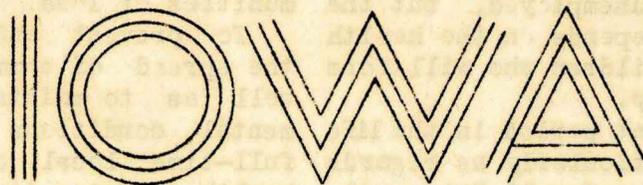


PUBLIC HEALTH SUPPLEMENT



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EDUCATION ESSENTIAL TO HEALTH

State Department's Program Aims at Reaching Every Community
With Information on How to Keep Well

By Walter L. Bierring, M. D., Commissioner
Iowa State Department of Health
Member of Iowa State Planning Board

It has become a trite saying that the "care of the sick" is the best index of an advancing civilization. The remarkable development of the modern hospital and the achievements of medical science have made it possible for curative medicine to preserve individual health to the highest degree.

In the same measure the extension of public health and preventive medicine in maintaining the health of communities and the state serves as a further criterion of social progress in a modern society.

To meet this challenge, the Iowa State Department of Health has inaugurated a well defined plan and policy that incorporates:

1. To make the people of Iowa "public health conscious."
2. To promote in every community some form of public health activity.
3. To coordinate all the forces -- the doctor, the hygienist, all the governmental and voluntary agencies -- in a common cause to make Iowa a healthier and happier place in which to live.

While an efficient central organization as regards personnel and operating facilities is essential, the real duty and responsibility of a State Department of Health cannot be fulfilled unless its efforts are so decentralized as to reach every community.

The first essential in every public health program is to educate the people to a fuller appreciation of the benefits and purposes of a modern public health service. In such a program, the radio, silent and talking films, public press, trained lecturers and official publications have been most helpful.

Of greater significance in arousing public interest has been the active cooperation of voluntary agencies such as the Federated Women's Clubs, Farm Bureau Women, Congress of Parents and Teachers, American Legion Auxiliary, and others in association with professional leadership of medical, dental, nursing and veterinary medical organizations.

Modern society is greatly concerned with the welfare of the aged, the de-

pendent and the unemployed, but the life of any state depends on the health and vigor of its children who will form its future citizenry.

The most important period in the life of every child, particularly as regards its future health and well being, is during the pre-school years. Often by the time the child reaches school age, the results of defective development, faulty nutrition, and the disabling effects of early tuberculosis and the acute infectious diseases cannot be as easily controlled as in the pre-school period.

This is the age period when protective measures, particularly in diphtheria and smallpox, are most effective. The most promising community program is one carried out continuously for a five-year period. As children are vaccinated against smallpox, immunized for diphtheria, during the ages of nine months to two years, and a group of children immunized each year as they reach these ages, in the course of a five-year program the entire pre-school population will be protected against these two diseases by the time the children are ready to enter school life.

It is reasonable to expect that such a community protective program would soon make these two childhood infections of rare occurrence.

There is a good prospect that within the near future scarlet fever, measles and mumps will be classed among the preventable diseases.

In such programs as the foregoing, the public health nurse can be of valuable assistance to the physicians and the community in accomplishing the best results.

The health of a community is dependent to a large extent on the sanitary environment, in which a safe public water and milk supply, proper disposal of animal and human waste, with proper housing, are the most important factors. In this connection, the Division of Public Health Engineering with its corps of trained sanitary engineers can render most helpful service to the com-

munities of Iowa.

To prevent and control effectively the spread of communicable diseases as well as to maintain sanitary environmental conditions require an organized full-time local or community public health service in the form of a county unit, or a group of counties constituting a health district.

Such an organized service includes a medical director, public health nurse and sanitary engineer, each being specially trained in public health work.

The organization of local health services is progressing very satisfactorily. Four county health services have been established, two health districts of six counties each are operating, one in southern Iowa in the Chariton Basin and the other in the northwestern part of the state, as well as 12 counties to be grouped in two additional health districts.

Thus, nearly one-third of the counties in Iowa have the benefit of local trained public health workers. The expense is shared equally by local and state funds, the latter being derived from allotments of the U. S. Public Health Service for the special training of public health personnel at the Universities of Minnesota, Michigan, Johns Hopkins and Harvard. This ensures properly trained public health workers for future service in this state.

Several statewide public health programs have been inaugurated by the Department during the past year.

Tuberculosis Program

While the incidence and mortality of tuberculosis has been greatly reduced in Iowa during the past 25 years, largely through the efforts of a voluntary organization, the Iowa State Tuberculosis Association, there are still many cases that go unrecognized, particularly in the early stages of the disease.

Since July 1, 1937, a cooperative tuberculosis control service has been in operation. This service has been supported jointly by the State Department of Health and the Iowa State Tuberculosis Association.

The purpose of this program is to find those persons who have been in close contact with a patient who has recently died of tuberculosis. After the contacts have been established by the public health nurse in cooperation with the physicians in the county of community concerned, a tuberculin diagnostic test is made. Those who react positively are examined further by the x-ray to determine the extent of the disease process in the lungs, if any.

Individuals who show signs of the disease in the lungs are referred to the attending physicians for appropriate treatment.

This program is now operating in 35 counties with six or seven more in prospect.

One of the results already evident is the marked increase in reporting cases of tuberculosis. Formerly, we were largely dependent on those appearing in the morbidity reports.

Syphilis Campaign

The objectives of every syphilis control program are:

1. To find syphilis mainly through the dragnet of special laboratory blood tests.
2. To treat adequately infected persons, so that they will not transmit the disease to others, and to prevent disabling results of incomplete treatment.
3. To teach the public all the facts about syphilis.

The State Department of Health has endeavored to follow these precepts in inaugurating the Iowa program, made possible by the following provisions:

The last Legislature appropriated the necessary funds to establish:

1. Statewide free laboratory diagnostic service at the State Hygienic Laboratory of the State Department of

Health at Iowa City, and funds were further provided through Federal allotments for:

2. Statewide free distribution of anti-syphilitic drugs to physicians reporting positive laboratory tests.

Pneumonia Program

A majority of the cases of acute pneumonia occurring in Iowa are due to a special germ, the pneumococcus. The pneumococcus is present in about 28 different types, for one-third of which

there is now available a specific serum for treatment. It is confidently expected that a specific serum will be developed for all types within the next year. About one-half of the cases of pneumonia in this state are due to Types 1 and 2, for which there is a specific serum.

In order to facilitate prompt diagnosis of pneumonia, the State Department of Health has established 125 typing stations throughout the state in approved hospitals and laboratories so that the spu-

tum from suspected pneumonia patients can be promptly examined in order to determine the type of pneumococcus causing the infection.

At present, funds have been provided to furnish therapeutic or curative serum to a limited number of indigent patients. It is hoped that this fund can be greatly enlarged in the coming year.

Industrial Hygiene

A special division and laboratory has been established for the purpose of determining the extent of potential and actual industrial hazards in this state and their influence in producing disease conditions.

This remarkable extension of public health activities in Iowa during the

(Cont'd on Page 9A)

OUR CONTRIBUTION

Iowa Planning News takes pleasure in presenting with this issue a Public Health Supplement in which are described briefly the many duties and functions of the Iowa State Department of Health. It is certain that many who will read these pages will be surprised at the many and varied programs sponsored by this division of the State Government in the interests of the public health. Is it dreaming to imagine what a paradise of health this state could be if all of these programs could reach their fullest expression in every county and community?

COMMUNITIES BATTLE EPIDEMICS

Local Whole-Time Health Services Organized to Prevent Spreading of Communicable Diseases and Safeguard Population

By Marvin F. Haygood, M.D., C.P.H.
Deputy Commissioner
Director of Local Health Services

It is easy to understand how a fire felt by the people of the whole community, state or nation. The care of the afflicted, -- wreck-built-up section, is potentially dangerous to all who live in the area. The care of the afflicted, -- wreck-built-up section, is potentially dangerous to all who live in the area. disease or injury -- is often made the

So it is with ill health, particularly if the cause spreads easily. Smallpox, tuberculosis, influenza, typhoid fever, acute anterior poliomyelitis (infantile paralysis), scarlet fever, Rocky Mountain spotted fever, syphilis, gonorrhoea, infectious diarrhoea, dysentery, certain types of pneumonia, diphtheria, oral spirochetosis, whooping cough, as well as several other conditions are menaces, either actual or potential, to the whole community in which they develop and gain any momentum.

Even though yellow fever, cholera and the plague have almost or entirely forsaken our

shores, we cannot be certain that a return visit will not some day occur.

Among the other diseases that cause physical or mental disability or both are cancer, rheumatism, infirmities of the aged, certain types of insanity, and feeble-mindedness which may not be transmitted by means of specific germs, but can and often do produce poverty and other malign influences that are

COMPARISON OF VALUES

In order to make more effective its resistance to loss of life and property by fire, New York City has changed its Fire Department from a two to a three-platoon system. This change, we are told, cost the taxpayers more than the entire budget of its very efficient City Health Department. Many cases of sickness, like many fires, start from pure carelessness or neglect of apparently minor hazards. Epidemics of contagion may not spread as swiftly as conflagrations, but have so many times in history proved as deadly, perhaps more so, leaving human devastation as stark and desolate as the ruins of an uncontrolled fire. Why not protect against disease as adequately as we protect against fire?

responsibility of the whole people who make their contributions either through compulsory or voluntary means. To avoid this expense and the concomitant suffering, worry and grief, it appears just as logical definitely to organize for the purpose of preventing disease as to insure against conflagrations and to conduct fire prevention campaigns.

The prevention of specified diseases, even those that are capable of being transmitted from one person to another, has required much investigation, research and effort. In some instances, the public may feel that there is just cause for impatience

and criticism, especially as pertains to such conditions as influenza and the common cold. However, much work is being done on these as well as many other perplexing problems, and we are led to believe that eventually measures of control will be developed.

What seems to be of the very greatest importance to the people is the application of the knowledge already

gained concerning the reduction of sickness and deaths from those conditions which, beyond doubt, are susceptible to control measures.

We are sure that there are already available ample facts pertaining to the cause, means of spread, portal of entry and effective methods of prevention of many of the infectious diseases, which if properly and adequately applied would almost or altogether emancipate millions of our people from the bondage of their devastating influences.

Among diseases that have retreated from or have been virtually annihilated by public health measures are yellow fever, Asiatic cholera, plague, smallpox, typhoid fever, and in many sec-

ed? For such endeavors, are the American people able to pay the bills?

These are reasonable questions, and should be answered fully, insofar as possible, by those who are privileged to serve in the field of public health.

The writer will attempt to offer some information touching these matters, for example:

1. Professional personnel, trained and experienced in the science and art of disease prevention are essential

2. Organization of such personnel into efficiently operating mechanisms is prerequisite to the delivery of effective service.

3. The guidance and control of the work of such organizations by govern-

DEATH IS AN UNNECESSARY VISITOR IN MANY HOMES

tions, diphtheria, Tuberculosis seems to be on its way out. The sectors held by syphilis and gonorrhoea are now being attacked with renewed vigor and their lines of offense have already broken in certain places.

There are, however, many of these formidable enemies which seem not to be much influenced by the ineffective use of our present day weapons. The casualties caused by cancer, pneumonia, dental caries, rheumatoid arthritis, sinusitis, asthma, diabetes and a host of others are still to be dealt with in a more scientific and determined way. Pregnancy, childbearing and infant life are as yet fraught with considerable hazard.

Accidents in the home, usually the result of carelessness, cause each year more than 38,000 fatalities; and we are told that the annual accident bill which we are called upon to pay totals \$3,700,000,000.

What can be done to make health more secure? How can the span of life be extended, and the joy of living increas-

ment or some other responsible agency of the people is indispensable.

4. The activities of these governmental or other responsible agencies must not be directed toward replacement of, nor interference with the legitimate, ethical, modern and indispensable treatment service usually available through the two great professions of medicine and dentistry.

5. Units of service must be established sufficiently close to the people as to be of maximum benefit at a minimum of cost.

6. Political influence must be held to a minimum, or still better, kept out entirely.

Not until 19 years ago were there any definite plans looking to specific training of physicians, engineers or nurses in the science and technique of disease prevention. Through a grant from the Rockefeller Foundation, the Johns Hopkins School of Hygiene and Public Health was opened in October 1918. Since then, of course, many other schools of public health have been es-

ANNUAL AVERAGE DEATHS PER 100,000 POPULATION
FOR IOWA AND THE UNITED STATES REGISTRATION AREA BY PERIODS
AND FROM SPECIFIED CAUSES
1920 to 1936

Annual Average Mortality Rates by Periods								
Causes of Death	1920-1924		1925-1929		1930-1934		1935-1936	
	Iowa	U. S. Reg. Area						
Typhoid Fever	3.8	7.5	2.4	5.8	1.5	4.0	1.4	2.8
Measles	4.7	7.3	2.9	4.5	2.4	3.1	2.9	3.1
Scarlet Fever	5.2	4.0	2.0	2.3	2.1	2.0	3.1	2.1
Whooping Cough	6.9	9.0	4.5	6.9	3.1	4.5	1.7	3.7
Diphtheria	10.0	13.8	3.8	7.4	2.0	4.3	1.6	3.1
Pneumonia	90.0	106.2	67.9	93.6	68.2	78.0	80.9	87.5
Diarrhea & Enteritis	*	44.7	11.3	32.9	12.5	22.1	9.4	16.0
Tuberculosis	47.7	98.4	36.8	82.0	28.9	63.7	25.1	55.0
Cancer	98.1	86.9	108.8	95.1	120.7	101.3	131.4	107.9
Diabetes	18.7	17.0	18.9	18.0	23.3	20.9	23.4	22.2
Heart Disease	138.4	167.1	167.0	199.9	205.0	223.5	243.4	245.1
Accidents	60.0	72.6	62.9	79.1	77.1	76.6	76.0	78.4

*Statistics Not Available

tablished, and a few that were already making some effort in this direction have broadened the scope of their service. Today we have in the field many well trained professional people constantly on the "firing line," and several hundred others preparing for duty.

Before these facilities were available, protective measures against the spread of scarlet fever, measles, diphtheria, typhoid fever, whooping cough, tuberculosis, syphilis, gonorrhoea and the like really amounted to nothing.

Today, we are rapidly emerging from an apathetic and uninformed state of mind, and have learned how to bring under control many of these death-dealing enemies. It is most gratifying to know that the force of mortality from some of the diseases which were exceedingly prevalent a few decades ago have already retreated to a position far back of the fronts they formerly occupied.

In Iowa, typhoid fever is only about one-third, whooping cough one-fourth, and diphtheria one-eighth as prevalent as they were in 1920. (See chart)

However, the picture as regards several of the non-communicable conditions is not so encouraging. The trend of the curve of mortality of some of these is actually upward. For example, during the past 14 years the incidence of cancer mortality has increased 33%, diseases of the heart by nearly 75%, and accident fatalities 26.7%. From certain other causes the rate remained relatively stationary.

So it appears, even from these meager data, that there still remains much to be desired. Sicknes still strikes altogether too often and death is an unnecessary visitor to many homes. What will we do about it? These are some of the answers:

1. It is necessary for each of us, so far as feasible, to define clearly not only what the problems are, but how they can be most expeditiously and economically solved.

2. Having this understanding, it becomes necessary to plan and organize our defensive forces so as effectively

to repulse the enemy.

3. Federal and state public health organizations, while essential, are too far removed from the people to render the detailed continuous and expeditious service required in the promotion and protection of the public health. Therefore, some type of local organization is necessary.

4. The geographical and population units to be included in local health jurisdictions vary somewhat with (a) the density and character of the population, (b) the health problems of the area, and (c) economic conditions.

In Iowa, it appears that for the more densely populated areas the county is the unit of choice, especially if the population thereof is 40,000 or over. In sparsely inhabited regions, and particularly where the health hazards are less than ordinarily found in congested sections, two or more counties may be combined to form a health district. The population embraced probably should not exceed 100,000.

The minimum personnel for a health unit consists of a medical director, public health nurse, sanitary engineer and clerk. In addition, the district organization includes at least one public health nurse for each county embraced.

The district or county health unit functions as a miniature state health agency. Most of the services offered by the state are performed through the activities of the local unit personnel.

Problems ordinarily encountered and which the district and county health units attempt to solve are:

1. Acute and chronic communicable diseases such as scarlet fever, diphtheria, whooping cough, measles, acute anterior poliomyelitis, syphilis, gonorrhoea, tuberculosis, tularemia, Rocky Mountain spotted fever, typhoid fever, brucellosis, diarrhea and dysentery. Later and when it becomes economically and otherwise feasible, such conditions as pneumonia, influenza, the common cold, cancer and diabetes may be included.

2. Insanitation of the environment, water, milk and other foods. In some localities the atmosphere is apparently becoming dangerously polluted, particularly from the results of incomplete combustion of certain hydrocarbons used for fuel. Improper disposal of industrial and domestic wastes in many of our built-up areas is a definite menace to health. Lack of treatment or sanitary disposal of sewage is a very sizable problem for thousands of rural homes and schools. Likewise, many of our village and rural dwellers encounter much difficulty in their efforts to obtain a safe water supply for home and school. Because of the ineffective sanitary control of market milk, village, town and city residents are probably not consuming nearly the quantity of this, one of the very best of all foods, as they really should. By the same token, the producers are not able to realize an unrestrained demand for their commodities. Defective heating and lighting facilities in many homes, schools and shops are contributing to ill health.

3. Lack of health information still ranks high as one of the problems even of more civilized and otherwise enlightened people. There is always, particularly in a democracy, a considerable lag between the discovery of vital facts and their delivery to the major portion of the population. Many of our practices or habits tend to demote health. I refer particularly to uncontrolled coughing, sneezing, spitting, mouth-to-mouth kissing and other acts which facilitate the admission of secretions from the oral cavity or respiratory tract, to the same cavities or tracts of other persons. Where such is allowed to go unchallenged, one is persuaded to believe that the people as a whole do not realize the real import of the hazards produced through such practices. Much has been learned during the past several years regarding the kind of food best suited to the needs of various types of people, the well, the sick, the young, middle-aged and

senile. The public is in great need of a larger measure of this kind of information.

4. Dental ill health is the most prevalent disease of man. Even a young adult, with 32 sound teeth and healthy oral cavity, is a rather rare specimen. As age advances, the maladies which have their origin in the mouth are multiplied in quantity and severity.

5. Undiscovered pathoses such as tuberculosis, cancer, diabetes and certain other maladies capable of producing or accentuating the seriousness of the degenerative diseases of the heart, kidney and blood vessels, are of considerable moment. The causes that ultimately result in arthritis, neuritis, rheumatism and other rheumatoid conditions become increasingly important as people become senile. The fact that altogether too few seek medical advice for what they consider trivial ailments sometimes and probably often means that they will suffer severely from their later results.

6. The high incidence of maternal and infant mortality is still a serious challenge to our civilization.

The Health Department attempts to act in the interest of and by the authority of the people. It must not try to usurp the power or the privilege which justly belongs to parents, teachers, physicians or dentists. It should never use dictatorial methods, but should operate according to rules, regulations and law.

It has for its purpose the better organization of the community for more orderly enforcement of legal scientific measures directed toward the prevention of the spread of contagion. It points the way to more nearly complete sanitation. It strives to enlighten the public in matters pertaining to the means, practices and habits that lead to a healthier, and therefore, the more abundant physical, mental, economical and, may I say, cultural life. The well organized and logically functioning health department is probably just as essential to the community as the po-

lice, the sheriff, the jail, the courthouse and possibly the school.

Just how the medical director, the public health nurse and the sanitary engineer operate, their detailed duties, what and how much can be expected of them could not be detailed in a brief paper. However, may I say that where such departments have been established, trained personnel employed, politics not allowed to interfere, and an equitable budget provided, it appears that the people, including the taxpayer who must always be considered, have enjoyed attractive dividends on their investments.

How much does it cost?

This varies from a few cents to around \$2 per capita. How much we can afford to invest in public health is very difficult, perhaps impossible to answer. For some things of much less value we are already paying many times more.

Charles Sclomon, in his new book "Traffic in Health," states that the American people are spending \$360,000,000 annually for patent nostras and proprietary remedies. This is slightly more than \$2.75 per capita!

If Iowans are making their pro rata contribution to this folly, we are in this state spending each year more than \$6,792,000 for this purpose, while the total appropriation to your State Department of Health is only \$115,000 per annum. That is to say, for each dollar we invest in health through the official state health agency, we spend a little more than \$59 for these so-called "remedies," many of which are of questionable worth.

It is my personal opinion that the people of this state could very profitably invest one dollar per capita in the maintenance of a proficient and continuing health service. Ordinarily it is found that in rural sections an expenditure of half this amount will provide for an effective local health administration. Probably 50% of this should come from state and federal sources, leaving the small sum of 25¢

per person as the local financial responsibility. Until all of the available funds are obligated, the State Department of Health will assist counties or districts on an even more liberal basis than this.

As the years go by, I think we can understand more and more clearly that ill health is uselessly claiming many of our loved ones, neighbors and friends. That we can and should, to the maximum extent possible, stop this terrible economic, social and vital waste is no longer a debatable question.

If we as a state and as a nation want to make this contribution toward the more abundant life for ourselves, our community and our posterity, we have even now a splendid opportunity.

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EDUCATION ESSENTIAL TO HEALTH

(Cont'd from Page 3A)

brief period of a few years has been made possible largely through Federal allotment of funds by the U. S. Public Health Service and the Children's Bureau under the provisions of the Social Security Act.

These grants are allotted to Iowa on the basis of approved budgets, being deposited with the State Treasurer after which they are expended in the same manner as other state appropriations.

Definite planning in public health that will be of incalculable benefit to all parts of Iowa is now possible. There is also reason to expect that these efforts will arouse a local community responsibility to still further ensure the permanency and stability of this movement, and thus conserve the greatest of national resources, the health of our people.

* * * * *

Every day between 300 and 700 blood tests for syphilis are made at the Hygienic Laboratories of the State Department of Health. They are expected to reach an all-time high for the current fiscal year ending in July.

CHILD HEALTH SURVEY PLANNED

Annual May Day Observance to Mark Start of Investigations of Community Needs and Programs

By Alma E. Hartz, R. N.
State May Day Chairman

Again this year Iowa communities will observe May Day (May 1) as Child Health Day.

Children will celebrate the day with demonstrations, plays and games depicting the health needs of their generation and progress made during the year in the protection of their health and the health of the communities in which they live. Parents will meet on or near Child Health Day to study community health needs and devise plans for the coming year.

But more than this, May 1 will serve as the opening day for taking a survey designed to disclose special needs of Iowa communities in relation to health work among children.

May Day officials conducting the survey feel that in each community there are one or more specific problems

which should be attacked. The goal of the program is to find these problems and point out means of solving them.

As many as possible of the organizations in the state which sponsor yearly child health programs will receive copies of the survey procedure. When the information requested has been obtained May Day officials will draw up a dual outline showing community needs and suggestions for filling them.

A few of the questions included in the survey are:

What volunteer groups in your community are active in child health work?

Is the cooperation of the County Medical Society sought in formulating

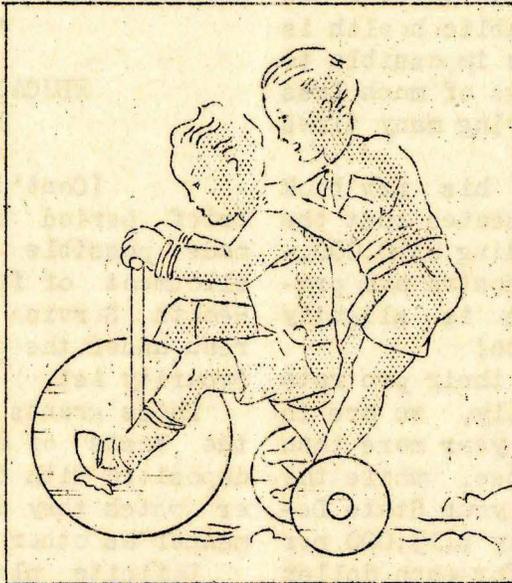
and conducting local health programs?

How many children have health examinations before entering school?

To what percentage of the population is the public water supply available?

What is being done to prevent needless accidents in homes and schools?

The aim of Child Health Day, which is sponsored nationally by the Children's Bureau of the U. S. Department of Labor is to have every community make full use of its resources in order to insure to children safe birth, normal growth and protection against disease and accident in their progress from infancy to maturity.



of its resources in order to insure to children safe birth, normal growth and protection against disease and accident in their progress from infancy to maturity.

To achieve this aim, the Children's Bureau has suggested a three-point program which May Day officials in Iowa believe will be fulfilled in this state.

The program includes (1) review of local child health activities, (2) planning for the extension and improvement of child health programs, and (3) presentation of special child health needs requiring the attention of parents and others in the community.

Supplementary observances of May Day this year will be held on April 30 and May 2, as May 1 falls on Sunday.

The slogan for the day is "Speed Children on the Road to Health."

May Day officials hope that the survey and the subsequent outline will provide the impetus for "speed on the road to health" in Iowa.

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SCIENCE GAINING IN DISEASE WAR

Pneumonia Serum Saves Lives; Progress Made Along Other Fronts, Notably with Diphtheria

By Carl F. Jordan, M.D., C.P.H.
Director, Division of Preventable Diseases

As the result of modern scientific discovery, one after another of the communicable or infectious diseases is frequently added to the list of diseases which are definitely preventable or curable.

Pneumonia, the dreaded disease which took the lives of 1,745 Iowans in 1937, is destined to cause a much smaller number of deaths as modern control measures are applied. Deaths from this cause have been markedly decreased, notably in Massachusetts and New York where adequate funds have made it possible to conduct an aggressive campaign against pneumonia, the foremost of acute infectious diseases.

Thirty odd members of the pneumococcus family of germs cause most of the cases of pneumonia. By means of immune serum prepared from rabbits, it is now possible to identify the type of pneumonia from which the patient is suffering. The method of testing the patient's sputum to establish the diagnosis is called the Neufeld method. Hospitals and laboratories in more than 100 localities in Iowa are equipped to do the work necessary to aid in the diagnosis of pneumonia. Immune serum for the typing of pneumonia germs is supplied to laboratories by the State Department of Health.

Experience with thousands of pneumonia patients in eastern states has shown that curative serum greatly lessens the fatalities. The Iowa State Department of Health has very limited funds with which to supply curative serum without cost for the indigent or underprivileged patient. The attending physician reports the case to the State Department of Health and states whether

the patient is suffering from Type I, Type II or other types of pneumonia. Curative serum has been made available for many underprivileged patients in Iowa during the past few months.

The demand for this serum is certain to increase greatly when it becomes generally known that curative serum saves lives. Many patients are unable to bear the additional cost of serum. In view of this fact, and because the serum when used early and in adequate amount exerts such a profound effect in leading to recovery, there is urgent need that the department have sufficient funds to supply curative serum as the chief means of saving the lives of a great many patients.

All reports of the various communicable diseases, including tuberculosis and venereal infections, are forwarded from all parts of the state to the Department of Health. Complete reporting of communicable diseases constitutes a primary measure in effective control and prevention. Reported cases are tabulated by days, weeks, months, years.

Such records make it possible to determine when a particular disease is developing undue prevalence. The records also enable forecasts to be made of epidemics of measles, scarlet fever and infantile paralysis, so that control measures may be instituted without delay.

In 1935, the Iowa State Department of Health began the distribution of convalescent serum as a means of combatting measles and scarlet fever. In February 1937, convalescent or human immune serum began to be processed in and distributed from the department's own serum center in Des Moines.

Convalescent serum, obtained from persons who have recently recovered from scarlet fever, is now known to be of great value in the prevention of scarlet fever and in lessening the danger of serious complications.

Similarly, convalescent measles serum, when administered during the days immediately following known exposure, will prevent an attack of measles or (preferably) modify the course of the disease in such a way as to render serious complications unlikely. The serum center also prepares and distributes infantile paralysis serum, which when given early and in adequate amount, may prevent or arrest the actual development of paralysis.

Bleeding clinics are arranged and held in larger centers of the state during seasons of undue prevalence of diseases such as scarlet fever, measles and infantile paralysis. Paid donors contribute small amounts of blood for convalescent serum. The demand for convalescent serum on the part of physicians and hospitals is increasing rapidly and the activities of the serum center play an essential part in communicable disease control.

Activities directed against syphilis and gonorrhoea are described elsewhere in this supplement.

The part played by the State Hygienic Laboratory of the Iowa State Department of Health in the task of finding syphilis can scarcely be over-emphasized. The appropriation set aside by the last Legislature to provide free blood tests represents a significant forward step. A great many cases of syphilis are found for the first time as a direct result of blood tests performed routinely on all expectant mothers, patients and others in hospitals, institutions and industries, student groups and individuals prior to marriage. The continued success of unceasing efforts against syphilis is directly dependent upon adequate financial support of the work of the public health laboratory.

Special measures for preventing the spread of tuberculosis are also narrat-

ed elsewhere in this supplement.

Tuberculin for use in performing the skin test for evidence of tuberculosis infection is forwarded each week from the serum center to many physicians and nurses throughout the state.

Special effort is made to discover and control the sources of infection of reported cases of typhoid fever, undulant (Malta) fever and other diseases. Case records are obtained of cases of pneumonia, infantile paralysis, epidemic encephalitis and Rocky Mountain spotted fever, a disease which has been reported in Iowa each summer since 1933.

Investigation is made of outbreaks of epidemic disease on request of local health officials. Control measures are instituted with the purpose of preventing recurrence of epidemics of similar nature. Milk-borne outbreaks of typhoid fever, gastroenteritis, scarlet fever and septic sore throat stress the importance of surrounding our public milk supplies with every safeguard known to modern science.

During 1937, deaths from diphtheria in Iowa numbered 11, representing an all time record in reduction of fatalities from diphtheria in this state.

No disease is more readily preventable than smallpox. In spite of this fact, more than 50,000 cases of this loathsome disease were reported in the fair state of Iowa for the 30-year period 1908-1937. Deaths from smallpox for the same period totaled 207. There is need for aggressive action with emphasis on successful vaccination and revaccination as the only effective means of eradicating smallpox.

Complete reporting of communicable diseases, careful investigation of individual cases, discovery and supervision of disease carriers, satisfactory control measures, improvement of milk supplies and sanitation, --- these and other factors essential to disease prevention are greatly dependent upon adequate local health organization, preferably on a district and countywide basis.

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HEALTH ENGINEERING EXPANDING

Technical Principles Applied to Control of Environments
Which Affect General Public Welfare

By A. H. Wieters, Director
Division of Public Health Engineering
Secretary of Iowa State Planning Board

Public health engineering in its broadest sense may be defined as the application of engineering principles to the control of environment insofar as environment affects public health. While as a specialty in the engineering field public health engineering is still in its infancy, already the scope of work is so varied that specialization within public health engineering is taking place.

As long as 50 years ago, engineers played a conspicuous part in the reduction of death rates from certain diseases, notably the so-called water-borne diseases. Particularly excellent work was done by the staff of the old Lawrence Experiment Station of the Massachusetts Board of Health which was a forerunner to the establishment of engineering divisions in other State Departments of Health, although it was not until some years later that the first of such divisions was actually established.

At the present time, all states have engineering divisions in their health departments, most of which are of some years standing. In Iowa, the division was first established in 1915 with a single part time engineer. The division has operated continuously since then.

Prior to the recent expansion, the engineering division had confined its

activities largely to supervision of public and semi-public water supplies, sewerage and sewage disposal, swimming pools and stream pollution.

In regard to public water supplies, sewerage and sewage disposal, the supervision includes approval of plans

for new construction and reconstruction and the general supervision of maintenance and operation. With 560 public water supplies and 242 sewage treatment plants in the state, this in itself is a sizeable task for the personnel of the central division.

Studies of stream pollution, including the routine bacteriological and chemical analyses of samples over long periods, have been made on major streams of the state. As a result, 42 new sewage treatment plants have been built within the past five years, many

of them in the larger cities.

Routine inspections with special reference to water supply, sewage and garbage disposal are made in all state institutions, county institutions, boys' and girls' recreation camps, CCC camps and state parks, and recommendations for improvement made to the governing authority.

Swimming pool plans are reviewed and approved, and field inspections of maintenance and operation are made.

THE HEALTH ENGINEER

The functions of the public health engineer, while probably little understood by the general public, are gaining increasing significance as results become apparent. We are coming to realize that fire prevention is as important as fire protection. Likewise, it is as important that disease-breeding environments be eliminated as to have adequate facilities available when one becomes ill. Correcting environmental health hazards falls definitely within the province of the engineering profession, and Mr. Wieters in his article has ably described the service performed by the public health engineer.

The Housing Law and Plumbing Code are enforced mainly by local officials, but the general supervision of such matters rests in the division.

Hundreds of nuisance complaints are received, all of which are referred to local authorities, although many of them must be investigated by the division due to local apathy or requests for assistance and advice on the part of local officials.

During the past 18 months, the department, through the engineering division, has sponsored and supervised a W.P.A. Community Sanitation program under which sanitary pit privies are being built in several counties, the property owners furnishing the material and W.P.A. furnishing the labor. Some 6,000 of these units have been built.

The division has cooperated by furnishing information to numerous federal agencies, notably the National Resources Committee, State Planning Board, Civilian Conservation Corps, Public Works Administration, Works Progress Administration, Farm Security Administration and Emergency Conservation Work. The federal works agencies require that all plans involving sanitation be approved by the department, which has greatly increased its work.

With the impetus of federal aid for state and local health work under the Social Security Act, a great expansion in public health activities, particularly in the establishment of whole time local health services, is taking place. In this expansion, public health engineering plays a prominent part.

Since the Social Security Act places stress on the development of local health services, only two new engineering projects have been initiated in the central division of the State Department of Health, namely, industrial hygiene and milk sanitation.

Detailed descriptions of these two projects are presented in other articles in this supplement.

Until comparatively recently, the engineering division has confined its activities principally to municipali-

ties, and with the small staff available much of this work has not been as thorough as desirable. Little time has been available for sanitation work in rural areas where also no local facilities are available.

With the advent of the Social Security program, a start has been made toward decentralizing the services of the division with the aim of improving services previously available and of inaugurating new services not previously possible because of lack of personnel.

This program is explained in another article in this supplement.

There are other phases of environmental sanitation which challenge the engineer's interest, but which up to the present time have not been given much attention by health departments largely because funds have not been available.

The control of food supplies, including the production, transportation, preservation, refrigeration and handling of raw food products and the processing of foods, all require special knowledge in sanitation.

With the disclosures of the past few years and epidemics traceable to faulty plumbing, extensive changes in the design of plumbing layouts and fixtures are imperative. Surveys and correctional work in existing plumbing must be undertaken to safeguard an otherwise satisfactory water supply after it enters a building.

Faulty housing has long been known to affect the health of occupants, but to date little has been accomplished to provide decent housing for low salaried groups. Water supply, sewerage, plumbing, ventilation, heating and lighting are involved in proper housing and are public health engineering problems.

Many advances in public health engineering practice were made before the scientific reason for such practices was known. For example, the filtering of water was known to lessen the prevalence of typhoid fever and Asiatic cholera before the germ theory of disease was advanced.

Today engineers are giving attention to noise abatement as a public health measure, although the exact physiological effects of noise are as yet undetermined except that noise is decidedly unpleasant.

Modern ventilation and air conditioning as practiced today are based more on physical comfort than on the physiological considerations of former years, most of which have been proved fallacious.

Smoke abatement is receiving serious attention as a public health measure, although no specific diseases have been traced to smoky atmospheres.

No case has been proved against obnoxious odors, yet for many years control of such odors has been considered a function of health agencies.

Past experience has taught health workers to be cautious about minimizing the health significance of objectionable environmental conditions which have not been proved to be responsible for specific conditions of disease. More and more health workers are using as a criterion physical comfort in matters of environmental control where such environmental conditions have not been proved to be specifically injurious, yet definitely cause physical discomfort.

Other factors of environment which might affect public health could be cited, but the above will suffice to indicate the broad scope of the problem and the present day trend. Modern civilization with the attendant congestion in large population centers has accentuated these problems, and without the application of modern sanitary practices for the control of environment such modern civilization would not be possible. As this congestion increases, so do the problems increase, and solutions to new problems and better solutions to partially solved problems are in constant demand.

Just as in the medical and nursing professions, public health engineering

is a special branch of engineering demanding special treatment insofar as technical training and experience are concerned. With the demand for such engineers occurring simultaneously from all states due to the expansion occasioned by the Social Security legislation, experienced and competent trained personnel was not available for the new program.

Sponsors of the legislation, recognizing this, made provision for special training of health personnel. Under the program, nine graduate engineers have received special public health training, making it possible to fill all positions in the Iowa central office and in the district and county offices with well trained personnel.

With funds at present available, the entire state cannot be covered with district and county organizations. The aim for the future will be to expand the program until complete coverage is accomplished.

It should be recognized that even when the state is completely districted, adequate control of environmental sanitation will not have been accomplished. The larger cities can afford to have milk inspectors, food inspectors, plumbing inspectors, housing inspectors, etc., whereas in the smaller communities finances will not permit nor would the volume of work warrant the employment of such inspectors.

Nevertheless, clean food and safe milk, sanitary plumbing, good housing, etc., are just as important in such communities as in the cities. Obviously one engineer in six or more counties cannot be expected to carry out these routine inspections in such an area, and a possible solution would be to place a sanitary inspector, or sanitarian, in each county to look after these matters in all of the small communities which do not and cannot control them locally.

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BIRTH RECORDS VALUABLE

Parents Should Protect Children With Registration; 8,000 Persons Born Prior to 1921 Sought Data on Fact Last Year

By Margaret C. Solum
Acting Director, Division of Vital Statistics

More than 8,000 persons in Iowa last year learned the importance of birth registration.

These persons were born previous to July 1, 1921. But the records of their births were not filed with the State Department of Health. In 1937, they discovered, in some cases almost too late, that proper registration of birth can be both a time and money saver.

Some of these persons were prospective pensioners who had to show proof of age before they could be allowed pensions. Others had to present official birth records to insurance companies before they could take out insurance. A few desired their birth records for passports. The fact of birth was needed by many for inheritance of property and insurance settlement.

Others wanted records for different purposes, but all were compelled to approach the Vital Statistics Division last year seeking their birth certificates. Until last year, they had probably never given thought to the possibility that some day they would need their records. Then the time came, they were unprepared and experienced difficulty in obtaining the required information, though records in the division date back as far as 1880.

It was necessary for each of these persons to fill out a special affidavit for recording their births. The affidavit in each case had to be signed by one or the other of the person's parents, or if the parents were dead, by the physician who attended the birth or by other persons knowing the facts.

Not always was it possible to find a person who could give the proper information. Occasionally, the facts were sought in the family Bible. Or census

records were dug out which would show proof of birth. All had trouble meeting the requirements, and one was unable to do so. Today, he does not have the job which required his record of birth.

Had the births of these persons been recorded by their parents at the proper time, shortly after birth, the inconvenience and uncertainty of filing affidavits would not have arisen. Their records would have been on file and available at hardly more than a moment's notice.

For a fee of 50¢, the Division of Vital Statistics will search records of birth which occurred before July 1, 1924. This fee also covers the cost of a certified copy of the birth record if it is on file. The affidavit is furnished when the birth is unrecorded, and the 50¢ fee includes the cost of a certified copy if the affidavit is immediately returned to the division.

Notification of registration is supplied without cost for properly recorded births which occurred after July 1, 1924. The necessary blank for filing will be sent to the parents when the birth is not on record.

Registration of a child's birth is the responsibility of its parents. Some day the child will need his birth record, and he has only his parents to blame if he cannot obtain a certificate when the time comes.

Registration is necessary for many other purposes than those listed above. The fact of birth is required to prove parentage, for inheritance of property, for settlement of insurance and for establishing identity. Date of birth must be proved for entrance to school, first work permit, for right to vote, for

(Cont'd on Page 23A)

MATERNITY EDUCATION PROGRAM

Current Iowa Plan Offers Valuable Assistance in Informing
People on Child Health Problems

By John M. Hayek, M.D., Acting Director
Division of Child Health and Health Education

The current Iowa plan for maternal and child health services provides for a statewide program of health education for the laity through activities providing impersonal, personal and repeated contacts.

It permits the presentation of information to the medical, nursing and teaching professions, hand in hand with instruction of the laity.

It enables the Department of Health, after approval by the local medical society, to assist with the organization and conduct of prevention programs against definitely preventable diseases in county and local communities.

It makes possible a study of home and hospital delivery services and provides in a single typically rural county for a demonstration of the need for and the value of medical care and supervision begun early and continued throughout the expectant period.

The activities in the interest of the education of the laity comprise impersonal contacts through publications of various kinds, public lectures and other health education mediums such as radio, talks, exhibits and posters.

Representatives of the division are available to speak to organizations and clubs on such subjects as the activities of the State Department of Health, immunization against disease and kindred subjects.

Any organizations desiring to obtain the speaking services of a representative of the department should mail a request to the Director, Division of Child Health and Health Education, Iowa State Department of Health, Des Moines, well in advance of the speaking date. This service is available without cost.

Lecturers to discuss medical care and other health topics are available through the speakers bureau of the Iowa State Medical Society, Des Moines.

The public health education program embraces seven phases, discussed in the following paragraphs:

1. Classes in Motherhood.

The department conducts classes in motherhood with the approval of the county medical society concerned. Public health nurses from the state staff who have had special training in the maternal and child health aspects of public health nursing do the teaching, or in those counties having a full time county public health nurse, they give her such assistance as is needed in teaching these classes.

They present information on the subjects of the hygiene of pregnancy, the beginning signs of abnormality, the layette, preparation for home confinement, care of the infant after birth and kindred topics. Insofar as possible class work will be largely demonstrational in character. Mothers will be given an opportunity to confer with trained public health leaders. These classes will be open to all women.

2. Education of the Professions.

The speakers bureau of the Iowa State Medical Society offers "refresher" courses in obstetrics and pediatrics for physicians and teachers institutes under the supervision of the state health agency.

Lecturers and instructors in the "refresher" courses include obstetricians and pediatricians on the staffs of the Department of Obstetrics and Pediatrics, College of Medicine, State University of Iowa, and other obstet-

ricians and pediatricians of repute who may be named by the several consultants and the speakers bureau committee and approved by the state health agency.

Courses probably will be offered to medical practitioners in each of the 11 districts in Iowa designated by the State Medical Society as councilor districts. They are open to all physicians licensed to practice obstetrics and pediatrics, and are given without cost to individual practitioners.

3. Communicable Disease Preventive Services.

Knowing that diphtheria and smallpox can be prevented by protective agents of proven value, every effort is made to encourage widespread use of these agents toward the eradication of those diseases. Authoritative information is presented by radio, newspapers, talks, posters and literature for free distribution.

Any school, community or countywide diphtheria or smallpox immunization program having the approval of the County Medical Society receives the full cooperation of the department. These programs are aided by the State Department of Health which furnishes free immunizing agents, Schick Test material, literature, certificates of immunity and record cards; assists in the preparation of publicity material, and provides a public health nurse to assist in the publicity and organization of workers to canvass families with susceptible children:

4. Study of Home and Hospital Delivery Services.

The obstetrical consultant of the division is supervising a countywide study of home and hospital delivery services.

5. Maternity Demonstration Service.

An arrangement has been made with the Washington County Medical Society whereby all of the medical practitioners in the county doing obstetrical work agree to give medical care and supervision to all expectant mothers of the indigent and borderline cases. This

service is given in the offices of the participating physicians without cost to the family. The family is responsible for providing delivery care except in the case of indigents. The latter receive delivery care under the contract for medical care of indigents which the County Board of Supervisors has with the County Medical Society.

The division has placed two of its maternal and child health nurses in the county to have charge of the administration of the demonstration. These nurses (a) make home visits to expectant mothers being cared for and instructed under this plan; (b) they organize and conduct classes in motherhood according to policies adopted by the state health agency; (c) they give home delivery nursing service and postpartum nursing care to mothers certified by the County Social Welfare office.

6. Extension and Improvement of Maternal and Child Health Services by Local Health Units.

Improvement of local maternal and child health services is made possible by assisting in the establishment and development of district or county health units or the establishment of a generalized public health nursing service by County Boards of Supervisors.

7. Maternity Institutes.

The plan provides for the organization and conduct of maternity institutes for both registered and public health nurses.

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Iowa's 1937 Death Toll

Despite the wide publicity given to accident fatalities and the mounting public concern over highway accidents, heart disease in 1937 took the lives of 5,978 persons in Iowa, while automobile accidents accounted for only 613 deaths. Cancer was second in the list of causes of death in Iowa during 1937, accounting for 3,352 deaths. A total of 26,492 deaths from all causes during 1937 was reported by Margaret C. Solum, Acting Director of the Division of Vital Statistics, State Department of Health.

NURSES GUARD FAMILY HEALTH

Public Nursing Service Bears Large Responsibility in Carrying Out Community Disease Prevention Programs

By Edith S. Countryman, R.N.
 Director, Division of Public Health Nursing

In order to keep pace with continual changes and developments in the public health movement, the functions of the public health nurse have changed and enlarged considerably.

The general information which follows gives an understanding of the public health nurse's duties in each specialized field. The suggestions are carried out by all nurses whose services are subsidized by state funds.

Public health nursing includes all nursing services organized by a community or an agency to aid in carrying out all phases of the public health program. Service may be given on an individual, family or community basis in home, school, business establishment or agency office.

It is the responsibility of the public health nurse to assist in analyzing health problems and related social problems of families and individuals; to help them, with the aid of community resources, to formulate an acceptable plan for the protection and promotion of their own health, and to encourage them to carry out the plan.

The public health nurse:

1. Helps to obtain early medical diagnosis and treatment for the sick.
2. Renders or obtains nursing care of the sick; teaches through demonstra-

tion, and supervises care given by relatives and attendants.

3. Assists the family to carry out medical, sanitary and social procedures for the prevention of disease and the promotion of health.

4. Helps to obtain adjustment of social conditions which affect health.

5. Influences the community to develop public health facilities through participating in appropriate channels of community education for the promotion of a sound, adequate community health program; shares in community action leading to betterment of health conditions.

All the functions of the public health nurse together form a well-rounded public health nursing program. If one service is carried on as a separate activity, it needs to be in close relationship with other phases of public health nursing. In practice, it

is impossible to separate one type of nursing service from others which may be needed in a particular family. Hence, in the interest of efficiency and economy, there is a trend toward having all the functions performed by one nurse in a limited area.

The public health nurse's functions in relation to specific phases of the community health program are listed as follows:

THE PEACE TIME NURSE

The glory of the War Nurse and the Red Cross Nurse who serve under fire or under conditions of extreme hazard, ministering to the wounded and injured in times of war or major disaster, has long been sung. Whoever reads this discussion of the functions and duties of the peace time public health nurse, whose work is so little known and so devoid of glamor and excitement, will, it is hoped, acquire an appreciation for this very important service to humanity. These functions and duties are described herein with considerable detail in order that a greater appreciation for this program may be gained.

Maternity Programs

In maternity programs, the nurse:

1. Gets in touch with prospective mothers and assists in obtaining medical and dental examination and supervision early in pregnancy and throughout the antepartum period.
2. Assists in planning and preparing for confinement and in obtaining a postpartum medical examination.
3. Gives or arranges for nursing care throughout the maternity cycle, including assistance at home confinements and care to mother and baby during the postpartum period.
4. Teaches through demonstration and supervises care given by relatives, attendants and midwives.
5. Helps the family to carry out specific medical advice as to maternal hygiene and infant care.
6. Participates in promoting adequate resources for maternity care through utilizing appropriate channels of community education.

Infant, Pre-School Programs

In infant and pre-school health programs, the nurse:

1. Assists in obtaining complete birth registration.
2. Assists in obtaining medical supervision, dental examination and correction of defects for every child.
3. Gives or arranges for nursing care for sick children, teaches through demonstration, and supervises care given by relatives and attendants.
4. Assists in the control of communicable diseases through teaching the recognition of early symptoms, the importance of isolation and the value of immunization.
5. Participates in programs for the prevention of handicaps and the care and education of handicapped children.
6. Assists the family to carry out general and specific medical advice concerning proper feeding, with emphasis on the technique of breast feeding.
7. Assists the family to carry out general and specific medical instruction concerning hygiene and the daily routine of the child including instruc-

tion of parents in the desirability of early establishment of sound health habits.

School Programs

In school health programs, the nurse:

1. Participates in formulating and developing a health education program based on the needs of the pupils.
2. Assists physicians in the examination of pupils and the interpretation of findings to teachers, parents and children.
3. Teaches the value of adequate health supervision and facilities for medical and nursing care and assists in obtaining correction of defects.
4. Inspects pupils and instructs teachers, parents and pupils to observe and recognize deviations from normal health.
5. Assists in the control of communicable diseases through teaching the recognition of early symptoms, the importance of isolation and the value of immunization.
6. Promotes the maintenance of a healthful school environment, physical, emotional and social.
7. Arranges for the care of emergency and minor injuries and illnesses in accordance with medical standing orders.
8. Participates in a program for the prevention of handicaps and the care and education of handicapped children.
9. Develops relationships to coordinate school nursing activities with all other health forces of school, home and community, and to promote community health resources.
10. Participates in curriculum making; nurses who are qualified may instruct classes in principles of healthful living and care of the sick.

Industrial Programs

In industrial programs, the nurse:

1. Assists the physician with medical examinations of employes.
2. Gives or provides for first aid under medical direction, and also for necessary subsequent care to sick or injured employes.
3. Teaches personal hygiene and the prevention of disease to individuals

and groups of employes.

4. Assists employes in obtaining correction of defects.

5. Coordinates service with the industrial relations program by (a) assisting the safety department in interpretation of its program, (b) keeping adequate medical and health records of all cases including compensation cases, (c) offering consultation service to the manager of the lunchroom, (d) interpreting the plant sanitation program to employes, (e) assisting in developing recreational facilities, and (f) making available to various departments appropriate data in nursing records.

6. Coordinates service with other health and social services in the community through (a) obtaining necessary health and social service for the employe and his family in their home, and (b) developing working relations with the health department and other community agencies and obtaining their participation in promoting health within the plant.

Adult Health Programs

In adult health programs, the nurse:

1. Encourages periodic health examinations.

2. Teaches the fundamentals of personal hygiene in order to assist in the prevention and retardation of those diseases peculiar to adult life.

3. Assists in obtaining early diagnosis and treatment of those diseases.

Communicable Diseases

In communicable disease programs, the nurse:

1. Promotes the complete reporting of reportable cases.

2. Teaches the need of medical care and assists the family to obtain it.

3. Gives or arranges for necessary nursing care; teaches through demonstration, and supervises care given by relatives and attendants.

4. Assists the family to carry out isolation and general and specific medical instructions.

5. Interprets health department procedure to individuals and groups.

6. Assists under authority of the

health department in making epidemiological investigations.

7. Instructs parents, teachers and other individuals and groups (a) to recognize early symptoms and isolate suspicious cases, (b) to carry out proper precautions to prevent spread of infection, and (c) to appreciate the importance of adequate convalescent care.

8. Helps under medical direction to obtain specific immunization of all infants and pre-school children and of other age groups as needed.

Tuberculosis Control

In tuberculosis control programs, the nurse:

1. Assists in finding cases and contacts and obtaining medical examination and supervision.

2. Assists under authority of the health department in making epidemiological investigations.

3. Assists in obtaining reporting of all cases.

4. Gives or arranges for necessary nursing care; teaches through demonstration, and supervises care given by relatives and attendants.

5. Helps to arrange for sanatorium and post-sanatorium care and rehabilitation of patient when indicated.

6. Teaches patient and family the importance of personal hygiene and the precautions to be taken to prevent the spread of infection.

7. Helps patient and family to maintain a mental and social adjustment toward a long term communicable disease.

8. Helps to educate the public concerning unmet needs of the community for the prevention, control and care of tuberculosis.

9. Assists in integrating services of clinics, sanatoria, private physicians, health departments and other related health and social agencies.

Veneral Diseases

In syphilis and gonorrhoea campaigns, the nurse:

1. Assists in finding cases and contacts and in obtaining medical examination and supervision.

2. Assists under authority of the

health department in making epidemiological investigations.

3. Promotes the reporting of cases.
4. Gives or arranges for necessary nursing care; teaches through demonstration, and supervises care given by relatives or attendants.
5. Spurs continued treatment through assisting patient to follow prescribed routines, and cooperates with the medical social worker.
6. Teaches patient and family the importance of personal hygiene and the precautions to be taken to prevent the spread of infection.
7. Teaches scientific facts concerning these diseases to individuals and groups to help eliminate traditional stigmas.

Non-Communicable Diseases

In non-communicable disease programs, the nurse:

1. Assists in obtaining early medical diagnosis and treatment.
2. Gives or arranges for necessary nursing care; teaches through demonstration, and supervises care given by relatives and attendants.
3. Assists in obtaining special care for patients having special types of disability, such as orthopedic, arthritic and cardiac conditions, diabetes and cancer.
4. Assists in obtaining convalescent care and rehabilitation of patient.
5. Observes and assists in adjustment of health situations in homes of patients; teaches general hygiene and prevention of disease; puts the family in touch with community resources.

Orthopedic Service

The orthopedic service belongs logically under the general heading of non-communicable disease, but is given a separate heading for emphasis at this time when work for crippled children is receiving special attention from the U.S. Children's Bureau. In this service, the nurse:

1. Assists in finding orthopedic cases.
2. Observes and helps others to recognize and eliminate environmental conditions or habits which might produce postural or other orthopedic defects.

3. Observes and helps eliminate conditions for bed patients which may cause contractures, foot drop or spinal curvature.

4. Observes and teaches others to recognize signs of orthopedic defects and helps to obtain medical diagnosis and supervision.
5. Gives or arranges for necessary nursing care; teaches through demonstration and supervises care given by relatives and attendants.
6. Gives or obtains skilled physiotherapy treatment under medical direction to prevent deformities and bring about maximum return of power to muscles and joints. (Only nurses who are properly qualified physiotherapists should give such treatments.)
7. Teaches patient and family the importance of self-reliance on the part of crippled person, promoted by encouraging independence in daily routine and interest in useful occupation.

Vital Statistics

In vital statistics recording, the nurse:

1. Teaches, as a part of antepartum care, the value of birth registration and the importance of accurate statements on birth certificates; makes certain births are registered before closing maternity cases.
2. Cooperates with the registrar by reporting names of newborn babies known to the nurse in places where birth reporting is poor.
3. Reports stillbirths or deaths of infants that live but a short time and are buried without usual formalities.
4. Assists with morbidity and mortality studies useful in determining needs and formulating programs.

Sanitation Programs

In sanitation programs, the nurse:

1. Ascertains source of water supply and means of excreta disposal in homes visited. (If in doubt as to the safety of these, refers them to public health

engineer for investigation.)

2. Teaches the importance of correcting unsatisfactory conditions and methods of immediate protection pending their correction.

3. Observes both the ventilation and screening in homes visited and teaches the importance of screens where insects prevail.

4. Inquires concerning the course of the milk supply; teaches standards and the importance of sanitary methods of milk production and handling.

Common Factors

Some factors are common to all phases of the community nursing program. Efficient work in any service depends upon the understanding and use of such principles and techniques as mental hygiene, nutrition, records and reports and medical standing orders.

Mental hygiene principles enable the nurse:

1. To make more productive all contacts with families and individuals.

2. To be aware of the variations in human behavior and their significance.

3. To use intelligently the mental health resources of the community.

Knowledge of factors contributing to good nutrition enables the nurse:

1. To use the resources of the community contributing to good nutrition.

2. To instruct the family concerning the relationship of nutrition to health and to normal growth and development.

3. To assist the family to adapt nutrition information to its own economic and social situations.

4. To recognize signs of poor nutrition and their contributing conditions.

Accurate records and reports enable the nurse:

1. To give more continuous and efficient service to the patient.

2. To prepare reports to physicians and cooperating agencies concerning conditions found.

3. To help in evaluating services and in planning programs.

4. To utilize information obtained from vital statistics in order to evaluate the health program and activities

to the needs of the community.

5. To interpret the health service to the community.

Medical approval for nursing procedure should be obtained from:

1. A medical group designated by the agency.

2. The individual physician.

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BIRTH RECORDS VALUABLE

(Cont'd from Page 16A)

right to marry, for settlement of pensions and for other purposes. Proof of place of birth is necessary for passports, emigration and immigration, and for establishing citizenship.

In respect to birth certificates, some parents seem to forget that the baby of today is the citizen of tomorrow and that he is going to face new and difficult problems as he grows into manhood and assumes his place in the community in which he lives. His home may be far from the place of his birth, and situations may arise in which it is an absolute necessity to give proof of age and citizenship.

This is a simple matter if a birth certificate is on file in the office of the State Department of Health of his native state. Whenever necessary, he may easily obtain a certified copy of that record which is legal proof of age, parentage and citizenship in any state or country.

* * * * *

"The improvement or maintenance of health is, or should be, a day-in, day-out endeavor, and we are approaching a time when it will be so considered by all schools. Health has already been called the First Objective of education. However, to date, we have often done those things we should not have done, and we have left undone those things we should have done; our health conditions are sometimes faulty and our health activities inadequate. Where this is the case, May Day serves as a time for good resolutions and for a fresh start." --- J. W. Studensker, U. S. Commissioner of Education.

STATE STUDIES MILK SANITATION

Health Department Adds Engineering Service to Aid in
Raising Dairy Production Standards

By Robert B. McAllister
Milk Sanitarian

State control of milk sanitation is now a function of the State Department of Agriculture. Because of their many duties, the small number of inspectors have been unable to devote sufficient time adequately to control milk sanitation. Municipalities also have the power to control milk sanitation, but little has been done there except in a few large cities.

Through Social Security funds, the State Department of Health is employing a public health engineer with special training in milk sanitation. He has been engaged in making fact-finding surveys in some 24 cities and towns. In these surveys, farms and plants are scored in accordance with the U. S. Public Health Service Standard Milk Ordinance and the milk supply of each city has been given a rating. Reports on the findings are presented to the city councils with recommendations for improvement of the milk supply.

Three Iowa cities have adopted the Standard Milk Ordinance and several others are contemplating its adoption. Unsafe milk today remains one of the biggest problems in environmental sanitation, as evidenced by the results of these surveys and also by the serious milk-borne epidemics which have occurred during the past several years.

Most dairymen are interested in producing and distributing to the consumers a good, clean, safe milk. They realize that it is to their advantage to do so.

There are still some, however, who refuse to carry out consistently the necessary steps to produce good milk. The dairymen in this group usually give the excuse that the process is impractical, foolish and unnecessary.

It is logical that a dairy should be thought of as a kitchen, because it is

there that a very important food is prepared for human consumption. For the reason that milk is a food, the consumer has the right to expect that it should be produced and handled in a place of kitchen-like cleanliness.

The question is often asked:

"What diseases are we trying to keep out by a program of milk control?"

There are two groups of these diseases. In the first group are those which come from diseased cattle and include tuberculosis, Bang's disease (undulant fever) and mastitis. The veterinarian is the best person to find and control these diseases.

In the second group come the diseases of human origin. These may be subdivided into two groups, namely, intestinal and respiratory diseases. From the human intestine come the bacteria causing typhoid fever, paratyphoid, dysentery and diarrhea. Bacteria ejected from the nose and throat cause scarlet fever, septic sore throat and diphtheria. Milk may carry the bacteria causing these diseases.

During the decade 1928-1937, there were in Iowa 15 epidemics traceable to infected milk because disease producing bacteria were introduced into milk.

After gaining entrance into milk, these bacteria find it to be a good growing medium. A short time after the infected supply has been distributed, the State Department of Health begins to receive reports of an unusually large number of cases of communicable disease in that locality. When this condition is noted, an investigation by the Department is made in an attempt to find the cause of the epidemic.

If the results of such an investigation show that a certain milk supply is the cause, the offending dairy is usu-

(Cont'd on Page 30A)

INDUSTRIAL UNIT ESTABLISHED

New State Hygiene Program Financed Partly by Federal
Social Security Funds

By Paul J. Houser
Industrial Hygiene Engineer

Industrial hygiene relates to the health hazards found in industry. An industrial hygiene program includes a study of the workroom environment and the application of principles toward the control of occupational diseases.

Health hazards of industrial environments may be grouped under 12 convenient headings, as follows:

1. Exposure to toxic or irritating dusts, gases, vapors, fumes and mists.
2. Handling of poisonous or infectious liquids or solids.
3. Exposure to excessive heat, cold or humidity.
4. Unsafe water supplies.
5. Insanitary washing and toilet facilities.
6. Exposure to excessive noise.
7. Excessive atmospheric pressures, as in caisson work.
8. Unnecessary fatigue.
9. Inadequate medical supervision and treatment of injuries.
10. Poor illumination.
11. Exposure to abnormal spectral conditions as the ultra violet and infra-red light rays.
12. Abnormal methods causing friction, pressure or strain resulting in injury.

An occupational disease is any affliction which is the result of exposure to an industrial health hazard. These may be classified as:

1. The so-called specific or characteristic occupational diseases such as lead poisoning, silicosis, metal fume fever (brass foundryman's ague), "machinists boils," tar cancer, benzol poisoning, etc.
2. Diseases, partly occupational, or those afflictions which may be promoted

by hazards existing both in and out of industry; for example, allergic asthma, allergic dermatitis, tuberculosis, etc., are no more than partly occupational in nature since they can be contracted both in and out of industrial environment. Then, too, there are other afflictions which may be aggravated by industrial health hazards, such as intestinal ulcer aggravated by heat cramp, pyorrhea by lead or benzol poisoning, etc. The elimination of common health hazards would prevent, or at least forestall the development of such afflictions.

3. Occupational health complaints. These are pre-disease conditions, such as headache, sleeplessness, dyspepsia, pain, numbness, stiffness, cough, etc. Being only symptoms and not in themselves true diseases, the complaints serve as a guide in improving the working environment.

4. Conditions which are neither diseases nor complaints but which may be advanced by one's occupation. Examples: postural defects, such as flat feet and round shoulders, or faulty work habits such as constant nodding of the head in rhythm with motions of the hands.

In Iowa, according to the 1930 census, there are more than 167,000 persons classed as gainful workers in the manufacturing, mechanical and mineral industries. Statistical studies have shown that health hazards are present in these industries. These studies have further shown that the life expectancy of the industrial worker is several years less than a worker otherwise engaged. Also, the incidence of tuberculosis, pneumonia and the degenerative diseases is increased materially among

industrial workers, causing an increase in the mortality and morbidity rates of the general population.

In the light of these facts, a Division of Industrial Hygiene was established as a unit of the State Department of Health in July 1937. Financing was made possible primarily through the Social Security Act and partly by allocation of state funds.

The basic principle of the division is one of service to industry. It is believed that while matters of health in industrial establishments are primarily the concern of the employer and employe, a complete program for the control of occupational diseases cannot be undertaken by industry itself. While a few of the larger establishments with proper laboratory facilities and technical personnel have accomplished much in improving the environment of their workers, most plants do not have the facilities or the personnel and are thus hindered in any improvement program which they may wish to adopt.

Industry is not a health department and it is not to be expected that it assumes the attributes of a health department. Industry conserves and increases the monetary assets of the state; health agencies, the human assets. The state has a definite function to perform in protecting the health of its people which cannot be allocated to any other agency.

Occupational disease control is a public health problem of the first magnitude requiring for its solution the cooperation of industry, the medical profession and public health agencies.

Any program for the control of occupational diseases must include:

1. A preliminary survey for determining the magnitude of the problem and where best to concentrate further efforts.

2. Reporting and investigation of occupational disease cases.

3. A comprehensive knowledge of the effects upon health of materials and processes used in industry.

4. Physical and chemical studies of

industrial environments.

5. Laboratory facilities to aid in making these studies.

The work of the division at this time is two-fold. First, the entire state is being covered by preliminary surveys in the industrial centers, and second, special investigations of potential hazards are conducted in cooperation with the State Department of Labor and other interested organizations.

The surveys entail a visit to certain industrial plants chosen by random sampling from a complete list of all industries classified according to articles produced, and obtaining a list of all employes according to their occupation. Raw materials handled and by-products of each process are observed and recorded. Likewise, control measures for prevention of toxic or obnoxious dusts, gases, vapors, fumes, mists or liquids are observed and recorded.

The surveys also include recording data relative to safety and medical provisions, such as the type of safety program in force and the medical care provided to sick and injured employes.

Special investigations include the collection of samples of polluted atmospheres or materials, analysis for specific toxic ingredients, a study of the process involved and recommendations for improving the working environment of any hazardous occupations.

Obviously, the success or failure of any program pertaining to industrial hygiene depends upon the number of contacts with industry where potential hazards exist. The preliminary surveys will show which occupations are particularly hazardous and will point out the processes which warrant further investigation.

However, the greatest strides can be made through those persons who have been afflicted by an occupational disease or who are working under hazardous conditions.

There is no one better qualified to call attention to occupational disease cases than the industrial physician or

nurse, or the practicing physician who comes in contact with these cases. Thus the medical profession can be of great service to the department and indirectly to industry by reporting known or suspected cases of occupational diseases or health hazards known to exist.

These reports will enable the division personnel to investigate the working environment and to call industry's attention to conditions which may be disclosed to be hazardous. This system of reporting should be regarded as equal in importance to the reports on communicable diseases which are mandatory in all states of the union, and which have assisted materially in reducing the incidence of communicable diseases in the past. A similar reporting system on occupational diseases will accomplish just as much in reducing the incidence of these diseases.

To persons interested in planning, this matter should be of particular interest as it presents an opportunity for obtaining legislation requiring reports on occupational diseases to be submitted to the State Department of Health. Some states already have such laws. In others, the industrial hygiene division has access to occupational disease compensation reports which indicate where health hazards exist.

In Iowa, occupational diseases are not compensable, hence, some other informative source should be available to the division so that investigations can be made where they will do the most good. A system whereby occupational disease cases are reported to the department will best serve this purpose.

Regardless of the passage of such legislation, however, the department solicits the cooperation of every practicing and industrial physician in the state in its program of industrial hygiene and asks that all cases of occupational disease be reported so that existing conditions can be investigated and improvements made where necessary.

Haven Emerson, in his presidential address at a meeting of the American Public Health Association, said:

"We surround the babe unborn with premonitory protection, deal wisely and gently with infancy and childhood, and then hurl the product of a reasonably healthy youth into a maelstrom of blind chances of dusts, fumes and fatigues which wear down the stoutest body and cripple the most willing worker."

At that same meeting a resolution was passed declaring that:

"Unhealthy occupational environment constitutes an important and widespread cause of increased morbidity and mortality among the large group of wage earners and among the general population.

"RESOLVED, that it is a function of the Department of Health to include as an integral part of a complete public health program the protection of the population against health hazards resulting from unhealthy working environment... and recommends to each State Department of Health of an industrial state the establishment of a bureau or division of occupational diseases or industrial hygiene under the supervision of a physician trained in public health and industrial hygiene, with adequate technical and laboratory facilities and personnel, empowered to make investigations of working environment, for the control of industrial health hazards and the prevention of occupational diseases."

Iowa is one of the greatest agricultural states in the union. Yet, 18% of the gainful workers are engaged in mechanical, manufacturing and mineral industries. Certainly these people are entitled to every consideration that can be given toward maintaining a healthy working environment for them. Let industry, the medical profession and the Department of Health cooperate in making our industrial group as healthy as the others.

ANTI-SYPHILIS DRIVE GOES ON

Public Enlightenment and Pursuit of Sources of Infection
Most Effective Means of Eradication

By James P. Sharon, M.D.
Director of Venereal Disease Control

Dr. Thomas Parran, Surgeon General of the United States, created a great commotion in July 1936 by the public announcement that syphilis was the greatest, most pressing public health problem. A program for the control of this disease was inaugurated in the fall and winter of that year.

Early in 1937, the Iowa State Department of Health, with the help of the U. S. Public Health Service, outlined a program which was intended primarily to have the following objectives:

1. To determine as nearly as possible the actual number of cases of syphilis and gonorrhoea in Iowa. This would of course be the main objective from the standpoint of public health because it would be impossible to devise methods of controlling these serious menaces to public health unless we were first able to establish a base line of its prevalence. In order to obtain this information, it was found necessary to:

- (a) First educate the public to the necessity of consulting a physician at once when there is any reason to suspect the possibility of infection.

- (b) Enlist the cooperation of physicians to report every known case.

- (c) Inform the general public that syphilis and gonorrhoea are communicable but controllable public health menaces.

2. To make treatment available to all regardless of social or economic status.

3. To disseminate information as to the desirability of good health, clean living and the compatibility of continence and good health.

In order to attain these ideals, the first step was to obtain a state appropriation so that blood tests to determine the presence of syphilis could be performed without charge to the physician. Previously, a physician sending a

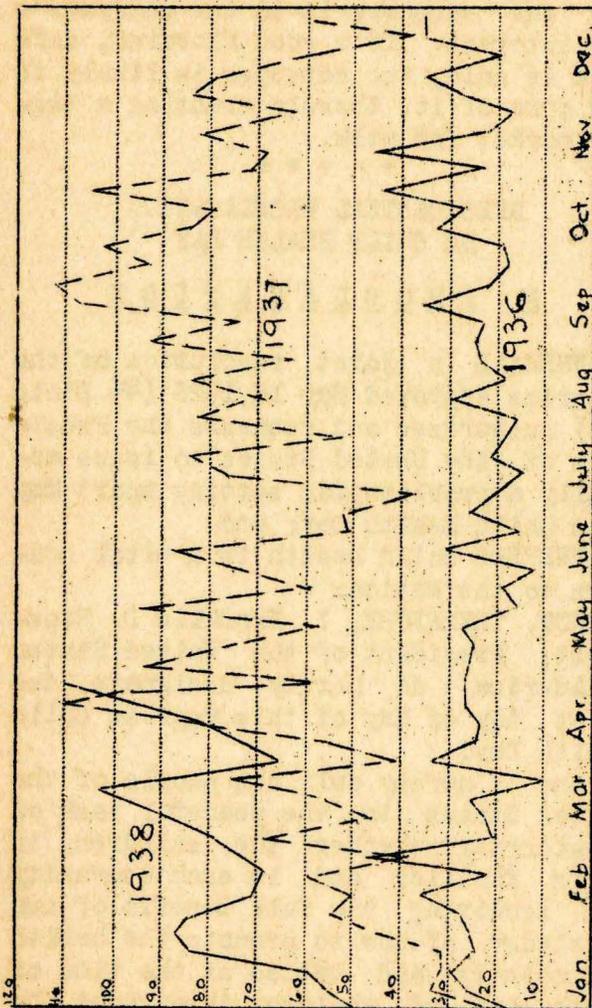
specimen of blood to a laboratory had to include cash with order. This meant that unless the physician had a strong reason to suspect syphilis, he was not inclined to have the blood tested, notwithstanding the fact that more than 50% of all cases of syphilis show no actual signs or symptoms. Blood tests can now be performed at a relatively low cost to the patient whereas formerly it was customary to charge from \$3 to \$5.

In former years, it was customary for a physician to charge not less than \$5 and sometimes as high as \$15 for one injection of a drug known as arsphenamine into the veins of a person afflicted with syphilis. The State Department of Health has made it possible for anti-syphilitic drugs to be delivered to the doctors of the state upon reporting a case of syphilis, so that now the physician charges only for actual administration of the drug instead of including the cost of the drug.

The next important step considered by the State Department of Health was the epidemiology of syphilis. In other words, to find out whenever possible where a person thus afflicted had contracted the disease and whenever possible to place this "source of infection" under treatment. When a child was found afflicted with congenital syphilis, steps had to be taken to determine if other children in the family and the parents should receive treatment.

When physicians reported patients as having lapsed treatment, steps had to be taken to get these patients to return to their physicians.

All of the above features of the program necessitated increasing the staff of the State Department of Health and last August the writer was placed in charge of Venereal Disease Control, with Miss Janet Fordyce, R.N., as as-



The above chart shows the definite gains achieved in obtaining reporting of syphilis in Iowa through the educational campaign described by Dr. Sharon in this article.

Assistant in epidemiological work. This work is carried on under the general supervision of Dr. Carl F. Jordan, Director of the Division of Preventable Diseases.

As a result, there were 3,627 cases of syphilis reported in 1937 as compared to 1,295 reported in 1936; 2,742 cases of gonorrhoea were reported in 1937 as compared to 1,786 reported in 1936. This does not mean that there are more cases of syphilis and gonorrhoea, but it does mean that more cases were brought to the physicians through the educational program. (See chart)

Named probable sources of infection investigated for 1937 totaled 375, of which 65.8% were examined. Two-thirds of those examined were found to be infectious; 238 lapsed cases were contacted and 26.8% were returned to their physicians for treatment.

In 1937, 2,719 consignments of anti-syphilitic drug costing the State of Iowa approximately \$3 each (or about \$9,000) were sent to physicians to help in the eradication of this disease.

* * * * *

TUBERCULOSIS CLINICS LOCATE LURKING CASES

Somewhere in Iowa every 10 days to two weeks, a clinic is held for the purpose of finding tuberculosis cases. In one instance recently, 76 persons in one county known to be in contact with the disease were x-rayed.

This case-finding program is designed primarily for rural counties of 30,000 population or less. Iowa is the only state thus far in which the State Department of Health has joined in a cooperative effort with a lay organization, the Iowa State Tuberculosis Association, in such a case-finding program. Approval of the County Medical Society is obtained in each case before a clinic is held.

The national death rate for tuberculosis has receded from 200 deaths per 100,000 population in 1900, to 55 per 100,000 in 1936. In Iowa, there were 605 deaths from tuberculosis in 1936, or at the rate of 23 per 100,000, among the lowest in the United States.

* * * * *

WHOSE BABY?

"When you see a boy running around with a pair of pants on -- or without them, for that matter -- it is pretty good proof that he's been born. But it don't prove when, where at, nor who to!" --- Will Rogers.

"A birth certificate is a baby's first citizenship papers." - North Carolina State Board of Health.

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STATE STUDIES MILK
SANITATION

(Cont'd from Page 24A)

ally put out of business by the lack of confidence in it on the part of the consuming public. For this reason it pays all dairymen to guard against such a condition.

The milk inspector is ordinarily considered a police officer, but his police power should be used only as a last resort. Dairymen should think of the inspector as a helper and friend to whom they may go when in difficulty.

Of course, if a dairy operator refuses to comply with the requirements of the milk ordinance, the inspector will have to use his police power. But it is believed that if he wins the confidence of the dairymen, this power will rarely be needed. For this reason, general opinion is changing the name of the enforcement officer from "milk inspector" to "milk sanitarian."

Few people realize the amount of hard work, extreme care, cleanliness and attention to minute detail which are involved in the production of a clean, wholesome, safe milk supply.

This goes all the way back to clean, healthy cows, and all the scientific knowledge employed to keep them so.

There are a thousand and one little details to be watched in the daily routine of milking, handling the milk and protecting it from a host of health enemies until its final delivery to the home where babies, children and adults consume it as the most important food in the daily diet.

Space here does not permit the enumeration of all these steps in the process, nor of recounting the daily habits and precautions which the dairyman and all his helpers must exercise.

Could every milk consumer realize what all this requires, there would be a far greater appreciation for the efforts made by honest and conscientious dairy operators to protect those whose lives, literally, are in their hands.

The full process of production and distribution to insure safe, good milk

for the consumer is in the dairyman's own interest. If a good flavored, safe milk is sold, the consumer is likely to use more of it, thereby creating a bigger market for milk.

* * * * *

PRESIDENTIAL PROCLAMATION
ON CHILD HEALTH DAY

A P R O C L A M A T I O N

WHEREAS a joint resolution of the Congress approved May 18, 1928 (45 Stat. 617) authorizes and requests the President of the United States to issue annually a proclamation setting apart May 1 as Child Health Day; and

WHEREAS child health is a vital concern to the Nation:

NOW, THEREFORE, I, Franklin D. Roosevelt, President of the United States of America, do hereby designate the first day of May of this year as Child Health Day.

And I hereby call the people of the United States to the peaceful task of considering whether the children in their families and in each community are receiving the full benefit of our knowledge of how to promote the health of mothers and babies at the time of birth and of children throughout the period of growth and development, and ask them to plan how the child health work of our public and private agencies can be extended and made more effective. I also call upon the children to celebrate the gains they have made during the year in health and strength and to do their part in the year-around effort to promote the health of the Nation.

IN WITNESS WHEREOF I have hereunto set my hand and caused the seal of the United States to be affixed.

DONE at the City of Washington this 4th day of April in the year of our Lord nineteen hundred and thirty-eight, and of the Independence of the United States of America the one hundred and sixty-second.

Franklin D. Roosevelt

By the President:

Cordell Hull
Secretary of State

I O W A S T A T E
D E P A R T M E N T O F H E A L T H

Des Moines

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MAY DAY
CHILD HEALTH DAY
1938



SPEED CHILDREN ON
THE ROAD TO HEALTH