, and go home.”

It is my opinion that a mother in the hands of an intelligent midwife is just about as safe as in the hands of a physician who uses such a technique. Of course this type of physician is very rare in this State.

In conclusion I would like to quote from the September HEALTH BULLETIN, just from the press, what Dr. Parrott, the Secretary of the North Carolina Board of Health, has to say of our maternal death rate: “Our maternal death rate is more than twice as high as those for communities where rates are considered good, and the maternal mortality in North Carolina reflects no credit on any civilized state.”
An Appeal to Women’s Clubs

IN the work of State Board of Health nurses in fifty-six counties last summer they examined eleven hundred and eight midwives in group meetings. Of that number four hundred and fifty-four had no equipment whatever. The State Board of Health has for a long time urged every woman who desires to serve her sisters as a midwife to equip herself with a clean canvas bag and filled with the small, inexpensive materials necessary for clean service. It is essential that they have this minimum equipment listed by the Maternity and Infancy Department.

The problem for many of these women is that they have no money themselves; they serve in many instances without pay. They often leave their own miserable families and spend a week or ten days without a cent of pay. Many of them often have to walk several miles to deliver the birth certificate to the township registrar of vital statistics; not even money enough in the whole group to buy a three-cent stamp.

Our appeal to the local women’s clubs is just this: You are all civic-minded. You want to help along any cause which advances the welfare of women. Now, why not make an effort to round up all the midwives in your county who are too poor to provide themselves with this little bag and its contents, and have your club make and fill for each one of them a model bag? The cost would be small, only two or three dollars each. A State Board of Health nurse will show you a model and the rest should be easy.

The welfare department of Washington County has already provided each midwife who registered with the nurse last summer a model bag. The Red Cross Chapter at Edenton, aided by a “Circle” of the Edenton Baptist Church and the Federal Office of Relief, have provided the Chowan group with the bags and uniforms, also. It can be done easily everywhere; and the women who are served by the midwives will be the beneficiaries. We shall be glad to visit or write to any local organization willing to help in such a quiet but helpful service for their less fortunate sisters. And any club anywhere will find no trouble in getting a local physician who will be only too glad to assist them in explaining the use of the bag to the midwives when they are ready to present them.

Remember, the infant and maternal mortality rate in North Carolina must come down!

“Right Kind of Home” Is First Article In New Series

THOROUGH treatment of child training in all its physical and psychologic aspects during the first two years will be given Hygeia readers in a new series of five articles, “Before Baby Is Two,” which begins in the November issue. Katherine Brownell Oettinger, the author, is mental hygiene supervisor of the Visiting Nurse Association, Scranton, Pennsylvania.

The problems that perplex young mothers are sanely discussed by Mrs. Oettinger, and logical, helpful conclusions are reached. The first of the five articles deals with the right kind of a home for the baby. The others will take up such problems as helping the baby to learn, to build healthy ways of acting, to build healthy ways of feeling, and to grow.

Before a baby is born, plan to make the home he enters the best possible, the author advises. If you wait you may become so busy taking care of his everyday needs that you
will forget how important attitudes are.

As contributory to the wrong kind of a home, Mrs. Oettinger lists the following conditions:

1. If parents smother the baby with too much affection.
2. If either parent becomes so absorbed in the baby that the other is forgotten.
3. If the baby’s coming is resented and nobody is happy about it.
4. If the mother is using the baby’s coming to make her husband and family wait on her.
5. If the baby’s brothers and sisters are not ready to greet him.
6. If the parents are ready to welcome only a boy or only a girl.
7. If either parent is always looking for and worrying about bad traits which baby may inherit from parents or other relatives.
8. If the mother’s strength is sapped by fears about her physical condition.

To close her article, Mrs. Oettinger says: “Do not feel alarmed if you find after reading this that you are not the perfect mother or father. The average home makes some of the mistakes some of the time. It is easier to steer toward better and more modern ideas if they are brought together for you to think about, now that you are undertaking this most important work in the world—the care and training of a new individual.”—Hygeia.

Practical Suggestions to Reduce the Number of Deaths from Tuberculosis Among Negroes

In preparing copy for our November issue we requested Prof. Jas. A. Clark, a teacher of the State Normal School for Colored People at Elizabeth City, to prepare us a short paper under the above heading. His contribution was received too late for our November BULLETIN. We feel, however, that the article, coming from a responsible Negro teacher in a State-supported school, giving his views upon many of the conditions which affect the health of his race, is entitled to publication in THE HEALTH BULLETIN, even though the issue is not devoted to a discussion of tuberculosis in particular. To forestall any argument about some of his statements, we repeat here that the editors of THE BULLETIN do not necessarily endorse all the views and opinions of its contributors. The purpose of THE HEALTH BULLETIN is to disseminate information as to how to prevent the spread of communicable disease and to promote the public health of the State. It is published for all the people, regardless of race or creed. The State Board of Health is proud of its record of more than fifty years impartial service to all the people, for as the writer repeats, “Germs know no race, creed, or color.”

Professor Clark’s article follows:

“One big problem of the United States is the reduction of death rates, and especially the high death rate of Negroes. Since the average life in the United States was 33 years in 1880, and in 1932 it had been extended to 58 years, there is no doubt of the possibility of reducing death rates when we find the causes and apply the remedies or prevention.

The High Death Rate of Negroes

“The record of last year showed that the longevity of the Negro in the United States was about 41 years, or 17 less than the average life.

“In North Carolina, during 1931, the deaths of whites were 20,107 and the Negroes were 12,804. Negroes were only 29.4 per cent of the population, but had 38.7 per cent of all deaths. Reports show that during the last fifteen years North Carolina has reduced her deaths from tuberculosis from 144.6 per 100,000 population to 71.4, which is less than half. But of the 2,299 deaths from tuberculosis during 1931, the Negro
had 1,177—that is, the Negro, with 29.4 per cent of the population, had more than 50 per cent of the deaths caused by tuberculosis.

"Scientific investigations and remedies for tuberculosis in the United States have cheated death from 202.6 per 100,000 population in 1904 to 76.0 in 1929. In this march to better health and the extension of life the Negro follows as a straggler. Why?"

"Dr. Taliaferro Clark, former Surgeon of the United States Public Health Service, made an elaborate study of 'The Negro Tuberculosis Problem' in the United States, and this authority seems to agree: 'The fact that we have extended life by preventive measures is enough to say that the group which gets less would lag behind in decreasing its death rates.'"

The Standard of Living As a Cause

"The social, educational, economic, and environmental factors must give the same support to the standard of living for the Negro to help medical science to win its battle against tuberculosis as other groups.

"Do the different standards of living cause a variation of death rates? Consider Pasquotank County: The report for 1931 shows 15 deaths for Negroes and 4 deaths for whites caused by tuberculosis. In 1932 the record is 14 deaths for Negroes and 2 deaths for whites. The writer of this article personally investigated the standard of living in these cases. As the physicians, health officers, and undertakers noted the records of these victims they found only two which had about the average standard of living of the white people of the county.

"We do not expect a farmer with poor seeds, unfertile soil, and cultivation by guess to compete with the farmer having selected seeds, fertile soil, and scientific cultivation. Likewise, good heredity, wholesome environment, and the best training generally give the best human products."

"Recently I was looking for the colored section in a city. I was told to continue down the street. When the pavement ended, the houses turned into shanties, the street lights became dim, and modern sanitation dropped—I knew that I had entered the colored section. These conditions are typical and very obvious in most of the communities.

"For the average citizen to think of a community which offered equal educational, economic, and environmental conditions for the Negro would be dreaming of 'Utopia' or Plato's 'Ideal Republic.' These conditions are not only unfavorable to reducing the deaths of Negroes, but they cause Negroes to increase the deaths of white people. 'Germs know no race, creed, or color.'"

Some Considerations

"1. Over 80 per cent of white births in North Carolina are attended by physicians, but only about 30 per cent of the maternity cases of Negroes receive prenatal, natal, and postnatal medical skill. This lack of medical attention, and also the care of the children by parents without health education on the scientific care of children, help to give many Negro children a poor start.

"2. Negro physicians, nurses, teachers, parents, and children should have equal opportunity of health education. Equal opportunity of clinics and hospitalization for patients and students. It would be unwise to offer less opportunity for learning and practice for Negro nurses and physicians, since they must work with a group that has a higher death rate.

"3. The most undesirable jobs should not exist for the Negro alone—or any citizen. All work should be made reasonably safe and profitable. 'Anything is good enough for a Negro' is only true when the desire is for increasing the death rates of white and colored people. All sections of the communities should be safe for good health.

"4. There should be frequent health examinations for children and adults. More isolation of tubercular patients from children; less crowding and more ventilation for sleeping; greater effort of discovery and treatment of the disease in the first stage; and more practice of the rules for prevention.

"5. Negroes should make a greater study of the vital statistics of their communities and try to find the causes for the high death rates. Increase health education by getting literature and workers from the State
Board of Health, the United States Public Health Service, Washington, D. C., and the National Tuberculosis Association, New York City. Inject health education into the many people who attend church and never enjoy school advantages. Negro churches should cooperate with the schools in giving health programs, since health is the first objective of education and the earthly goal of Christianity.

"6. There should be a greater number of Negroes trained for health work among Negroes. It is believed that they would have better understanding of the conditions of Negroes and increase the service."

QUALITY ABOVE QUANTITY

Quality, not quantity, production should be the goal in propagating the Tar Heel species of the genus homo.

That, apparently, is the opinion of the North Carolina State Health Department; and with it the Record heartily concurs. Better, instead of more babies, ought to be the objective.

As pointed out in the North Carolina Health Bulletin, this State no longer holds the dubious honor of having the highest birth rate of any state.

New Mexico, according to the Federal Census bureau, now has more births per 1,000 population than any other state in the Union. North Carolina drops to second place as a population producer, with Alabama running close behind her, and with South Carolina tagging Alabama's heels.

"This is one first we cheerfully yield to our neighbors," says the Bulletin, urging that we "devote more attention to the important job of saving a larger number of the babies that are born."

The same census report to which reference has been made shows eight states, including Virginia and Maryland, have a higher infant death rate than North Carolina.

Obviously it is better, considering both the present and the future, to produce a few strong and healthy young citizens than to produce a greater number in which many are below standard.—Greensboro Record.

BUILDING A TEMPLE

By Hattie Bose Hall

A builder builded a temple;
He wrought it with care and skill—
Pillars and groins and arches,
All fashioned to work his will.
And men said, as they saw its beauty,
"It never shall know decay.
Great is thy skill, O builder!
Thy fame shall endure for aye!"

A mother builded a temple
With infinite loving care,
Planning each arch with patience,
Laying each stone with prayer.
None praised her unceasing efforts,
None knew of her wondrous plan,
For the temple the mother builded
Was unseen by the eye of man.

Gone is the builder's temple—
Crumbled into the dust;
Low lies each stately pillar,
Food for consuming rust.
But the temple the mother builded
Will last while the ages roll,
For that beautiful unseen temple
Was a child's immortal soul.

State Board of Health Radio Program

A slight change has been made in the time for the Radio Talks made over Station WPTF at Raleigh by members of the State Board of Health staff. These talks in future will be made at 9:45 a.m. every Tuesday. The program is scheduled for fifteen minutes. Remember the day and hour—every Tuesday morning from 9:45 to 10 o'clock. Kindly tune in and give the program a trial.

See Dr. Wilkes' Article

We are pleased to be able to publish in this issue, especially for our physician readers, the article by Dr. Grover Wilkes. When Dr. Wilkes read his paper at Burnsville before a large group of physicians it received the endorsement of several of the most influential physicians present. Many of them requested the Editor to publish it in The Health Bulletin.
Effect of Malnutrition On Tooth Structure

The following instructive letter was sent by Dr. E. A. Branch, Director of the Dental Division of the State Board of Health, to a mother who had written him for advice about her child whose mouth was "filled with broken-down teeth":

Dear Madam:

We are glad to have your inquiry relative to your child's mouth and the relation it bears to systemic disease. It has been stated by one of the best-known physicians that practically all of the glandular tuberculosis in children originates in the mouth, "for," said he, "the mouth is a perfect incubator."

If you will recall, in your study of bacteriology in school, that the things to be desired in culturing bacteria are moisture, warmth, darkness, and culture media, you will see right away that we have these conditions in an old, broken-down tooth in the mouth.

You will also recall that you stated in your inquiry that your child's mouth was filled with broken-down teeth and that he was between eight and nine years of age. Also, you were anxious about him being underweight and having a poor appetite. May I remind you that poorly formed teeth are indicative of undernourishment and are one of the surest signs we have.

The first teeth are formed before the birth of the child, and the enamelled caps of these first teeth are calcified before birth. If the calcification is as it should be, the enamel of the tooth is the hardest structure in the body, but if this little tooth, in its formation, is denied a sufficient amount of lime salts (which you have to supply, either from your diet or from your body), then this tooth is improperly calcified, and when the child grows its first tooth, about six months of age, right then this lack of sufficient lime salts in the calcification of the teeth is manifest. This is one of our first sure signs that the child was undernourished before you gave him birth.

If he is undernourished, then he has a lowered resistance to begin with, and it won't be long (depending upon the extent of undernourishment) before these teeth begin to break down. When they break down, through the enamel, the inner layer of tooth structure called dentine is exposed, and as this contains a large per cent of animal matter, decays rapidly. In a short time after the dentine begins to decay, the nerve of the tooth is exposed and it aches. Toothache is excruciating pain, and mother resorts to home remedies to relieve it. Usually in a short time after this happens the nerve in the tooth dies and a gum boil forms, which is nothing short of a running sore—and just think, this sore is in your child's mouth!

The discharge from this sore is mixed with his food and is eaten. It is difficult and painful to chew against this sore tooth and, naturally, the child does not eat things that have to be chewed because the process of chewing is so painful. The pus that is eaten destroys the appetite and the child is naturally, as you say, "fussy" about his eating.

I am not surprised, with all this as a background, that your child is underweight. You are not surprised, with this as a background, that your child continues to be undernourished and in this condition; we both know that your child has a lowered resistance to disease. With this lowered resistance he is in splendid shape to contract any and every disease in the catalogue.

We have written you at some length because we know your desire to correct this condition, and we have written you with the hope that we will cause you to consult a good physician and a good dentist in order that you may be properly advised after a thorough physical examination of your child.
Diphtheria Prevention In Robeson

By E. R. Hardin, M.D., County Health Officer

The County Health Department began its immunization campaign against diphtheria with the long-time preventive (toxin-antitoxin) in January, 1925. Schick testing was done the following year. Since January 1, 1925, the Health Department has completed the diphtheria preventive (toxin-antitoxin or toxoid) for 11,723 children. A little over 31 per cent or 3,675 of these children were six months to school age; the others were school children, mostly first and second grades. You will observe that this is an average of 1,300 children given the diphtheria preventive each year for the last nine years. The average will run a little higher when 1933 is completed.

Schick testing was begun in 1926, and 6,927 school children and teachers have been Schick tested for diphtheria susceptibility since that time.

In 1920 160 cases of diphtheria were reported to the Health Department. In 1923, 1924, and 1925 an average of 98 cases of diphtheria were reported each year. In 1930, 1931, and 1932 an average of 71 cases were reported each year. Only 31 cases of diphtheria were reported in the county last year.

From the above figures it will be observed that there has been a great reduction in the number of cases of diphtheria in the county since the immunization work began. No deaths were reported from diphtheria last year. This record is very encouraging, but it could be considerably improved if all parents would have their babies immunized as soon as they were six months old. The protection is simple, it causes little or no discomfort, and gives adequate protection to most children for a period of years, and some of them a lifetime. If you have children six months to school age, have your doctor give them the diphtheria preventive at once. The diphtheria season is here and it takes some time for the serum to give the necessary protection.—Lumberton Robesonian.

Change of Address

We want to request that when any of the readers of THE BULLETIN notify us of a change of address that they always state the old address as well as the new one, so that the change may be promptly and properly made.

Noted Men On Conservation of Life and Health

It may well be claimed that the care of individual and family health is the first and most patriotic duty of a citizen.—President Taft.

Public health is the foundation on which reposes the happiness of the people and the power of a country. The care of the public health is the first duty of a statesman.—Disraeli, English Prime Minister.

To me, the tragedy of this earth is a diseased child. The natural inheritance of a child is joy and freedom and growth and freedom. He is robbed of it all by disease. To me, the most tragic indictment of civilization is a diseased child.—Dr. J. Y. Joyner.

Nothing can be more important to a state than its public health.—President Franklin D. Roosevelt.

We say that human life is priceless. Yet statistics indicate that in North Carolina we are losing, yea, needlessly wasting thousands of precious human lives every year, together with the efficiency, the earning capacity, and the real joy of living for tens of thousands of others. All this is preventable. Much of it is easily preventable.—Governor Bickett.

Let's Reduce the Infant and Maternal Death Rate in North Carolina