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HEALTH EDUCATION

AND THE
PREPARATION *of*
TEACHERS

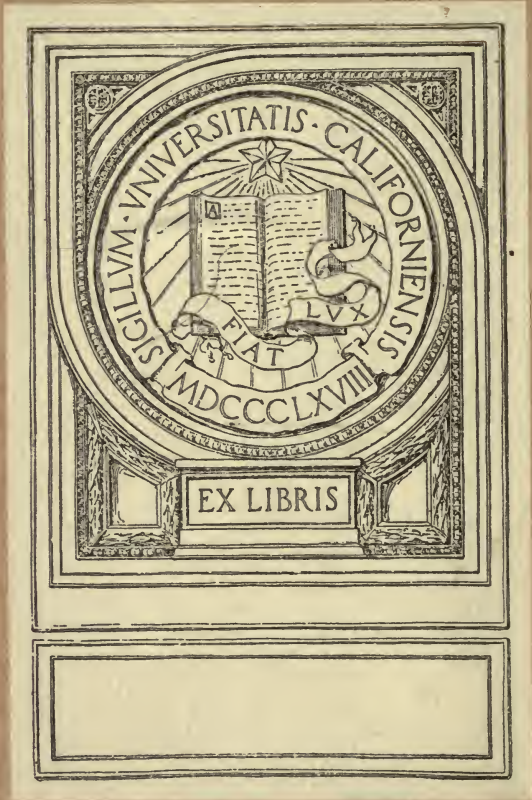
LAKE MOHONK CONFERENCE



PUBLISHED BY
CHILD HEALTH ORGANIZATION
of America

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NEW YORK

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THE
CONFERENCE

Report of Conference

on

HEALTH EDUCATION

and the

PREPARATION *of* TEACHERS



Called by

The U. S. Bureau of Education
and

The Child Health Organization
of America

AT

LAKE MOHONK, NEW YORK
JUNE 26 - JULY 1, 1922

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Health! Strength! Joy!



PROGRAM

Chairman of Sessions

DR. THOMAS D. WOOD

Teachers' College, Columbia University

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DR. WILLARD S. SMALL (*U. S. Bureau of Education*)

MR. DANIEL CHASE (*N. Y. State Department of Education*)

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DR. C.-E. A. WINSLOW

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PROF. C. D. HART

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DR. MAURICE A. BIGELOW

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The Preparation of Teachers in Health Education

Papers presented by

DR. W. S. SMALL
PROF. C. E. TURNER
MISS FLORA ROSE

Discussion led by

DR. FRANKLIN BARROWS
DR. ANNA GOVE
MISS MARGARET SAWYER

PROGRAM COMMITTEE

DR. C.-E. A. WINSLOW
Chairman

DR. THOMAS D. WOOD
Chairman of Sessions

DR. JOHN R. FINLEY
DR. MARY SWARTZ ROSE
DR. ALBERT SHIELS
DR. WILLARD S. SMALL
DR. RAY L. WILBUR
MR. WILLIAM WIRT

*Health in
Education*



*Education
in Health*

FOREWORD

The Talking Oak

WHEN Jason was grown up, you remember, he decided to go on the glorious adventure of the quest of the Golden Fleece. This fleece once covered a ram who had been trusted to bring two children into safety. Jason was perplexed as to how the adventure should begin so he consulted the Talking Oak.

A great many of us have set forth on the quest of the Golden Fleece of Universal Child Health as the most glorious adventure which grown-ups today can undertake. We are often perplexed as to how to proceed. And so we consult the Talking Oak. That is, we hold a conference.

The first time this happened was in December, 1920. Then the Child Health Organization of America called a Conference of fifty interested people to discuss the question: Can health be taught to children, and if so, who can do it best? The Conference decided that it could be done and that just as Jason was instructed to find fifty heroes to accompany him on his adventure, so must teachers all over the country be enlisted to bring the quest of Child Health to a successful conclusion.

And so the Child Health Argo was launched. Since then it has cruised around the world. As a result a tremendous interest in the teaching of health to children in the schools has been aroused. Child psychology has been applied to teaching methods, and "the dry bones of physiology and hygiene live again," clothed with interesting facts and winged with imagination.

But the Argonauts have not yet come into possession of the Golden Fleece, although here and there shining bits of it have been won. Several new questions of direction have been formulated and future teachers need to be given better preparation before they join the quest.

This preparation must include the inspiration that a glorious adventure requires of its followers, radiant, abundant health, and bedrock knowledge of the subject

matter of physiology and hygiene and the technique of teaching methods.

To determine how teachers can best be trained to follow the quest of Universal Child Health was the main question that caused the U. S. Bureau of Education and the Child Health Organization of America to consult the Talking Oak once more.

They invited authorities in the scientific and educational fields to come to Lake Mohonk, New York, the last week in June, 1922, and there talk over "Health Education and the Preparation of Teachers." One hundred people accepted and the names you will find on page 179. Probably the Talking Oak has never flourished in so beautiful a place as Lake Mohonk. Certainly it was never so well cared for. From Mrs. Smiley, the hostess, to the smallest bell-hop of all—from hail to farewell—the members of the Conference were made to feel the imprint of genuine kindly hospitality.

Most of you who read this report were unable to come to the Conference, but here you will find the papers in full, the moot points in the discussion of important questions and the significant recommendations formulated.

In order to relate more clearly to their subjects some of the important points brought out in discussion, it has been necessary to rearrange certain parts of the report. For instance, the proceedings of the Monday evening Round Table Conference and the Friday morning meeting have been included in the account of the sessions to which they apply.

We hope this report will be to Teacher-Training Institutions and to individuals a valuable guide in planning a Student Health Service and course of study.

INTRODUCTIONS

THUS it came about that the group of men and women, whose names appear on page 179, assembled at Lake Mohonk, to consider the problem of the "When," the "How," and the "Where" of training teachers for that most important function, the Health Education of the children committed to their charge. The first evening was given over to introductions—first, of the problems to be considered; and second, of the people who were to do the considering.

To preserve the spirit of the Conference as well as possible in this report, a literal transcription of the proceedings is here given, except where the limitations of space demand the condensation of discussions. Therefore the meeting is at this point turned over to *Dr. Thomas D. Wood*, Teachers' College, Columbia University, Chairman of the Sessions:

WE are met in a unique place—here at Lake Mohonk—and this is a unique Conference. So far as I know it is the first conference of its name and type which has been held in this country. To some of us there seems to have been no more significant or graphic effect of the war upon this country than the realization of the meaning of health, of physical fitness, to the welfare of the world. We need not review the evidence which brought this home to the American people. There is no more significant outstanding development in our modern program of public education than that which relates to the health of the children in our schools. There had been attempts made for a half-century to take care of the health of the school children and to give them instruction in matters relating to health. It had been slow, inefficient, rather desultory, and not very successful. The war has brought about great change, and it is in part as a result of this that this Conference meets here this week, under the auspices of the United States Bureau of Education and the Child Health Organization of America.

It gives me great pleasure to introduce to the members of this Conference, as the first speaker, the President of the Board of Trustees of the Child Health Organization—Dr. L. Emmett Holt of New York.

Dr. Holt:

Mr. Chairman, Ladies and Gentlemen:

IT is my pleasant duty to welcome you to this Conference, the first of its kind ever held; but I am sure not the last. The Child Health Organization has joined with the U. S. Bureau of Education in calling the Conference, but wishes it distinctly understood from the outset that it is to be a real conference. No cut-and-dried program has been formulated which you are to be asked to endorse. We have come to discuss questions of great interest at the present time; questions regarding which no doubt much difference of opinion exists. This is a real advantage. If we all were in agreement such a conference would be unnecessary.

The subject of the Health Education of Children, which is the main one which has brought us together, is a comparatively new one, still in its plastic formative stage. How it develops, how it is guided and what becomes of this movement is largely in the hands of the men and women who are in this room tonight.

A great many experiments have been tried in different parts of the country in directing the Health Education of Children; some in our schools and some out of them. Some of these have been very successful, some have had a minor degree of success and some have been quite unsuccessful.

We hope to be able in our discussion this week to sift out the methods, the agencies and subject matter which seem most worth while, and which deserve to be continued and developed, and also to decide those which are not worth while and which should be dropped altogether. We hope, therefore, to have the fullest and frankest possible discussion upon the various topics which are to come up for our consideration. Only in this way can a conference like this justify itself.

Possibly a few words regarding the circumstances which led to the formation of the Child Health Organization may

not be out of place, since the facts may not be familiar to all of you.

During the war, when so many physicians went into military service, a group of pediatricists, members of the New York Academy of Medicine, who could not go, formed a committee known as the Committee on War-Time Problems of Children. The committee had no very definite program in mind, but were moved by a desire to do something for the children of this country, especially those of school age, whose health and nutrition seemed to be overlooked on account of the great efforts which were being made for the children of Europe.

The physicians became associated with a group of social workers of the People's Institute of New York.

Representatives of the two groups went to Washington and secured the interest of Secretary Franklin K. Lane of the Department of the Interior. He promised his active cooperation, but said—"The health of the children of the entire country is involved; and not a small local committee but a large national one should be formed. The United States Bureau of Education in the Department will do everything possible to carry out the plans which you have in view." The cooperation which Secretary Lane promised was given during his entire term of office, and it was continued by his successors.

Part of the time a member of the Child Health Organization staff was under appointment in the Bureau of Education at Washington, and through this Bureau a great deal of literature relating to the health of children, which had been prepared by the Child Health Organization, was distributed to the schools of the country.

In the beginning our interest was chiefly in improving nutrition through the establishment of school lunches and through literature relating to the diet of school children.

We very soon found that the problem involved other and larger considerations. In a few months we came to the conclusion that, just as the problem of infant mortality had been solved chiefly through the education of the mother, definite improvement in the health and nutrition of the school child could be secured only through the education in health of the children themselves. Thus we were drawn, without our intention, into the educational field and our

aim has been in the common phrase of the day—"to put Health Education on the map."

The slogan selected for the Child Health Organization was *Health in Education—Education in Health*; and it is to the spread of the two ideas that the organization has addressed itself during the four years of its existence.

In all our health movements the part which private organizations have played is a very important one. It is they who have gone ahead and blazed the way which has later been followed by governmental and other official agencies. This has been true of the campaign against tuberculosis, against infant mortality and many others. These movements began in a small way with a single group. So we hope it may be with the Health Education of Children. We hope and expect to see this extend until it embraces all the children in all the schools of our country.

I think we will agree it to be the function of education to prepare the rising generation for the duties and responsibilities of life, and certainly there is, next to moral instruction, nothing more important than instruction in health. We aim to make this as much a part of regular school instruction as that in the "three R's." This program involves the bringing together of two important groups, which have not always and everywhere worked together in closest cooperation, viz., the health authorities and the school authorities. How this can be done is one of the problems which meets us today.

The Chairman has said that much of the health instruction given in the past has been desultory and ineffective. I think that we may go even further and say that in very many cases its only result has been to make health repulsive. The aim of the present movement in Health Education is to make health interesting and attractive. Our experience leads us to believe that this is quite possible.

What I hope we may accomplish in this Conference is to determine, first, what regarding health can be taught to children; and, secondly, how best to teach it.

What we decide upon in our Conference here this week is bound to exert a wide influence, perhaps determine what will be done in this country during the next few years in Health Education. I hope we all realize our responsibility and our great opportunity.

The following address, prepared for the opening session but not delivered, is here inserted, because it presents another aspect in the development of the Health Education movement. *Miss Sally Lucas Jean*, Director of the Child Health Organization, speaks as follows:

YOU have been welcomed by Dr. Holt in the name of the Child Health Organization, but I, too, am glad indeed of the opportunity to extend my heartiest greetings to you all.

When a committee of the Pediatric Section of the New York Academy of Medicine sent a representative to Washington four years ago to confer with Franklin K. Lane, then Secretary of the Department of the Interior, about the prevalence of malnutrition among school children in New York, there was little thought of the tremendous strides to be taken within a few years. Mr. Lane immediately urged the formation of a national group to raise the health standard of the American School Child. With the confidence of such a statesman invitations were extended to educators and socially minded individuals living in all sections of the country. The response was amazing, all accepting but two from a list of twenty-seven. A small budget was raised and the Child Health Organization launched. Just how a new private association could assist a national department as they were invited to do was somewhat vague, but as Secretary Lane said, "If you have enough red blood, it can be." The Director of the Organization was appointed on the dollar-a-year basis in the Bureau of Education and a printing fund allowed. Dr. Small welcomed assistance and gave support at every turn which made cooperation possible. As I look back to the letters which came both to the Bureau and the Child Health Organization during those first few months from teachers, I seem to see their earnest faces rise before me, all begging for help in methods of interesting children themselves in building stronger bodies. As one teacher wrote us, "The ideas you send us are good. I appreciate your help but I don't know quite how to go ahead." As each letter was answered personally in addition to carefully developed printed matter, it was possible to suggest ways and means of meeting each particular situation and always to add that the teacher herself possessed a laboratory in her classroom

of pupils from which *we* hoped for help. Our faith was soon rewarded. A large proportion of the letters brought ideas, methods, devices which though sometimes expressed in English that would scarcely warrant our belief that the teacher herself had been through High School, carried the earmarks of practical application.

City and State superintendents became interested many times through their teachers' enthusiasm and requests for a course of study were frequent, and to meet this need a Conference was called in December, 1920. Fifty people gathered together from all sections of the country for a three days' meeting—many of you participating at that time.

The Conference was instrumental in bringing many people together who had been working in the same field along parallel lines unconscious of each other. The movement was undoubtedly advanced and ultimately "Suggestions for Health Teaching in the Elementary Schools" was issued. Much work has been done since then, almost a new point of view created. From all over the world we are asked for assistance in teaching health to school children. Now we all recognize that this is a problem for the doctor and the educator to work out together.

The educator has not been encouraged to interpret the knowledge of the doctor. That has been the task which this Organization set for itself, and now the demand for leaders in this field has gone beyond the supply. From the answers to a questionnaire sent out this spring to all teacher-training centers in the United States it is evident that the supply of well trained health teachers is not rapidly increasing.

There is little uniformity in the health courses offered, from 1 to 6 hours being allowed, and moreover, *these courses are frequently elective*. Fifteen different titles are used in describing the courses. Practice teaching in health subjects is rather the exception than the rule.

The health of students themselves does not appear to play an important part beyond the physical examination, which is put on record and forms the basis for physical exercise to be allowed or encouraged.

The increased interest in health teaching has grown out of an idea—the idea that health could be made interesting

to children themselves. We are here to consider how best we can pass that idea on to the children in the schools of the world.

The Chairman then introduced Dr. Willard S. Small, Specialist in School Hygiene and Physical Education, Bureau of Education, Department of the Interior, Washington, D. C.

Dr. Small:

Members of the Conference, Ladies and Gentlemen:

THE Bureau of Education has occasion to seek the help and cooperation of a great many voluntary organizations which are devoted to different aspects of educational promotion and improvement. Of course, it is always improper to speak of one's poverty, either personal or official, but I think it would do this audience no harm to know that the U. S. Bureau of Education, which is supposed in some mysterious way to exert an influence for good upon a great variety of educational activities in the country has for that magnificent service, a munificent annual appropriation of about \$160,000.

I will not weary you with statistics, but you may be interested to know that the Bureau has published and issued to the public something more than one million pieces of literature of one kind or another bearing upon Health Education or the health teaching of children. This is within the last four years. The Child Health Organization, for the most part, has been the producing agency for that literature; the Bureau of Education has been the distributing agency. Why? Because the Bureau of Education has natural and effective access to the schools of the country. By reason of the fact that we do have this access to the schools of the country, we were able to begin, as soon as the Child Health Organization had some goods to market, to market the goods. We first distributed only one or two slender pamphlets and the Classroom Weight Record. Soon we began to get returns from these publications. From here and there over the country, responses began to come in and you may be interested to know that some of the most useful information and valuable responses came not alone from those who occupied the high positions in the educational hierarchy, but from untrained or self-trained teachers.

We have carried on for the past four years a very large correspondence, with not only, as I say, important school officials, but also with apparently unimportant teachers all over the country. We have gathered a constantly increasing mass of information in regard to the problems of health teaching, and have made some attempt to analyze this. For instance, we are able to say from time to time what kind of new literature is needed in order to answer a certain percentage of inquiries that come from teachers all over the country.

Now, it may further interest you to know that although we have made our primary approach to the schools of the country, as we properly should, yet in larger and larger measure our correspondence and our lines of contact have gone in other directions—not only to teachers, but to nurses, to the agents of the Tuberculosis Association, to the agents of the Red Cross, to the Home Economics workers of the States, to almost every variety, not only of educational, but of semi-educational and accessory institutions; and to the health departments of city, county and State all over the country.

I am refraining, as Dr. Holt refrained, from telling you where you are going. I am more and more impressed as I come to know better the kind of problem that is put up to us from all over the country—I am more and more impressed with the fact that we are just on the outskirts of this problem of health in education and that the problem is not going to be solved in the office of the Bureau of Education or in the office of the Child Health Organization or in the chair of Hygiene or Health Education in any university, although all these will be important contributing agencies, but the problem is going to be solved largely by the field workers—those who are on the firing line. Some of the most important contributions to sound methods of guiding children into an appreciation and love and practice of health, as I said a few moments ago, have come from apparently very unimportant persons.

The thing that we know today is important and the thing that we are trying to do in the Bureau of Education, in cooperation with the Child Health Organization and other organizations, is to understand and interpret the experiences, both positive and negative, that come to us from the

field—to interpret and retranslate those so that they will be useful to the teachers everywhere.

We have not as yet, in any large measure, solved the problems of method, and I am very hopeful that this gathering which is assembled here will give substantial aid in solving these problems.

I heard last Friday night at a meeting of the National Conference of Social Work, which is having its session in Providence, a most interesting and significant address by Mr. Prentice Murphy of Philadelphia. Mr. Murphy gave a historical sketch of the progress of the theory of social work during the last 15 years; and, as the conclusion—which he repeated several times in various ways—as the conclusion of his historical sketch, he made a statement something like this: That more is to be accomplished through the public schools in the solution of social problems than all the special institutions and the special organizations for uplift work can ever accomplish. As I listened to Mr. Murphy the thought kept recurring in my mind: “That is probably right, Mr. Murphy, but it means quite as much in the way of transformation of our schools, of our purposes and aims in education, as it does in the transformation of method in social work.” It sometimes seems as though the dead hand of the past—two hands, indeed—were lying very heavy upon the schools of today—two legacies of ideas in regard to education that today instead of being sources of power are deterrent and devitalizing. The protestant reformation bequeathed us the idea that education, at least elementary education, is purely a matter of literacy—being able to read and write language. Why? Because—and Martin Luther made this very plain—we are to be saved by our knowledge of the Scriptures; and if we are to be saved, we must all be able to read the Scriptures. Therefore, education is the acquirement of literacy. And for three centuries that conception has dominated all our thought and effort in the field of popular education.

This conception was strongly reinforced by the political-educational ideas that sprang up in this country during the early days of the American Commonwealth—the bequest of Jefferson and his confrères. And what were these ideas? This is a democratic government; a democratic government depends for its success upon the intelligence of the elec-

torate—the masses; therefore the masses must be educated—to read, if not write, political literature. Literacy, again, is the significance of education. (Jefferson, of course, knew nothing about the I. Q. and supposed that intelligence was a product of education.)

But a change is in progress. We are now coming to see that if we are really to educate a people who will be safe for democracy, or for whom democracy will be safe, or for whom even religion will be safe, we have got to educate the whole individual. I sometimes think that our schools are intellectual sweatshops; and then when I look over the programs of some of the schools, I think they are intellectual delicatessen shops. They should be neither. A school should—sometime perhaps all of our schools will—realize Froebel's idea that a school is a place where children under proper atmospheric conditions, may grow in body, soul and spirit. Now, this is what I meant when I said that this health motif in education must transform and is transforming the whole of education.

I am going to say quite confidently that we shall not get very far with our hopes of Health Education if we do not think of it in that organic way—something that is going to modify, and in a measure transform our theory of all education. If we think of it merely as something added to traditional education, or a method by which we can give children information and ideas about health, we shan't get very far. Children are the most conservative people in the world, and what the custom is in a school at a given time has great effect upon what the children do and become.

I am hopeful that out of this Conference of one hundred interested, earnest and practical workers we shall sift out some important conclusions in regard to Health Education.

Dr. Wood:

“One thing may I say before introducing the next speaker? We should keep in mind that the most desperate movements for the care of children's health in the last decade have been made in other countries than our own, for reasons that are entirely obvious to you. This country has been more favored. On the constructive and educational side of health—the program of Health Education—I believe that I am correct when I say that the United States leads the world. It has, for various reasons, a great opportunity and a correspondingly great responsibility. You would be greatly impressed if you could see the letters that come in increasing numbers from many quarters

of the globe—200 or 300 a week—to the Child Health Organization and to other organizations, from the countries of Europe, from South America, from Asia, from Canada, from the Orient. The evidence that we have shows us how deeply interested they are, and how concerned they are with reference to the importance of this part of the national program. This is perhaps peculiarly striking in the new, struggling nations of world which have been reassembled since the war. I wish merely to make this reference to a very significant movement taking place, to the very peculiar opportunity which America has to give help, guidance, examples, in demonstrating this great work. The peculiar significance of this Conference, representing all parts of the United States as a national conference, is its intention to strive for a program, not only to affect our own country, but directly and indirectly to affect the work that is being done in the other countries of the world.”

Dr. Wood then introduced Mr. Daniel Chase, the Supervisor of Physical Education of the State of New York.

Mr. Chase:

FIRST, let me say that my only excuse for being here is that Dr. Frank Graves, our present Commissioner of Education, could not come and asked me to substitute for him in saying a word of welcome. I asked Dr. Graves to write me a letter of greeting, which I brought with me and which I now read:

To the Delegates in Attendance at the Conference on Health Education:

It gives me great pleasure to send a word of greeting and of welcome in the name of the State Department of Education to the doctors, teachers, and other experts in the field of health and of education. I congratulate you upon assembling at Lake Mohonk, one of the beauty spots of our great Empire State, and regret that I cannot be with you in person. It would give me great pleasure to participate in the discussion and to get from you some of the information and inspiration that is bound to come from your discussion on this most vital question.

As it has frequently been said: “It is only recently that educators have come to realize that the physical, mental and moral nature of a child is represented in almost every conscious act, and that the ‘school is for the whole child’.” In its origin the primary function of the school was mental training, learning from books and teachers. Even yet some boards of education and teachers see nothing in the school save a place to learn facts from books, but gradually all of us are coming to understand the interdependence of mind and body. It is now known that the physical growth and well-being of a child condition his entire intellectual life.

The Middle Ages, with their asceticism and repression, held us long in their thrall, and less than a century has passed since we completely abandoned the idea that, in order to refine the mind and rescue the soul, we must neglect the body and mortify the flesh. But biology, psychology and common sense have done their work, and so apparent now is the relationship that "even he who runs may read." Progressive school boards are getting to feel less concerned about the possible ability of new teachers to "Discipline" (spelled with a big D) than about their being able to interpret the infallible signs of fatigue, failing vision, obstructed hearing, St. Vitus' Dance, and inadequate nourishment. We cannot yet say, "Take care of the body and the soul will take care of itself," but we may safely insist that all higher mental and moral qualities have a physical basis, and that if the material is neglected, the spiritual cannot reach its highest development. We are coming to see that no school which fails to provide for the physical well-being can be a good school even on the purely mental or moral side. The school must share with the home the task of maintaining the normal growth and natural vigor of the child, if it expects to control his intellectual and ethical development.

I shall be much interested to have a full report of the results of your deliberation. I am very happy to know that the State Department of Education is to be represented by at least two members—the Medical Inspector of Schools and the State Supervisor of Physical Education. These men know what is being done throughout the State and are well qualified to present the viewpoints of the Department on the matters under discussion. Many of our policies have not yet crystallized. I hope that we will always remain open-minded enough to change them when occasion demands. We are all seekers after truth.

It is my earnest wish that you may have a successful conference and a most enjoyable period of good fellowship.

Sincerely yours,

(Signed) FRANK P. GRAVES.

We specialists are apt to be like the "Village Oracle, Dan'l Hanks." You remember:

Old Dan'l Hanks he says this town
 Is jest the best on earth;
 He says there ain't one, up nor down,
 That's got one-half her worth;
 He says there ain't no other State
 That's good as ourn, nor near;
 And all the folks that's good and great
 Is settled right 'round here.

Says I, "D'jer ever travel, Dan?"
 "You bet I ain't!" says he;
 "I tell you what! the place I've got
 Is good enough for me!"

* * * *

Some fellers reckon, more or less,
 Before they speak their mind,
 And sometimes calkarlate or guess,—
 But them ain't Dan'l's kind,
 The Lord knows all things, great or small,
 With doubt He's never vexed;
 He, in His wisdom knows it all,—
 But Dan'l Hanks comes next.

Says I, "How d'jer know you're right?"
 "How do I know?" says he;
 "Well, now, I vum! I know, by gum!
 I'm right because I be!"

Fortunately, we are not here in the spirit of "Dan'l Hanks," but rather to learn from each other.

The value of teaching health habits as a part of physical education is that physical activities—things that boys and girls naturally do—help to make attractive the things they ought to know about their physical natures. I maintain that education through activities is the big thing that is going to leaven the health lump. The physical nature, the mental nature, and the moral nature are all bound up in one whole, and as we contribute towards the one we help the other. We must devise methods and ways of working closely with all educational forces for better health and better character of our future citizens.

In the past five years, 28 States have passed legislation looking to compulsory physical education and physical training for school children. England, France and the other countries of Europe have similar work on foot. Our problem is very much like that of Great Britain, as a recent letter from the Director of Physical Education at Glasgow, Scotland, shows, in which he says:

Those of us engaged in physical education in Britain feel it necessary at present to place emphasis upon the educational value of physical training. The hygienic and corrective values are now more readily recognized and appreciated. In the past, physical training has largely rested upon military ideals and much of its technique followed the military pattern. This ideal is passing, giving place to an educational ideal. Success can only come by recognizing that the maintenance of health and the development of an active personality are fundamental problems of education in general, and that physical education must therefore be woven into the weft and warp of the whole educational process. The horizon of physical education must be widened—and it is being widened. Until comparatively recently its means have consisted almost entirely of formal physical drills

and gymnastics on the one hand and games on the other—all valuable for health and character but regarded as something apart from or outside the purview of the educationist. The educationist must realize that physical education is not merely a matter of health training, but that it is a method and process of educating the child through physical channels as distinct from other channels which are almost purely mental, reflective and contemplative. Perhaps up to the age of 14, or even later, most education is acquired through purely physical channels.

In the same way that the teaching of English is not the substance of a single subject of the curriculum, but can be taught during every moment of contact between teacher and child, so physical education is not the substance of a special part of the school timetable devoted to gymnastics or games, but should permeate the entire curriculum and the whole school environment. Education must have not only high intellectual ideals, but high physical ideals. Class teachers must approach education from physical as well as from intellectual angles, and if education in the past has failed through exclusive attention to mind, we physical trainers must see to it that physical education does not fail through exclusive attention to body. Those responsible for physical education must be fully acquainted with education in general—its history, its philosophy and ideals—in order to estimate correctly the value and position of physical training in the whole fabric of education.

New York State is glad you are here, and we hope to gain from your wisdom much that will help us all.

Upon the conclusion of Mr. Chase's welcome, Dr. Wood closed the opening session. In so doing, he extended to the guests the cordial greetings of Mrs. Smiley, who, as hostess of this great mountain resort, had put the delightful facilities of the hotel and its beautiful grounds so fully at the disposal of the Conference.

Following the addresses came the opportunity for members of the Conference to become acquainted, and to make some plans for enjoying together the recreational possibilities of Lake Mohonk. This increased the atmosphere of sympathetic receptivity to each other's point of view—which was so large a factor in the free and friendly discussions that characterized this Conference, and contributed no little to its success.



Section II

SUBJECT MATTER IN HEALTH EDUCATION

TO aid the Conference members to organize in their own minds the contributions of so varied a company, the Program Committee grouped the discussions around three main questions, namely—the “What” of Health Education, the “Where” and the “How.” It was believed that after such a well ordered consideration of the constituent elements in a school program, the general outline of the kind of teacher-training required would emerge. It was in line with this plan that the first working session of the Conference was given to “Subject Matter.” Dr. C.-E. A. Winslow, Professor of Public Health, Yale University School of Medicine, presented the first paper:

The Objectives and Content of Formal Instruction

in Hygiene

PERSONAL hygiene has changed the habits of daily life. The modern public health movement is definitely a movement for bettering the health conditions of the community, which of course depend upon the health of the individual. We must teach personal hygiene, and in this modern phase of personal hygiene we have had to introduce entirely new methods. The public health nurse found that people did not understand the things she taught them, because they had had no training. Gradually and slowly we realized that if we were going to attain the ideals of health we must go back into the schools and teach them something about hygiene.

After this long journey, we went to the little Red School House to see what was being done there for the public health campaign. We found that Health Education must be revolutionized in the schools.

Dr. Holt told of the origin of the Child Health Organization last night. The Child Health Organization had great vision and did a great thing when it saw the ideal of changing the spirit and method of teaching health; it was a very

courageous and very constructive idea. The splendid readiness with which the United States Bureau of Education met this issue and joined its great moral forces with those of the Child Health Organization generously and in the most whole-souled way must never be forgotten.

Dr. Holt was very modest in what he said about what has already been achieved. The only way to really get some idea of what has been accomplished is to get the leaders of the movement separately: Get Dr. Holt to talk about Miss Jean and Miss Jean to talk about Dr. Holt.

Hygiene is now the fashionable thing. It is not always going to have such a lead as at the present moment. We must make the most of it, so that it will go on when there is not the type of striking leadership available as there is at present.

We progress in all human undertaking by oscillations between one extreme and the other—a principle which is admirably illustrated in the history of the teaching of hygiene. Ten years ago, where such teaching existed at all, it involved chiefly the memorizing of the names of the bones of the human body and similar mental gymnastics of a character as futile as any that has ever been perpetrated in the name of education. Today we are in the flood of a wholesome reaction against such teaching of unimportant and disconnected facts. The motive of the time is habit formation; and largely through the stimulus of the Child Health Organization of America we have developed a whole host of devices for making Health Education vital and compelling. The basis of our present attack is the height and weight chart with its direct appeal to the competitive instinct, and grouped about this fundamental device we have a whole technique of health stories, health poems, health plays, health clowns and health fairies to aid in seizing the imagination of the child and enlisting his interest in the new movement.

All this is admirable, but I suspect that we shall soon face a real danger of swinging the pendulum too far. Habit formation should no doubt be our first aim, but it is by no means our only aim. We must also lay a sound basis of knowledge if the child is to be something more than an automaton—if it is not only to learn certain tricks, but is also to acquire intelligence which will enable it to modify its habits to meet the changing conditions of its after life.

*A New
Vitalized
Health
Education*

*Two
Fundamentals of
Health
Teaching.*

With every year health problems loom larger in our community life, and if the citizen is to deal competently with such problems he must know something more than that he was taught in school to brush his hair in the morning, to operate the tooth brush with a rotary motion, to eat carrots and drink milk. I believe then we may advance as a fundamental postulate that a program of school hygiene should include not merely the formation of health habits immediately necessary to the child, but also the acquisition of a certain basic body of knowledge which will be necessary for the continuance of healthy living in the future. In the words of the committee on a school health program of the American Public Health Association: "The goals of health instruction are to establish health habits, to give the child the practical knowledge of the principles of healthful living, to develop health ideals, to arouse a sense of individual responsibility for the health of the community, and community responsibility for the health of the individual."

In the second place, it seems to me very clear that the inculcation of a necessary knowledge of the fundamental principles of healthy living requires a certain amount of formal systematic instruction in a classroom. I know that many members of this audience will rise up at once and tell me that the most effective teaching of hygiene is being accomplished today in certain schools where no textbooks are used and no formal period set aside for the study of this subject. Hygiene permeates the whole school curriculum as an intangible but ever-present influence. I acknowledge the fact but I deny that it is a fact upon which we may safely base general deductions. Professor Thorndike once remarked to me that all educational experiments succeed, and it is perfectly obvious that in a dozen school systems in the United States geniuses have arisen who are accomplishing marvelous results by extra-curricular inspirational methods. I submit, however, that it is absolutely out of the question to expect that any large proportion of the vast number of teachers in the public schools of the United States can ever be transformed into inspired enthusiasts for hygiene. The prophet leads the way, but educational reforms, like religions, must be systematized and organized if they are to become practical forces in everyday life, even if they lose some of their primary inspiration in the process. The average teacher in the average school will never teach

*The Need
for Organization.*

hygiene until there are hours set apart for the subject, until she is graded and promoted by her work in hygiene as in other subjects and until she is trained in hygiene in a Normal School as she is trained in arithmetic or English grammar today. I would not give up one whit of what has been accomplished in emphasis on habit formation and in the development of extra-curricular methods of appealing to the imagination and the will of the child, but in the long run such appeals will only have their maximum effect if they are correlated with definite and formal instruction in a subject which is so essential to the sound conduct of the individual life.

*The Place
of Formal
Instruction
in Health
Teaching.*

The proper combination of systematic and incidental teaching of hygiene is well stated in the admirable outline issued this spring in mimeograph form by the Health Education Bureau of the Department of Public Instruction of the Commonwealth of Pennsylvania. We shall probably all agree that "Hygiene is best taught, not simply by a specified period of the day devoted to formal health instruction, but by making it part of the instruction in all other subjects. In the Elementary Schools the health work is in most cases in the hands of the grade teacher, who should use every opportunity to make reasonable application of any fact or principle which may arise in connection with any subject to the problem of healthful living. This application should be made at the time the occasion arises. In this way all other subjects may be made to support health instruction. In the lower grades there is little place for systematic class instruction." We must also, however, I think, agree with the succeeding sentences, which might perhaps even be stated somewhat more strongly—"but in the upper grades it (systematic class instruction) may be very valuable if it is used to support health habits which have been or are being acquired, and to develop in the pupils a definite sense of responsibility for community as well as personal health. The social approach is always better than the personal."

The exact stage of school life at which formal systematic instruction should begin is still to some extent a debatable problem. The excellent Pennsylvania outline contemplates the introduction of such instruction (with the use of textbooks) in the fifth grade. Of 15 States whose hygiene programs happen to be accessible to me as I write, 7 pro-

vide for the use of textbooks in the fourth grade, 4 in the fifth grade, 3 in the sixth grade and 1 in the eighth grade.

*The Time
to Begin
Formal
Instruction.*

I myself am inclined to believe that the fourth grade is not too early a point for the commencement of formal instruction in the elements of hygiene. The committee on school programs of the American Public Health Association, on the other hand, believes that "in the Kindergarten and four lower grades the chief effort should be to develop health habits mainly by inspections and special devices. In subsequent grades systematic instruction should attempt to crystallize and fix the health habits which have been taught heretofore, and to provide the pupil with necessary information concerning the physical basis for healthful living, principles of bacteriological cleanliness, and the sanitation of the community."

The majority of experts in this subject will, I think, agree that either in the fourth or fifth grade formal health instruction should begin; and on this assumption I should like to outline what seem to me a few of the broad and fundamental elements of knowledge which such instruction should inculcate.

*A Biologi-
cal View-
point in
Health
Teaching
Essential.*

First of all, and most important, is the basic conception of the body as a living machine, working in accordance with physical and chemical laws, and working as a coordinating whole with the health of each part depending on the normal functioning of the rest. It is essential that this conception should be grasped, not as a form of words, but as a solid and vital basis of all the student's thinking about health. If such a view were really held as a basic conviction by our adult citizenry, it is probable that four-fifths of the delusions and superstitions and quackeries that weigh upon the human race would vanish like a dream. The development of this fundamental viewpoint depends, of course, on other types of instruction than that given in hygiene. It is rooted and grounded in a knowledge of general biology. As President R. L. Wilbur of Stanford University wrote me a few weeks ago in connection with the program of this Conference: "I feel that there should be particular emphasis laid upon biological work—nature study, zoology, botany, etc., as a basis for thinking in terms of life. Otherwise hygiene is too apt to be a series of more or less true so-called 'precepts.' My feeling is that sound and universal training in biology for our college population would soon

give us the teachers to handle hygiene in the schools and a proportion of citizens with an appreciation of hygiene in ordinary life. The teachers need to think biologically more than to put over rules."

If we could really inculcate this conception of the living machine with all that it implies I should be almost satisfied with the accomplishment of the course in hygiene. It is impossible, however, to teach this general lesson—except as a form of words—without a sufficiently detailed exposition of physiology to make its meaning a vital element in intellectual experience; and there are a number of subordinate principles in the working of the living machine of sufficient moment to make their inclusion in our course essential to its adequacy. Among such I would call particular attention to the following, always remembering in the words of the Pennsylvania outline cited above, that "only so much formal information should be given as will render possible good health in the parts described":

*Six
Important
Principles
of Physi-
ology.*

(1) It is not important to know the number and the names of all the bones, but it is essential to know something of the structure and inter-relations of the parts of the bony system and to understand the structure and the general arrangement of the muscles if the child is to have an intelligent grasp of what is involved in correct posture, if it is to comprehend the real value of exercise and if in future life it is to respond intelligently to the professional advice of the orthopedist.

(2) A knowledge of the mechanics and the chemistry of digestion is vital to the continued maintenance of sound elementary habits and only a real knowledge of the elements of nutrition will make possible a judicious appraisal of the dietary fads and fancies with which the citizen of the future is likely to be confronted in increasing degree. Under the general heading of the digestive system we may also mention the importance of some conception of the structure of the teeth and of the process of dental disease which will facilitate a future utilization of the resources of dental hygiene.

(3) A clear comprehension of the physics of the circulation is basically important for any conception of the effects of the atmospheric envelope upon the body and for a rational control of the effects of this atmospheric envelope through ventilation and clothing.

(4) A knowledge of the ways in which wastes are eliminated from the body is fundamental in avoiding constipation and in maintaining the kidneys in a healthy condition. Here, as in the case of the circulation, it is through a real knowledge of the machinery involved that the individual will be disposed to take

the fullest advantage of medical counsel bearing on the postponement of the degenerative diseases of later life.

(5) A vital conception of the structure of the nervous system furnishes the only sound basis for intelligent mental hygiene, for habit formation, rather than the learning of tricks like a pet dog, and for the adjustment of work and rest so as to insure a maximum of productive performance. The practical hygiene of the eye and ear requires an intelligent comprehension of the structure of these complex but frequently defective appendages of the central nervous system.

(6) Finally, under the general head of physiology, the pupil should be given an elementary view of the cyclical changes in the human body, of the ways in which developmental and degenerative diseases arise and of the possibilities of medical science as applied to the early detection and hygienic treatment of incipient disease.

In addition to these points, which appear to me to constitute the most essential elements in a sound knowledge of physiology proper, the pupil should also be equipped with an equally sound comprehension of those fundamental relations between man and his microbic and other enemies which underlie the control of the environmental diseases. In this field, again, there are half a dozen outstanding points which deserve special mention:

*The
Knowledge
Essential
for the
Promotion
of Public
Health.*

(1) The expansion of everyday conceptions of cleanness, to include the vitally important sorts of cleanness can only be acquired through knowledge of the principles of bacteriology, best by actual demonstrations of cultures which the student can see and handle. Much of the inspirational health teaching of the present day shows that even the would-be teacher of hygiene has quite failed to grasp the essential distinction between dirt which is dangerous and dirt which is merely unsightly.

(2) In the second place, the distinction between the harmful and the harmless bacteria should be made clear, with the fact that the dangerous types have their origin only in the human and animal body; so that a vague fear of dirt and disease in the abstract may be replaced by an intelligent sanitary conscience which will facilitate the isolation of disease in its early stages.

(3) Thirdly, the pupil should be given a conception of the way in which disease germs are transferred from one person to another by water and other articles of food and particularly by insects; and of the methods of preventing such transfer by measures of public sanitation. The control of the fly nuisance offers a peculiarly valuable direct contact with personal experience in this field.

(4) Next in importance is a comprehension of the nature of the struggle between the invading microbe and the human host with an intelligent grasp of the principles of vaccine and serum therapy, which promise to play an ever-increasing rôle

in the control of communicable disease. With instruction of this sort the obstructive efforts of the anti-vaccinationist would lose their power and smallpox, typhoid and diphtheria could be brought under complete control.

(5) In the higher grades the principles involved in the control of tuberculosis and infant mortality should find a place. In these and other fields an intelligent cooperation of the citizen is vital to success and that cooperation can only be secured in a community where the elementary principles involved are understood.

(6) If the citizen is to play his part in the broader community struggle against preventable disease he should understand something of the main objectives and the general activities of the health departments of city, state and nation. The health officer who operates in a community where any substantial proportion of the citizens have received a basic instruction of this kind would be able to accomplish results in the saving of lives of which we have scarcely dreamed in the philosophy of the past.

(7) Finally, we should recognize a growing and a very sound tendency to introduce into the school curriculum well planned instruction in regard to safety in the street and in the home. One-half of the victims of automobile accidents are children, of whom over 500 are killed and 12,000 injured in New York City every year. The schools of St. Louis reduced fatal accidents of school children by more than 60 per cent. through intensive safety teaching. The Safety Institute of America is planning to furnish a special information service for the teachers of the city along this line next year.

*"Safety
First."*

Without the acquisition of such broad elements of knowledge as those outlined above, our scheme of Health Education will fall short of the attainment of its highest possibilities. Let us continue to emphasize the acquisition of health habits as the primary aim of such education; but let us base these habits and their modification in the coming years upon a sound knowledge of the underlying principles of physiology and hygiene. Let us utilize all the resources of correlation and extra-curricular inspirational technique; but let us provide also for such systematic formal instruction as can alone ensure for hygiene its definite and permanent place in our educational system.

Discussion

The discussion was opened by Professor C. D. Hart, College of William and Mary, Williamsburg, Va. *Professor Hart* said:

"We all know that education in health must start in early life. Perhaps the ideal is the pre-school age.

"Personally when it comes to the program it seems to me: the first four years, health habits; the next two years (on the basis of Elementary School and Junior High), physiology of the body, a knowledge of the subject matter of physiology; the next year, home hygiene; the next year, community hygiene. A large percentage of students go only to the eighth and ninth grades. We must therefore give all the subject matter that we want to get over in fundamentals in that number of years.

"I believe the first thing this Conference must settle is how many years we are to teach hygiene—that is, give formal instruction. Then, what are we going to teach in each year? We can say this must be done in nine years, but we must know when it is to be done and what our standard of attainment must be in each year. It seems to me that, after the health habits, we must start in with formal instruction in the 5th grade, but also review health habits. The only way to get it over is to devote at least 20 minutes a week to the subject. The enthusiastic teacher attempts to coordinate it in all her subjects.

"For the last two years I have corresponded with over a thousand teachers and I have found that they do not know the least thing about subject matter. How can you expect them to coordinate at the present time, until laws are passed requiring them to know a certain amount? If you give the teacher that has not been trained a textbook and outline, you can expect so much to be put over but you cannot expect coordination until you can get that teacher enthused by all kinds of activities."

Dr. Wood, at this point, called the attention of the Conference to the importance of confining the discussion to subject matter—and indicated the need to find *valid organizing points* with reference to which the field of subject matter indicated by the speakers could be defined, so as to meet the minimum requirement of the ideal program the Conference had in mind.

Organizing points useful for such selection of subject matter, were offered.

Dr. Small suggested the habit and conduct of life desired of people, saying:

"I am glad to agree with *Dr. Winslow* that we have to have knowledge, and that irrational habit won't get us very far. I want to call your attention to the fact that after all it is habit, or conduct of life, that we are aiming at, and that the knowledge is merely subservient to that.

"Let us remember that *Matthew Arnold* was right when he said that conduct is three-fourths of life, and that is what we are aiming at. We want this morning to find out what knowledge is necessary to ensure reasonable conduct.

"I call your attention to the fact that it is the conduct of all of the people. Not the conduct of those who sit around a Conference

like this—not the conduct of those who go to college—but the conduct of all the people. And we have got to realize that the grade of intelligence of all the people is something that is not affected very much by the amount of instruction, the amount of knowledge, that we feed out to them—it is an inherent thing. I do not assume that we can grade all children by a mental test.

“In our dealings with the problem of Health Education or education in health, we must keep in mind that 75 per cent. or 80 per cent. of the people have a rather moderate grade of intelligence, and if we are going to think in terms of educating or training all the people so that they will have a reasonable understanding of what public health demands of them, we must work out a rather limited program and must realize that there are several grades of conduct—a grade for all of the children in the lower elementary grades—a different thing for the upper elementary grades, not only different in quantity but different in quality.

“One other point I want to make is that after all effective knowledge comes through performance, and I hope that we are not going to fool ourselves with the idea that getting knowledge—whether out of books, lectures, motion picture reels, or laboratories is all. If it is merely the passive reception of knowledge that we feed into children in the elementary grades we are not going to get far. We have got to have the knowledge that comes from the activities of children.”

Miss Emma Dolfinger, Associate Director of the Child Health Organization, added, in line with Dr. Small's thought, that in the “Rules of the Game,” we had very pertinent organizing points, for practically all subject matter needed in elementary schools.

The “Rules of the Game,” as Organizing Points.

Mr. A. L. Safford, Superintendent of Schools, Reading, Mass., stated that children's activities and interests were important organizing foci.

Dr. Walter Brown, of the Mansfield Child Health Demonstration, stated the importance, as an organizing point, of the scientific knowledge required of people for intelligent cooperation with public health workers. He specially stressed this, in the selection of subject matter for teachers' courses.

Mrs. Lucy M. Paul, Instructor in Physiology, Bacteriology and Hygiene, Pratt Institute, Brooklyn, referring back to Dr. Winslow's suggested outline of subject matter, said:

“A very practical thing and a very desirable one to get into public school work is action in emergencies. It should be given in such a way that the child should be able to take care of such things, as a cut and how to tie it up, etc. There is a place for emergencies along with home hygiene.”

Mrs. Isabelle W. Baker, of the American Red Cross, Washington, D. C., added:

"First aid, as given in the home hygiene course as outlined by the A. R. C. is more practical than the Red Cross first aid course, which is more technical. First aid in the home hygiene course is taught under our direction with home appliances."

Miss Jean said:

"This talk makes me think of a large group of public schools. In one of these schools there were 1,000 children. It was quite impractical for the nurse in charge to give the care required in emergencies, so they organized a group of children from the 5th, 6th, 7th and 8th grades, to assist, and it was not only possible, but most enthusiastically received by the children, who acted as assistants, to learn to apply a bandage easily. It is quite possible for a normal 5th grade child to be able to use common sense and meet emergencies, and arrange a bandage as well as the nurse, and to have some general idea of asepsis.

"This plan has also been worked out in playgrounds, where organized health work is very necessary. Every "Leader" had a thorough course in first aid work during the winter as part of her training, and she applied it in emergencies during the summer. As a result girls with no technical training in health cared for most injuries. It seems of utmost importance and should be included in every well-developed school system."

Mr. Lewis H. Carris asked the privilege of presenting another important claimant for inclusion in the subject matter of a Health Education program. He said:

"I am the Field Secretary of the National Committee for the Prevention of Blindness and the Conservation of Vision. The National Committee for the Prevention of Blindness originally started out to try to eradicate some of the most obvious cases of total blindness, and it found itself soon involved in the broad program of the conservation of vision. The National Committee's work fits into and emphasizes and gives effect to such a program as this, which we are considering here this week—the matter of helping children to be healthy. The National Committee really serves as a professional organization through its employes, in going into all fields of science, particularly the practice and science of medicine and getting out from the best practice and the best writings the things which concern the conservation of vision.

"I think the people in general do not yet realize the importance of the preservation of good vision. I may be saying something which I won't be able to say in two or three years, but as I see it now, I am inclined to believe that the question of vision is almost as important as the question of nutrition, which has been discussed so much here this week. It is a fact that the eye is one of the most important parts of the human machine. It is a fact that we now bring children into our schools, under our compulsory education laws,

to sit under conditions which involve a considerable amount of eye-strain. The modern work of studying and reading from books is not the kind of work which the eye is built to do. Consequently, all the children who are in our schools are subjected to eye-strain. Conservation of vision is on the positive side. No teacher wants a child in her classes to get such defective vision that glasses are necessary. It is true, however, that a considerable percentage of eyes are defective to such an extent that glasses are necessary.

"We have to consider in the program of Health Education the relationship of vision to physical well-being. It is pretty well known that even the minor defects of the eyes may lead to very serious defects with reference to health. It seems to me that we must have our school buildings so lighted that there shall be the least possible strain to the eyes of the children who are going through the schools. Of course, I realize that may not be the work of the individual teacher, but every teacher of health can let it be known that certain buildings in the system have rooms where children are subjected to eye-strain. During cloudy days all book work should be suspended, or if we have artificial illumination it should be sufficient to avoid eye-strain. Teachers should be trained to know that eye-strain is more important than literacy in regard to the children who are in the school.

"The New York Committee for the Prevention of Blindness located in New York City, tries to assist in this particular program, and has literature which we are using to try and help relieve the situation."

Following Mr. Carris, *Dr. H. E. Kleinschmidt*, of the American Social Hygiene Association, contributed the following significant suggestions. He said:

"Dr. Wood asked me to tell you something about social hygiene. It seems a far cry from social hygiene to child hygiene, but it is not. The prevalent conception is that we are only engaged in the combat against venereal disease. Upon studying the subject it was found that although commercialized prostitution was an important factor, other factors also came into play such as sex education, recreation, and teachers and parents qualified to teach the facts of sex. The more deeply the problem was analyzed, the more many-sided it was found to be. It ramified so widely that today social hygiene embraces everything which redounds to the good of the human race, and while the program is widespread and diffused, we are probably nearer a solution than ever before.

*Social
Hygiene.*

"After a great many years of trying this and that, we finally recognized that the whole situation will never be improved until there is a change in the attitude of the people, about sex. It is perhaps altogether a matter of attitude of mind, and heretofore the attitude has been wrong. We cannot do much with the adults. The hope lies in the development of the next generation, and we are looking far ahead to the time when this new generation shall grow up and come to the problem with an entirely different set of ideas regarding the processes

of life and sex. Then I think we will accomplish much in the field of social hygiene.

"If this is to be accomplished, as I have suggested, it is to be accomplished through just such people as are assembled here. It is largely a problem of teaching, of education, of getting the correct ideas over early in life and anything which you may work out which will redound to child health will certainly be a contribution to the so-called social hygiene movement."

The discussion on this paper having ceased, Dr. Wood introduced *Dr. LeRoy A. Wilkes*, Medical Director of the Board of Education of Trenton, New Jersey, to discuss

Content of a Health Education Program

"**MR. DOOLEY,**" Peter Finley Dunn's humorous philosopher, in discussing Christian Science, once said: "Hennissey! The Christian Scientists believe there is *no* disease, and the *doctors* believe there is *nothing else*—and I believe that if the *doctors* had a little more *Christianity* and the *Christians* had a little more *Science*, you *might* get well—if you had a good nurse."

Sometimes I think Dooley has shown us the way to follow in our attempt to raise the physical standard of the school child.

If we health specialists could get a larger and more *harmonious* view of the *real* physical needs of the child, we might supply the "little more Science" to the *pedagogue*, who in this case is the "good nurse," and the most logical and best equipped person to "get it over" to the child. *Health Content:* What are the really basic rules of health?

It is often painfully evident that we who believe so earnestly in education in health and health in education, are not *all* agreed upon this point. I often ask myself and my associates in Trenton this question, and we have attempted to outline the rules which we believe can be best supported upon a logical or psychological basis.

First: We (in Trenton) are agreed that the fundamental facts regarding the *selection* and *preparation* of *food* are essential, and we have outlined these facts briefly and simply as follows:

There are three great divisions of food: Body Builders, Energy Givers and Body Regulators; and a possible fourth division, known as growth regulators, i. e., the vitamins. Dr. McCollum will give us the necessary details about these.

Some portions of food are all used up in keeping us well and strong. Other parts of the food build *tissue*, and still other parts act in ways that help the body-builders and energy-givers by furnishing vitamins and mineral salts, etc., and regulating the body functions. Such a large part of the body is water (at least 65 per cent.) we must daily take in at least a quart of water. The water content may be taken in various forms (i. e., milk, cocoa, etc.). Of course milk is one of the best foods because it has practically all the essential parts of food in itself—body-builders, energy-givers, body-regulators, vitamins, minerals and water. We must be sure that it is clean milk, because milk is such a good food that if germs get in it, they also grow and multiply rapidly, especially in the cream. Be sure that your milk comes from a place where great care is taken in keeping it clean. It must be kept upon the ice so that it will not turn sour. This is a bacterial action, and low temperature inhibits bacterial action. Candy and food eaten *between* meals tire out the stomach so that it can't work rightly to digest your meals. Eating *between* meals destroys the appetite *at* your meal time. Happiness aids digestion. Worry hampers it.

It seems to me that if we properly *select* and prepare food for the average child, we need be concerned only in furnishing at least the necessary minimum caloric content. The maximum need, in the average case, can be determined by the child's appetite. In my experience, over-eating is not particularly dangerous in school children, when the food is properly selected and prepared. (In adults the danger of over-eating is unquestionably a prominent consideration in health maintenance.)

The "Don'ts" or things to be avoided in connection with the subject of food we teach are as follows:

*Four Food
Don'ts.*

1. Avoid eating between meals. One can except milk, when it is found that the practice does not destroy appetite for meals.
2. Avoid soft, doughy, or highly spiced food.
3. Avoid fried things generally.
4. Avoid tea, coffee, and other stimulants.

In connection with the different rules of health we have attempted to enlist the *teachers'* interest by outlining briefly the *pertinent* facts in relation to the anatomy and

physiology involved, in an attempt to make clear in the *teacher's* mind the *reasons* in support of measures advocated. The teacher can use this information as she deems best, when the pupil questions the value of preventive measures outlined.

Care of
Teeth as a
Subject
Matter
Essential.

The teeth are not to be regarded as ivory "pegs" stuck into the gums, but are modified body tissue like the hair, nails, etc., and depend for their development and resistance against disease, upon the *food* which nourishes *all* parts of the body. While the decay in teeth always *begins* on the *outside*, the external influences can only be effective in proportion to the lowered resistance of the tooth structure which results from faulty metabolism from several causes, the most important of which are poor diet (especially lacking in minerals and vitamins) and *fatigue*. Some claim that faulty glandular secretion is involved, but the main fact to remember is that the tooth is a specialized *body tissue* and is nourished and protected chiefly by bodily *nutrition*.

If for no other reason than the psychological value—the appearance and feeling one experiences from regular attention to oral hygiene—we should regularly clean our teeth with a proper kind of tooth brush and dentifrice after each meal and at bed-time. Decay should be eliminated at the earliest moment it is discovered in order to save the teeth and avoid unnecessary pain. Much emphasis has been laid upon clean teeth, but *healthy* teeth are so intimately associated with *diet* that we should always lay the emphasis *here* and on the fact that external influences can only become effective when the bodily resistance is lowered in the ways already mentioned. Every child should consult his own dentist at least every six months, and have his teeth kept in proper condition.

Fatigue.

Second: We believe that the subject of *fatigue* ranks next to food and drink in importance. In discussing the relation of *fatigue* to malnutrition, the teacher is able to argue *convincingly* when the anatomy and physiology have been pointed out to her, viz.: The food goes into one end of the digestive tract, which is a tube varying in size and structure. It is about 30 feet long, and its largest dilated portion is called the stomach. There are four coats. *Three quarters of the digestive tract is muscle*, and this muscle by contraction passes along the food (transportation) so tha

the various parts of the functioning portion (innermost coat or intima) can, in turn, perform its particular function in selecting from the semi-solid food mass those nourishing materials which give us strength and health. Since so much of the digestive tube or tract is composed of muscle we can readily appreciate *why* we cannot get the best results from even the best kinds of food if we are "tired out." One should rest, if very tired, before eating.

In our belief there are two stages of "being tired," and the distinction is of importance. The first stage might be described as that of "comfortably tired," while the second stage is that often spoken of as "too tired to rest" or "going on one's nerves," and borders on physical exhaustion.

Many drugs have two directly opposed actions, i. e., alcohol first stimulates and then depresses. In somewhat similar manner do we tire—first in such a way that we find great relief and comfort in relaxation—but the expenditure of energy beyond this stage causes a restlessness upon relaxing, during which sleep is impossible and no relief is available until we pass gradually back into the "comfortably tired" stage in which our recuperative powers can work to the greatest advantage.

By the term "fatigue" I refer to the second stage in which we are calling heavily upon our reserve strength. Fatigue is more common in children than *parents* and *teacher* fully *appreciate*. *All* bodily functions are *retarded* by fatigue. Many undernourished children, while in this physical state, are forced to eat food they cannot digest, and to practice music lessons, run errands, etc., and are often punished for the nervous manifestations which accompany this physical state, and which are not always a voluntary action.

Much stress has been laid upon *exercise*, but in my experience we should be more specific in our teaching about *rest*, as this is an even *more vital* subject with the lower grade children. The active and passive types of rest should be explained. The thin, nervous "book-worm" type of child, though not the *usual* type, does *need* physical exercise to rest his weary brain and restore vitality to his body. This exercise must be carefully supervised and must be regularly taken. Brain workers need physical diversion. Physical workers, and most children come under this classification, need mental diversion and physical rest.

Elimination of Waste.

Third: Regularity of Waste Elimination. Daily bowel action is a health rule we cannot neglect. This should be made a daily habit from birth, and strictly observed throughout our lives. The bowels, kidneys, skin and lungs are the outlets for waste disposal in the bodily economy, and the disposal of waste cannot *anywhere* be neglected.

Mental State.

Fourth: Cultivate a proper *mental* state. Avoid worry insofar as possible, as this contributes little or nothing to the solution of the problems causing it, and has a direct unwholesome effect upon the nervous and digestive systems, chiefly, and secondarily upon the circulatory and respiratory systems. This is good advice for *parents* and *teachers* as well as *pupils*.

Fifth: Cleanliness. "A full bath in warm water at bedtime more than once a week" cleans the skin, opens the pores and aids in the elimination. It also exercises and tests the vaso-motor mechanism which maintains bodily temperature, soothes the nerves and induces sleep. The psychological effect of cleanliness is especially good as it maintains self-respect and morale, which are intimately related to health.

Cool or cold baths are stimulating to mind and body and should be taken *daily* upon arising. One's resistance to disease, especially the common "cold," is undoubtedly raised, and we acquire more vitality when the cold shower is a daily habit upon arising. In winter of course the room must be *warm*, and a brisk *rub-down* must follow.

The Psychological Value of Cleanliness.

The washing of the hands and face has some value in itself, and I believe it has a *tremendous* psychological value as the first step toward improvement in *general* cleanliness, and should therefore be encouraged as a health habit—especially before meals. Adequate facilities are *not* provided in most schools. In Framingham (Mass.), I visited a new building, where *each room* had a wash bowl in it. The teacher stood at the door upon the opening of school each morning and inspected the children, and those unclear were "permitted" to become clean before association as a member of the class. Infection and skin diseases are much more common in those districts where cleanliness is less marked, and in my school health supervision experience have seen a very great improvement shown in the control of skin diseases and infections by the cleanliness (at least of face and hands and exposed parts) which has resulted

from the teachers' efforts upon this subject. In spite of many individual extreme costumes, I believe that the modern clothes are a distinct improvement,—from a health standpoint.

Correction has, until recently, been overstressed, almost to the exclusion of the more important preventive measures—and I do not wish to minimize the good corrective work that has been and is still being done.

The oft-quoted results of the draft examinations—i. e., the failure of 33 per cent. of the flower of our young manhood to meet ordinary army physical standards—proved conclusively that something must be done to offset the undermining influences that accompany our modern life.

The old walk to school, often of a mile or more, is replaced by the automobile or trolley car, which carries the child to the door of the school. The "movie" robs many children of *sunlight* and *fresh air*, and often of *time* necessary for *sleep*; overstimulates the nerves and emotions, and in the "serial" pictures leaves them each week in suspense as to the ultimate fate of the heroine. This nervous tension disturbs sleep and makes for the unstable, nervous systems found in the pale, thin children, who especially are permitted by *indulgent parents* to attend too frequently.

*Evils of
Modern
Advantages.*

As a natural result of the abuse of some of these modern advantages, and from many other causes, we have fatigued, malnourished children who are problems to teacher and parent. To these are added many other children whose physical condition could be decidedly improved in the early stages of deviation from normal by simple procedures.

In cases of malnutrition in children, though "poundage" gain is perhaps our most tangible evidence for determining in a broad sense those children who are below par from the standpoint of health, we must always consider other evidence, such as the vitality of the child. This real vitality or "pep" must be carefully distinguished from nervous energy of the over-tired restless child. The latter is spasmodic in type and the child lapses back into a peevish state and has a listless expression.

Some children require prompt medical attention before secondary defects appear, or the original defect becomes incurable, and the teacher and nurse should urge the parent to provide this attention, without delay, upon notification from the school principal or doctor.

The enormous number of teachers available and their wide distribution provides an unparalleled opportunity to give to children the "Rules of the Game"—and to see that they play accordingly, which is the really important part. *Actual physical improvement* should be the gauge of the teacher's ability in the program, rather than the *knowledge* gained by the child. The "Rules" are not complicated and the teacher can be trained to determine the child's general physical condition to a very large extent, by questions and simple measurements, the child's habits, state of health in the past, his growth-rate, his chest expansion, his mental and manual ability, his regularity of attendance, etc., and she can add to this information, where it is available, and it should be everywhere, the report of the doctor, dentist and others.

Time and facilities must be regularly provided in the school program for this work, and the teacher should be trained in Normal School in these simple procedures. This plan will enable the teacher to learn something of the child's general "normal" appearance, and she will thereby be better able to detect the first signs of deviation from "normal" in the pupil. Here the doctor and nurse are of greatest value to both teacher and pupil, i. e., in "salvaging" in the early stages, those children who are beginning to deviate from their individual "normal" condition as determined previously by the teacher and parent.

When a child shows signs of deviation from the mental average for his age, the teacher has been trained to consult his parents as to their observations and opinion regarding his habits and actions in the home. Such consultation is even more urgent when there is a question of possible deviation from his average physical condition, though this has not been sufficiently urged upon the teacher in the past.

Ideally, the rating of the teacher's ability should be based upon the physical as well as the mental improvement shown, though I grant that this is something hard to measure definitely. Increased vitality cannot be definitely measured as yet. If the teacher's rating is based solely upon the mental improvement shown, as is the customary procedure, that is where her effort will be expended. The possibilities of the teacher in the program of health are not realized, for it is not sufficiently and generally appreciated

that health preservation is essentially an educational problem.

Discussion

The discussion of Dr. Wilkes' paper was led by *Miss Ethel Beard*, Director of Health Education, Child Health Demonstration, Mansfield, Ohio. Miss Beard brought to the attention of the Conference, the facts that we must provide for the teachers the opportunity to live the life of health that we are asking them to teach; and that, as conditions now are, teachers do not have such opportunity in many Teacher-Training Institutions in this country. The latter statement she based upon her personal acquaintance with such institutions in three States. She concluded by saying:

"The real work of Health Education must be a thing of spirit coming from the individual teachers. It should be correlated work up to the 6th grade. It means also a wonderful thing—it means that we are getting, through the introduction of this correlated health work, a reduction of the rigidity of our American school system which is so foreign to the real nature of childhood. For that reason the correlation of Health Education around the 'Rules of The Health Game,' which should represent the fundamental or basic rules of health, should be extended so that all of the teachers are carrying out a national experiment. The teachers and children are contributors."

*Health
Education
a Reducer
of Rigidity.*

The idea advanced by Miss Beard was endorsed by *Miss Elma Rood*, Teachers' College, Columbia University, who said:

"We must give the teachers more knowledge of their own personal health and get them interested in living it themselves before we can get anything across in the schools. The situation in the training schools is that there is lack of physical education and health work. Conditions in which the teachers have to live in the rural districts are very bad. It is very difficult to carry out rules of healthy living in isolated sections, with no conveniences. When they come into the summer sessions of the Normal Schools, the teachers compare conditions. I think we should, in some way not only give them inspiration in the teacher-training courses, but find some way to improve their living conditions in the rural districts."

This Miss Rood felt to be a teaching opportunity for nurses, who, through the children, have access to the homes in the community, and can thus get the principles of healthful living across to mothers, without offending them.

Miss Jean here added:

"You may have a perfect school house and perfect equipment and it is of no value unless the spirit is right—that is the big thing in all of this. Of course we want scientific teachers and school buildings properly equipped, but they are of no value unless the teacher has the spirit and thinks that health is of fundamental importance and is worth a great deal to obtain."

Mr. Charles M. DeForest, Director of the Modern Health Crusade, then said:

*Aesthetic
Health
Chores.*

"I was very glad that Dr. Wilkes, in speaking of the 'Rules of the Game,' referred to cleanliness. We who endeavor to serve the anti-tuberculosis movement, made it a 'Rule of the Game.' The washing of the hands and cleaning of the teeth are aesthetic chores. I was talking with a friend the other day who spoke about the discouraging influence of washing your hands before meals, on the grounds that you could not make your hands free of bacteria unless you gave them a surgeon's washing. Washing eliminates 75 per cent. of the bacteria, and such a thing as massive infection might be removed. We would always like to have cleanliness, and we consider washing of the hands, and as a rider, washing of the face, as a psychological influence.

"In one of the lists of the 'Rules of the Game' that I have seen there is also nothing about mental attitude. In our side of the anti-tuberculosis work, as summarized in the Modern Health Crusade, we always like to put in a 'Rule of the Game,' which we call a 'chore,' about the mental attitude: 'I tried to be cheerful today.' I believe it has been a direct influence on health, and it seems to me that it might well be stressed.

"I presume we cannot settle the question of subject matter with any rigidity. It must be revised from time to time."

Mr. Safford:

*Mental
Hygiene.*

"I have been listening here for someone to bring up the important matter of mental health. It is a well authenticated fact that between 60,000 and 75,000 people are committed annually in the United States, to institutions for the treatment of mental diseases. If you will consider that all of these people have passed through our public schools and that many who are to become like them, are there today, you will see that we have a problem which is of first-rate importance.

"In the last 25 years a knowledge of the origin of mental diseases has been increased through the new psychology. It has been possible to prevent many of these mental diseases and to cure some of them. Great progress has been made in psychopathology but very little, almost nothing corrective or preventive has been done in the schools. Many cases of insanity, neurasthenia, and nervous prostration have their origin in early childhood; in many instances before the child is 5 years old the seed is planted.

"This subject ought to have some place in a program of health teaching. Neurotic conditions of teachers and pupils ought to have some consideration."

Miss Julia B. Tappan asked Dr. Wilkes how he got that information which the doctors have, over to the teachers in Trenton.

Dr. Wilkes replied:

"First, as a stepping stone, we took the simple 'Rules of the Game,' and presented them to the teachers and said: 'Here are the fundamental facts that we would like to get over to the child. I do not know much about the elementary grades. My job is to give you the goods and your job is to deliver them. Come back and tell me how you do it.' The most original of the teachers took these simple rules and worked out marvelous schemes for presenting them to the child. The teacher can talk directly to the children. She is the most logical person and the best trained to translate that material into the child's language so that he can understand it. The content is not so complicated. It is a question of distribution."

The reader is referred to the section on "Successes and Failures" and "Teacher-Training" for a more extensive discussion by Dr. Wilkes, of his method of training his teachers.

Miss Ethel Perrin, Assistant Director, Health Education, Detroit Public Schools, at this point focussed the attention of the Conference once more upon the selection and organization of subject matter by proposing the Detroit plan. She said:

"In subject matter I have a rather new division here, giving six fundamental subjects, and from these six fundamental subjects to lead up to the Rules of the Game or the Laws of Health:

*The Detroit
Health
Education
Plan.*

The aim is to give the child increased PHYSICAL ABILITY, to insure NORMAL GROWTH, to DECREASE ILLNESS, to AVOID ACCIDENTS, to OVERCOME DEFECTS and to make possible an abundance of ENERGY AND VITALITY.

To achieve these results it is necessary to bring before each child through experiences, observation and reading the basic elements of health and to instill in him an inner urge to do those things necessary to a healthful life.

I. The major problems about which this health program will be developed are:

- | | |
|-------------------------|----------------------------------|
| 1. Normal Growth | 4. Overcoming Physical Handicaps |
| 2. Physical Performance | 5. Safety Education |
| 3. Decreased Illness | 6. Increased Energy and Vitality |

II. In general each of the above major problems will be developed from the standpoint of the following contributing factors:

- | | | |
|---------|----------------|------------------|
| 1. Food | 4. Exercise | 7. Posture |
| 2. Rest | 5. Clothing | 8. Leisure Time |
| 3. Air | 6. Cleanliness | 9. State of Mind |

III. The general method of teaching each of the six major problems should be as follows:

1. Observe physical likenesses and differences and relate to 1, Normal Growth; 2, Physical Performance; 3, Decreased Illness; 4, Overcoming Physical Handicaps; 5, Safety Education; 6, Increased Energy and Vitality.
2. Relate the contributing factors or causes of health (food, rest, air, etc.), to each of the six major problems.
3. Interest the children in specific problems.
4. Plan individual and group activities for the solution of these problems.
5. The teacher may find it worth while to form a Health Club (all members of class)."

Dr. Wood commented on the fact that the papers so far had represented two different phases: The Interest and Understanding of the Pupils; and the Interest and Understanding of the Teachers.

He then introduced the third speaker of the morning, *Dr. E. V. McCollum*, Professor of the Department of Chemical Hygiene, Johns Hopkins University, Baltimore, Maryland. *Dr. McCollum* brought to the discussion of subject matter a summary of that newer knowledge of nutrition, an understanding of which all the workers present realized was fundamental to their task of Health Education.

Food and Health Education

Dr. McCollum:

WHAT I shall say to you will sound somewhat different from anything you have already heard this morning, since my own experience has been of a decidedly different kind from that of the other members of this Conference. I have had relatively little experience in trying to teach children, but have had a great many opportunities to discuss the problem with people who have had such experience. It is my familiarity with the science of nutrition as it rests upon animal experimentation and upon the correlation of knowledge so gained with human experience which gives me the right to come to you and express my views.

John Burroughs once said something which is epigrammatic in its forcefulness and is appropriate on this occasion, i. e., that we must never forget that we are built up around a gut.

The most important of the laws of health relates to the character and quality of our food. Second in importance is the effectiveness with which we rest. I would put exercise third. There are, of course, other things, such as cleanliness, temperature, ventilation, etc., which are of importance from the standpoint of physical well-being, but they occupy a subordinate position in a program for physical betterment.

Let us consider for a moment what a skillful breeder of horses does for a very fine colt, that is, the progeny of extraordinary parents—one that is worth one hundred times as much as the average horse. His method of caring for it is a very simple one. His first consideration is to provide for it the right kind of food; he sees to it that the animal has food which experience has shown will be ample for the support of optimal growth and for maintenance of health after growth is completed. Beyond this he does little in any special way to look after its well-being other than to provide for it shelter and an opportunity to take such exercise as it desires. There is no more enthusiastic group of people from the point of view of wanting exact and sound knowledge concerning food values, or who apply the principles of nutrition more carefully, than that group interested in animal production.

We are very fortunate now as the result of laboratory investigations in possessing very exact knowledge of the dietary properties of different foods. This knowledge is, however, by no means widespread, although much has been written about the subject. Few have studied the problem carefully enough to become well educated in the matter of diet. There are many who think they are educated in this field—many who can recite glibly the list of foods which are said to constitute a satisfactory diet, who can enumerate the known vitamins and tell about the different deficiency diseases which come from a lack of one or another of them. There are, however, relatively few, if my experience serves as a safe basis of judgment, who can satisfactorily plan menus, or who can inspect a menu and tell whether it is satisfactory or not, except in most general terms, and if not satisfactory, tell how far it falls short and in what factors lie its weaknesses. I think it is safe to assert that a great many more teachers of domestic science, and a considerable number of nurses, are much better able to do this than any

*The
Essential
Simplicity
of a Healthy
Regimen.*

other group more or less interested in nutrition. Certainly there are a great many more teachers who understand the well established principles of nutrition than there are physicians. I have come in contact with a great many physicians, and with all due respect to them, and with a full appreciation of the fact that there are many remarkable men in the medical profession, I must confess that relatively few physicians have as yet taken the trouble to acquaint themselves with the literature in this field. There seems to be in many instances a feeling of self-importance which goes with the possession of a degree in such an honorable profession which makes it very hard for them to accept new knowledge from non-medical people. The result of this is that there are surprisingly few physicians who are competent to advise on the subject of diet. On the other hand, I have found a certain number of physicians who are quite bold in giving advice whose knowledge of the results of modern research in this field is almost nothing. We must find some way to educate the next generation of physicians in matters relating to nutrition, for in only this way can we get the results which we want. I must emphasize again that what I have said does not apply to all physicians; some of the ablest practitioners are among the most enthusiastic students of this branch of science.

Let us consider again for a moment the care of the valuable colt. After it is fed it is allowed to exercise. It is not put through a lot of contortions or made to lie on its back and kick its legs to get exercise of a suitable nature; it walks, trots, or runs, and with these simple exercises, and no more than it voluntarily takes, it grows into a magnificent creature. It rests a great deal of the time. It is not an essential thing to work strenuously in order to develop muscular power.

Take for example the lion. The lion and its family live on a rocky knoll on the margin of the desert, and spend their day there in a state of rest. They come out at night to seek their food, and may walk or trot some miles in seeking the water hole, where they expect to find food. The only vigorous effort which is made is in the last rush in an effort to strike down their prey. As soon as they have eaten they return home and there sleep as late as a grand opera star, yet under these conditions—a highly satisfactory food supply and no special effort to train themselves to a state

of hardihood—they remain graceful and powerful creatures, with as long a life on the average, barring accidents, as have other creatures with other food habits.

Exercise is a good thing, so is cleanliness. I would not moderate too much my expression of admiration of these qualities, for I thoroughly recommend them. I nevertheless emphasize this point here because there is a group of educators who seem to feel that exercise is the most important means of building up strength and health. I want to insist that we cannot make exercise take the place of proper nutrition.

When we make a program for human betterment we must understand that we cannot limit our instruction and our efforts to children of school age. We must consider all children of all ages. From the standpoint of health the most important time in the life of an individual is the prenatal period, and the period of infancy and early childhood. It is then in great measure that the size of the fund of that something which we call vitality is determined. It is then that the quality of the teeth, the skeleton, and the perfection of form, are determined. What we do with children of school age is to be looked upon as a salvaging operation, commendable but by no means so basic in its significance in the life of the individual as is a sound health program which begins with the expectant mother, and ends with a properly educated young adult.

*When to
Begin a
Sound
Health
Program.*

Women who are expecting to have children are enthusiastic and earnest almost without exception in following any advice which will increase the prospects for the health of their infants. They form a group which is in an especially receptive mood, and their cooperation can be easily secured in applying such counsel as will improve their own or their babies' welfare. Mothers are also very solicitous for the welfare of young infants, but this solicitude gradually fades as the child grows older, and is much less pronounced when it reaches school age.

School children can be made an effective source of information to parents, and it is through the education of school children that we can expect to improve the living habits in a great many homes. If children are convinced that certain living habits are of importance and promise reward of a kind in which they are interested they will not infre-

quently be insistent or even tyrannical in their demands at home.

It is a matter of great importance in the teaching of children of school age that they receive their instruction from someone who will serve as a model of physical fitness, beauty and health. I do not believe children in general are much impressed with advice about nutrition from older people who themselves do not present evidences of physical success. Children are impressed with such physical prowess as the athletic feats of Douglas Fairbanks, and with the physical perfection seen in many of the screen stars. It is only through physical beauty and physical power that the interest of children in proper living habits is to be secured. Lessons illustrating the contrast between feeling well and feeling ill do not, I believe, impress the young as they do the adult, the latter having a better appreciation of a sense of well-being and ill-being.

It is, of course, impossible to secure as teachers of the young, persons who exhibit in themselves the idea of physical perfection. This is the ideal but it is scarcely attainable at present. The next best thing is to illustrate to children the importance of the right selection of food by means of animal experiments. Such contrasts as are easily obtainable in groups of laboratory animals fall but little short of being as striking and convincing as anything in human experience. We need to have more people trained to conduct for educational purposes demonstrations with laboratory animals. Pictures go a long way toward getting the results we desire but they do not take the place of the living animal. This is especially true where different groups are shown to go through very different experiences purely as the result of the kind of food provided them, some failing to grow, becoming rough and timid, while others grow to larger size, and become strong and vigorous, and exhibit gentleness and freedom from anticipation of danger.

It is of great importance that we look toward a better standard of perfection than we are now doing. I do not like the term "normal" as it is now used. It really means nothing more than a fair average of what we are accustomed to see. When one contemplates a group of children who are passed by medical inspectors or health workers as "normal" one must, if a little thought is given to the matter, conclude that our standard of normality really applies

*Health
Teachers
Must Look
the Part.*

*Teaching
Nutrition
Through
Animal
Experi-
mentation.*

to physical inferiority and a relatively low standard of health. It would be much better if we adopted the term "optimal" as an index to the goal toward which we are working, and picture in our mind's eye optimal physical development, beauty and health. Every child should be taught to contrast perfection with the average attainment in our population in order that he may have an incentive to live up to the guiding principles which will best promote his development and protect his health.

*The
"Optimal"
as an
Ideal.*

I have emphasized repeatedly in recent years the necessity of taking into consideration the entire life history of the individual rather than his apparent well-being at the time of examination, as the basis of judgment as to how far we are attaining or failing to attain our objectives.

We need scarcely expect rapid and effective progress toward the ideal in physical development and function until we have put into operation some effective procedure for raising the standard of human material. Many children now come from parents who are physically inferior, and for this reason have limited possibilities. I do not see any hope at present for applying to human beings any of the well established biological principles of selection and weeding out of the unfit which would, if applied, do more than any other one thing which we could do to improve the human race. Endeavors in this direction are, however, not recognized as the task of the present group of workers.

We have just passed through a period covering several years in which the teaching of health rules and health chores, etc., in the public schools has been over-advertised. Those who promoted this work in its early days were very optimistic as to what they could accomplish. There is a tendency now to reaction on the part of the public and to despondency on the part of those whose enthusiasm led them to promise more than could be delivered.

The difficulty as I see it lies just here—that the mistaken notion gained credence that one can start with a child of school age and overcome all the bad effects of earlier mistreatment or misfortune. We have fixed too largely our attention upon the school child, and any effective program for human betterment must include plans for approaching in the right way the solution of the problems of persons of all ages. These mark themselves off into the several well

defined periods in life—pre-natal life, infancy, childhood, young adult, and older adult life.

The most effective of all means at our disposal for gaining the desired ends is through the teaching of nutrition and of rest. Results can best be obtained in pre-natal life through the education of dentists and public health nurses, and at present, to a lesser extent, through the advice of physicians. This situation will in time, I hope, be reversed. At present I see the greatest hope of progress through the members of the dental profession. They are a very teachable group, and have had an ideal experience during the last ten years to fit them for the reception of new ideas as to the importance of proper diet.

During the last year I have had an exceptional opportunity in meeting very large numbers of dentists at their national association meetings and at state dental society meetings. I find all the wide-awake dentists in the country ready to acknowledge that they have had sufficient opportunity to observe the workings of the slogan, "A clean tooth never decays." They are convinced that it is not true. Our education in the preservation of teeth has been left in great measure to those financially interested in the sale of tooth brushes, paste, and washes, and we have been given the kind of education that might have been expected from such teachers. Nearly all the good teeth which our race has enjoyed existed before the tooth brush was invented.

I have asserted repeatedly in recent months that the most fundamental principle in preventive dentistry is the development of a sound set of teeth. The teeth are enameled before they are erupted, and the development of the teeth takes place in pre-natal life, infancy, and early childhood. If we at that time do not take advantage of the opportunity to make a sound set of teeth they will thereafter be vulnerable. The shortsightedness of the policy now so widely advocated of solving the dental problems of the race by multiplication of dental clinics for the repair of children's teeth will be easily apparent. Such a program, while commendable from the standpoint of safeguarding the health of persons now living and of preventing suffering, is to be commended as the best we can devise. The same program offers no prospects of relief from a situation which has become all but intolerable. Tooth preservation

must depend upon providing within the teeth their own barriers of defense—protective powers which reside within the living tissues—such as the body has in respect to all its parts.

We may therefore expect the dentists to very quickly acquire, as I know they are doing, the fundamentals of scientific nutrition, and to urge this upon the patients to whom they have an opportunity to talk while operating upon their teeth. I am very enthusiastic about the contribution to human welfare which this profession is about to make.

During the last three years we have conducted in our laboratory many hundreds of experiments directed toward demonstrating the effects of diets faulty in one or more specific ways on the development of the teeth and their preservation after eruption. These data are still unpublished, but I may state here that nothing in my experience has been more convincing than these data in showing that the diet is the factor of supreme importance in determining the quality of the teeth.

I must also express my great appreciation for the enthusiasm of health nurses, teachers, and many physicians who are taking up this line of endeavor. My desire at the present moment is to prevent the despondency which is apparent in some individuals through failure to transform within a few months enfeebled creatures into models of physical perfection. I hope that in pointing out what can be done for a human being in different epochs in its life I may set this whole subject in its proper perspective and stimulate interest and effort toward achievement. I have mentioned briefly the subject matter or perhaps the appeal material which will be most useful in affecting the unborn child and the infant, also the child of school age. It is little less important that a campaign of education be promoted which will tend to correct the faulty metabolism, and relieve the attending discomfort and brighten the outlook of life of a vast number of adults who are prematurely growing old. The most valuable feature of this line of endeavor would be the influence on young adults which would lead them to make an earnest effort to preserve the characteristics of youth while they have them. While somewhat beside the mark in the present restricted discussion, I may say that the same appeal, with slight modifications,

*A Modern
Conception
of the
Fountain
of Youth.*

serves here as serves in the case of the school child, i. e., the appeal to physical beauty and the figure which goes with health. There are few now who realize that a short and effective day is more valuable from the standpoint of efficiency than the usual long and ineffective day.

If, then, we adopt a comprehensive plan of improving so far as we may the knowledge and personal conduct of individuals of all ages we may confidently expect not only improvement of the lives of individuals, but a steady growth of the spirit of appreciation of the importance of applying scientific knowledge to adult life for the special purpose of promoting physiological well-being. As time goes on there will be an accumulative effect which will become manifest in a distinct improvement in the average standard of well-being in human beings.

Discussion

The discussion of this paper was introduced by Miss Edna White, Director of the Merrill-Palmer School of Detroit.

Miss White said:

"The first point I wish to emphasize in Dr. McCollum's discussion is the necessity for disseminating accurate information regarding nutrition. So much misinformation has been given out, that we are now facing in many quarters, a reaction against nutrition propaganda which tends to discredit the whole movement. An instance of this is in the over-emphasis that has been given weight as an indication of malnutrition. The weight factor has been a useful device to interest teachers and pupils and as an index of progress, but there has not been sufficient emphasis on the fact that it is only *one* factor and in many cases not the most important in diagnosis of malnutrition. In consequence there has been a reaction and in developing our health work in Wayne County we found it difficult to secure either interest or endorsement by the school authorities until it was made clear that the diagnosis of malnutrition was based on many other factors besides weight. The recent articles in the *Outlook* while in many respects unfair, have received considerable attention and credence on the part of the public in general. All this shows the necessity of supervision of educational programs and material in nutrition by trained specialists, and the desirability of the presentation of accurate information in simple terms.

"We must recognize that the organization of subject matter in this field depends upon the group to whom it is presented.

"Nutrition specialists must first receive basic training in the underlying sciences and develop their work as applied science. The

specialists in related fields, such as teachers, nurses, and social workers, who are often the agencies directly transmitting information to the parents and children, must in most cases rely upon empirical information which needs to be carefully chosen. It is imperative that they recognize their limitations and the necessity of trained supervision. The trained workers, in turn, must realize that the specialists in related fields have often not the same science basis and may misinterpret and misapply statements they do not understand.

"The trained worker should be available so that problems may be constantly referred by these associate groups. In Wayne County we have worked out this plan by having a county supervisor of nutrition who directs the work and gives accredited short courses to the teachers in the Elementary Schools. By the end of this year we will also have given similar short courses to every group of public health nurses in the city and county (approximating in number 275). Nutrition bulletins were prepared to be used by the regular teachers in the Elementary Schools in connection with physiology which is a required subject. A casual examination of any primer of physiology will show how inadequate and in most cases absurd is the information given in regard to food. The teachers themselves frequently have no idea as to the meaning of the information given, since it is phrased in the most technical terms and in consequence they have no notion of its application in terms of everyday living. We need to furnish sufficient accurate elementary information regarding food so that the child may be able to make an intelligent selection of his own food. We have been satisfied in most cases with doling out milk, a remedial measure which, if unwisely handled, may have no educational value whatever, and from the social angle may be a questionable practice.

The Inadequacy of Most Text-books on Nutrition.

"Lastly, I agree most heartily with Dr. McCollum in feeling that our ideals of health are not high enough—we are too often satisfied with being able to get about. Our teachers must believe in health and 'practice what they preach' so that our children are taught by example as well as precept."

Miss Adelaide S. Baylor, Acting Chief, Home Economics Service, Federal Board for Vocational Exchange, Washington, D. C., here expressed her conviction that the Conference should "lead to more perfect team work of the specialists in nutrition, physical education, physiology and hygiene, since all had as their major objectives the promotion of health."

Referring back to the subject of the weighing and measuring of children, *Dr. Wilkes* said:

"I should like to point out a very serious error that has been made by those who have deprecated the school use of weighing children. Attention has been fixed on a very small portion of the minority group and we have entirely overlooked the great mass that have been improved by the rather concrete methods we have of weighing and measuring. Handling 1,800 children, 18 per cent. of the children

(most of them underweight), are improved and put into the normal group—simply because we have nourished them and endeavored to point out the defects.

“Because we could do nothing with the very small portion of the minority group these people are ignoring absolutely the most convincing kind of material which is effective with large groups, because of the few exceptions.”

Then *Miss Jean* mentioned that Dr. Wood and Dr. Holt had prepared very careful articles on the subject of weighing and measuring of children in answer to articles which have been appearing in the *Outlook*, which articles have been brought out in the form of a pamphlet by the Child Health Organization.

Dr. Wood here contributed an interesting reaction to *Dr. McCollum's* paper, saying:

“I am going to recite a little lesson based partly upon *Dr. McCollum's* recent work. I said it before him and he seemed pretty well to agree with it. Let me give it to you, briefly. It is my interpretation of the best material I can find. For example, all commercial vitamins are quite worthless so far as our scientific investigations show us, though I understand there is no agreement. A recent article reported tests upon rats with vitamin preparations, and the test favored one preparation, but showed no evidence essentially in favor of the others. *Dr. McCollum's* latest article, which appeared this week in the *Journal of the American Medical Association*, reports that his recent experiments give no proof of the value of any of them. The people of the country are spending millions for these elixirs of life and health and youth, and one of our obligations is to try to interpret the nutrition phase of knowledge in the matters of health, not only to children, but to adults. In the next place, I gather that our ordinary diet has too much of white bread, potatoes, animal muscle, and sugar—that the things that should be emphasized particularly in the diet are two salads a day—salads twice a day—because of the very valuable material that salads contain, represented by raw lettuce, celery, cabbage, and other leafy materials; that we have what *Dr. McCollum* calls the ‘pot herb’ represented by spinach and leafy vegetables; and that we should have, somewhat independent of age, a quart of milk a day or its equivalent in manufactured dairy products. That may be changed next year or next month, but I give it as an illustration of the best practical synthesis that I can find at present.”

*Knowledge
as a Pro-
phylactic.*

Both *Mrs. Henrietta Calvin*, Specialist in Home Economics, Bureau of Education, Washington, D. C., and *Miss Laura A. Cauble*, Bureau of Nutrition, Dairymen's League Cooperative Association, Inc., New York City, brought out the great teaching value of concrete demonstrations of nutritional effects produced by feeding and other environ-

mental factors, on plants and animals, when such demonstrations can be scientifically conducted and carefully controlled by responsible people. The value of well-chosen exhibits illustrating food values was noted by both speakers.

Miss Jessie Hoover, Milk Utilization Specialist, Bureau of Animal Industry, United States Department of Agriculture, Washington, D. C., in commenting on the carrying power of the concrete methods of the nutrition class, told the following story, which shows in an amusing way how one child tried to use her knowledge to the advantage of her pets. Miss Hoover's story goes as follows:

This story is about the little daughter of my chief and it goes to prove that children get ideals and carry them over into their lives. Her father came home from the office one evening and found that she had a little playmate with her, and they had gathered seven of the neighborhood cats into the dining room. On the dining-room table were seven sheets of paper and at the top of each sheet was written, "Nutrition Record of Teddy, Dick—Tom—etc." Under Teddy's record was written, "Nine pounds with normal fur"; then "Diet—Thirteen saucers of milk and three eggs." This record varied in the case of each cat. The little girl went to bed at the usual time that evening. While undressing she called down to her father below, "How do you spell nutrition?" The father told her, and then she asked, "How do you spell clinic?" He also told her that. Later on in the evening her father went upstairs, after she was asleep, to see what she had been doing, and he found that each sheet of paper had been headed "Nutrition Clinic."

Dr. Richard A. Bolt, General Director, American Child Hygiene Association, concluded the discussion by stating that he believed Dr. McCollum had struck a keynote when he said that the principles of nutrition were the fundamental health habits around which others must be built, and that it is important to distinguish between *health* habits and habits which are *æsthetic*.



Section III

THE PLACE OF HEALTH EDUCATION IN THE CURRICULUM

THE Conference next addressed itself to the problem of the wisest possible distribution of the subject matter just recommended. In comment, the Chairman struck this important note:

"We must realize that it is of great importance to put into the field of subject matter, material that is as up-to-date, as scientific, as well authenticated as possible. We must try to depend upon the most authoritative sources, the best authorities for this material. We cannot always be sure of the accuracy and the balance of emphasis in material values, I suppose, even in the official reports from Boards of Health, or from any human source, but some sources are more dependable than others. I will give you one very simple illustration. Supposing we took this range of material that we get from the voluntary organizations. When a Life Insurance Company puts out material in the health field, if we are reasonably familiar with it, we may appreciate the fact that the modern Life Insurance Company is not only selling insurance, but also health. It will be likely, therefore, to get the most authoritative material in the health field. (I have no desire to advertise life insurance companies.) When we have health devices from the commercial manufacturers of materials, we should be very careful. They are apt to be biased—prejudiced—in favor of their particular manufactured products. In other words, they are not primarily selling health. Commercial people are selling specific, specialized products. Perhaps that simple principle is thoroughly enough illustrated and emphasized in just this way.

"The topic of this session is 'The Place of Health Education in the Curriculum.' The first paper is by Dr. Maurice A. Bigelow, Professor of Biology, and Director, School of Practical Arts, Teachers' College, Columbia University, New York City."

The Place of Health Education in the Programs of Schools and Colleges

Dr. Bigelow:

LET me begin by stating my confession of faith in Health Education.

I believe in Health Education not as any cut-and-dried or special form of program which has come to my knowledge, but simply as a broad, general movement for center-

ing the attention upon the importance of giving more consideration to the problems of health. Some 18 or 19 years ago I renounced my belief in the old, formal physiology so far as the first six years of school life were concerned. Beyond that time I have a little different point of view. I state this confession of general faith in Health Education because I am going to say some things that may sound critical. Please understand that I am in general sympathy with most of the ideas of the movement. In criticizing some details I am trying to save the movement from some over-zealous friends, as well as from some of its misunderstanding enemies. I say this so as to explain some things which may sound somewhat critical.

*I—The Relation of Health Education To Its Predecessors,
“Physiology” and “Hygiene”*

In planning for a nation-wide health educational movement we may save ourselves the task of uselessly repeating much of a long chapter of the history of science education if we remember that we are not dealing with a recently discovered phase of education, as some enthusiasts seem to believe. “Health Education” is a very new name, but trying to teach how to maintain natural health under the more or less unnatural conditions imposed upon us by modern civilization is no new thing in American education. Certain school books on health had a large circulation before 1840, and in 1842 Horace Mann devoted about one hundred pages of his sixth annual report as Secretary of the Board of Education of Massachusetts to a statement and defense of health study as a school subject which has not been equaled by any later writer. Numerous other prominent writers on science education, notably Herbert Spencer in “Education” (1861) and Huxley’s “Essays” (1876 and 1877), have emphatically advocated scientific study of human health in schools and colleges.

It is true that many of these educators wrote under such titles as “the study of physiology and hygiene,” but, nevertheless, an extensive historical inquiry into the American teaching concerning health during the nineteenth century has convinced me that our new “Health Education” is in very great measure a new label for a greatly improved brand of goods which under any of the old names could

*New
Names for
Old.*

not be marketed in the educational field as extensively as their importance demands.

Please understand me, then, as not laboring under the popular delusion that Health Education is a brand new subject to be forced into the curricula of schools and colleges. Fundamentally, Health Education contains comparatively little new and important knowledge which would not be found in the old physiology and hygiene.

What, then, are the distinguishing characteristics of this new movement? So far as the chief aims and subject matter is concerned, Health Education as a phase of practical science education is a very new name for the very old idea that study of the human body in relation to its environment will somehow give the individual human a key to greater health, and hence greater efficiency and happiness, making life more worth the living. But Health Education of today implies more than scientific subject matter. It also means up-to-date educational methods; it means, in general, more educational emphasis on the applications of science to successful human living; it means a broader field than was commonly included in the old physiology and hygiene of the public schools and most colleges; it means, as I shall point out in the next section, teaching for health that is much more than physical. In all these respects Health Education can be made so different and so much more efficient than the old studies which had the same general aims and subject matter that for the sake of clearing away all the old mistakes and hopeless misunderstandings, both of teachers and of the intelligent public, it is good that educational leaders have decided to drop the old terminology and to place an absolutely new label on a new way of working for the old idea of more health through education. So much for the relation of the Health Education of today to its predecessors in our educational system.

II—The Larger View of Health in Education—Health as Both Personal and Social Welfare

It is important that Health Education as a whole, extending from Kindergarten through Junior College years, should be organized on a broad basis, including health as both personal and social welfare, and meaning much more

than health as that term is usually applied to the physical well-being of the human body. It will seriously hamper the movement if there is broadcasted the impression that Health Education is simply improved hygiene in the old physical sense. ~~The truth is that our conception of the field of hygiene has expanded rapidly during the two decades of this twentieth century.~~ Hygiene once meant, and still means to most people, mere physical health, i. e., the proper working of the machinery of physical or animal existence. But this is too limited and narrow for our highly organized civilization in which the healthy, joyous, efficient individual life must perforce have in it many elements which are vastly more than physical living, because the psychical and social aspects of life have become so highly developed. The study of healthful living must be more than personal and public hygiene concerned with physical and bodily health, it must also deal with healthy mental life; and, to be complete, it must touch social health or social welfare of society, which scientifically means groups of two or more human beings.

In short, hygiene as the science of healthful living was fifty years ago entirely physiological, in the eighties and nineties of the last century it absorbed the pertinent bacteriological discoveries, still later the psychological claimed a place, and in the last twenty years we have begun to recognize the importance of many sociological elements in the problem of the healthful and successful living together of men, women and children on this planet of ours.

Of course, the inclusion of the sociological problems of family and community health or welfare expands hygiene to the European scope of social hygiene as represented by the present activities of the social hygiene organization of France and also by Havelock Ellis in his well-known "Task of Social Hygiene." These cover a multitude of problems concerning social health or welfare. Many of the problems are already well placed under sanitation and sociology, and the result is that in Europe the prominent problems of what they call social hygiene in its largest sense of social welfare are those which in America we have agreed to locate in social hygiene in its narrow sense, namely, the problems of social health or welfare which have grown out of, or are closely related to the fundamental sexual instinct. For example, some of the chief topics considered under social

*Sociological
Elements
in Health-
ful Living.*

hygiene abroad are: the feminist movement, state regulation of marriage and divorce, eugenics, the problem of venereal diseases, legal-social control of sexual conduct, the reproduction-control—understood here in America as part of our limited social hygiene movement because they are clearly problems centered around the phenomena of sex.

It is perhaps unfortunate, both for the limited field called social hygiene and for the broader field of social health or welfare, that in the American usage social hygiene has replaced and broadened sex hygiene. However, so far as the needs of American education are concerned, we can use satisfactorily the phrase "social welfare" to include as much as the European social hygiene. In fact, it is significant in this connection that the leaders of the educational phase of our American social hygiene agree that the subject should not appear as such in our educational program, but should be merged and even submerged in a larger program for the teaching of human welfare through various subjects which naturally have bearings on health in its widest sense. Hence the American usage of social hygiene as designating the group of the chief problems of the larger social hygiene of Europe does not concern our broadening our conception of Health Education to include those aspects of social health which are, after all, of personal meaning because they react so definitely upon the individual. For illustration, take such a simple case as teaching young people to control their tempers so that the word "indignant" is strong enough to describe correctly their reactions to other people. Here, selected from numerous common situations, is a clear-cut problem of social welfare or social health which seriously concerns society; that is, the relations of two or more individuals. At the same time, it is a problem of personal health because a temper running amuck is not good for the individual's nervous system, as proved by the rebound on digestive, circulatory, and other organs. Another illustration may be drawn from the most complicated of human social relationships, namely, the mental and social adjustments in family life. Disharmony or maladjustments of men, women and children in homes is bad social health which reaches the extreme of social ill-health when a family disintegrates. At the same time, every family physician knows what a

lot of personal ill-health is the result of the social maladjustments of the family reacting on the physiological processes of the persons concerned.

Do I make clear my point that Health Education must set its horizon far beyond that of the old physical hygiene? That is no longer satisfactory because it is bounded by the directly physiological, or indirectly bacteriological, aspects of individual health in the sense of freedom from the disorders which demanded medical aid. Under the heading of "Health Education" we must be free to include any problems of personal, family, and community or social health or welfare which in both direct and remote ways react on the physical and mental and social well-being of the individuals who are the fundamental units of society.

So much in favor of the larger outlook of Health Education.

III—Health Education in Kindergarten and Elementary Schools

may be taught:

- (a) as a special subject prescribed by law,
- (b) in nature-study or "science,"
- (c) in physical education,
- (d) in language work,
- (e) in home-making and home-living classes, for both boys and girls,
- (f) incidentally in "social science" and moral education topics, and in extra-curricular activities as supervised playgrounds.

*Health
Education
in Ele-
mentary
Schools.*

Avoid over-emphasis on the word "health" or its opposites "disease" and "illness." Ultimately, and in private schools, most important topics in a, b, c, f should be merged under the general heading "practical science," extending from Kindergarten through Junior High School years.

The big problem is training teachers already in service in the Elementary Schools. We need special "practical science" teachers in graded schools just as much as music and fine arts teachers. For small schools we need better teachers' guides to textbooks. We need textbooks which must be more than "readers."

IV—*Health Education in High Schools*

may be taught:

*Health
Education
in High
Schools.*

- (a) in Junior High School and year I of four-year schools (prescribed by law),
- (b) in "general science"
- (c) in biological science,
- (d) in hygiene, personal and community,
- (e) in physical education,
- (f) in home-making, and home living,
- (g) in literature,
- (h) in social science and psychology,
- (i) in extra-curricular activities,
- (j) in lecture series on home health and home living.

V—*Health Education in Regular Liberal Culture Colleges*

may be taught:

*Health
Education
in Colleges
and
Teacher-
Training
Institu-
tions.*

- (a) in hygiene—general, personal and community,
- (b) in biology (especially, its physiology and applied chemistry),
- (c) in physical education,
- (d) in home-making,
- (e) in sociology,
- (f) in psychology,
- (g) in ethics,
- (h) in literature.

Most of the best health teaching in American colleges is now done by teachers of biological sciences or of hygiene. The college physician as such is rapidly losing his old-time hold on the hygiene courses. Very little in the professional medical training and experience of a physician fits him directly as a lecturer in Health Education. Much tends to unfit him. Therefore, the college physician should function as a lecturer on health only when his medical training has been supplemented by educational study, and especially by study of the hygiene of normal life, so that he deserves a dual appointment as college physician and professor of Health Education. Already there are a score or more of such men and women in this country. They are not likely to increase in the larger colleges for the reason that in those institutions the duties of the college physician combine both those of medicine and health officer, and allow no time for more than occasional lectures on health improvement or conservation.

These remarks regarding college physicians apply also to school or college nurses. Professional training for nurs-

ing does in itself not prepare for teaching hygiene. Supplementary training is necessary.

VI—Health Education in Graduate Teacher-Training Colleges

In these the opportunity is similar to that in regular Normal Colleges, but in addition to good technical preparation, instructors who are to train students in Normal Schools to be teachers of Health Education should have a thorough knowledge of educational psychology, history and philosophy of education, and fundamental principles of teaching.

Discussion

Dr. Wood then asked Dr. Caroline Croasdale, Professor of Hygiene, and College Physician, New York State College for Teachers, to open the discussion.

Dr. Croasdale:

"In this brief discussion I shall limit my remarks to 'Health Education in Teacher-Training Colleges.'

"Before attempting to discuss the place of Health Education in the curriculum in such institutions it seems logical to enumerate some of the aims or functions to be served by such a course—many are so obvious of course as to need no mentioning. The following three are perhaps enough out of the beaten path of thought along this line to be worth considering for a moment,—first:

"Let us have Health Education in our Teacher-Training Colleges that will aim to humanize, to warm, to vitalize. Thus we can help the student here by trying to render as innocuous as possible the tensions created by over-zealous specialists in Latin, history, or mathematics—tensions which if unrelieved tend all too often to seriously distort the student's sense of values besides working havoc with her nervous system. To stabilize, to neutralize fear and anxiety will help her to grow mellow instead of remaining timid and callow.

"The term 'nervous teacher' has come to be almost a byword in our schools and the nervous woman with the querulous voice and the irritable ways besides laying up no end of suffering for herself could never in a thousand years be a successful teacher of Healthy Living. It is well to remember here that healthy, happy living is an art as well as a science and no amount of teaching of the mere cold facts of the sciences related to health will succeed in producing that first and most fundamental necessity in Health Education—a healthy, happy teacher. If you were psychoanalytically inclined you'd call her a well adjusted personality—if you are just a plain hygienist, like myself, you'd call her a successful practitioner of the *fine art of living*. This to me is the most subtly difficult aspect

*How to
Eliminate
the
"Nervous
Teacher."*

of the whole job. Just exactly by what means it shall be accomplished I cannot say. I have only the profound conviction that it is fundamental and must be done. To help the student at all times to remember that she is first, last and always a human being—not just so much raw material to be treated with alopathic doses of various heavy tasting ologies which, instead of helping to interpret life to her sometimes at least serve only to lead her further and further into the mazes of unreality. ‘I’m so worried over Calculus I cannot sleep,’ or ‘I’m sure I shall never pass History 3:’ not all the fault of the college curriculum—partly the student—immature with distorted perspective and faulty sense of values—badly in need of education in *mental* hygiene—if you will.

“The second aim, really embraced by the first, is to give the prospective teacher the Health Ideal energized in her by a huge *wish* for accomplishment both in herself and in her future pupils. When I studied college psychology we used to say, ‘Will.’ Now I understand it is ‘Wish’; will or wish, it must be strong. The Health Ideal placed before her must be that of ‘positive health’ so called. She must really appreciate and understand that it no longer suffices to be simply not sick—she must aim to be always gloriously well.

“The third aim of Health Education, here has to do with the necessary technical information and equipment which will enable the student to first maintain her own health—both mental and physical—at its very highest level and second the information which will interpret to her the health needs of her pupils together with health information suited to their needs and ages, with methods thrown in if you like. Personally I should prefer my young teacher of health ideals to be thoroughly well and happy herself, generally well-informed along health lines with a great big ‘Wish,’ *i.e.*, enthusiasm, and no methods (at least ready made ones), than to be even a little neurotic, a trifle hollow-chested but method perfect. Let her be so well that she ‘oozes’ health and happiness then I’m sure her methods will take care of themselves. Ever since my own normal training days I’m inclined to shy from methods a little, for fear the trees might get so thick we couldn’t see the woods.

“These then, being some of the fundamental aims of Health Education in Teacher-Training schools, by what mechanisms of curriculum are they to be attained or approximated?

“Narrowing down to the actual department organization for health work which has met with most favor we find a beneficent three-armed influence.

“The *first arm* is Health Examination—gentle, intimate, leisurely, the mental as well as the physical needs of the student being constantly in the examiner’s mind—and the student leaves the office haunted by no gruesome specters of disease but with the health vision of the perfect woman she wishes to be.

“The *second arm* takes her to the hockey field, to the swimming pool, to the track meet, to the great outdoors, to the gymnasium. There she must meet personified her health ideal and there my constant prayer is—Oh Lord send us physical education leaders,

strong and clean and fine—and many of them—and oh! Lord, send them quickly!

“The *third arm* gathers her into the classroom and lecture hall to hygiene in all its ramifications. Careful work in social hygiene, heredity, eugenics, sanitation, applied bacteriology, and applied physiology. Further elaboration of subject matter is aside from the point here, but I may say in passing, that I heartily agree with Dr. Bigelow that if you wish this subject matter correlated and useful—have it given in your own department.

“And the end product of all this? We dream of her; we have not yet produced her,—quite. A warm, vital, happy girl, calm-eyed and strong and gently wise; able to control intelligently all that pertains to her own health, and ready and eager to do her part in guarding and conserving the health of our children.”

In the informal discussion following, *Dr. Winslow* expressed this opinion:

“The newer study of science is probably the best way to approach the subject in the earlier grades, and it is appropriate to call it frankly physiology and hygiene in the upper grades.

“The inculcation of proper health habits is the objective of Health Education, but in order to be sound, Health Education must grasp the underlying principles of biological behavior in the broad sense. Now our danger is that in the reaction from the old system, which gave a certain amount of knowledge about the body and did nothing with it, we may attempt to do something, without having anything to do it with. There is no antagonism between “Knowledge” and “Health Living,” we must have both, and if our Health Education is to be sound, it must appeal to the interest, to the will, and to *the intellect* to the degree to which the child’s mind is attuned.”

Both *Miss Mary G. McCormick*, Supervisor of Nutrition, State Department of Education, Albany, N. Y., and *Miss Katherine A. Pritchett*, Supervisor of Nutrition, Department of Public Instruction, Pennsylvania, in substantiating *Dr. Winslow’s* point, expressed the belief, based on their observation and experience, that more scientific knowledge is necessary to the teaching of health, and that our teachers do need this training.

*Student
Teachers
Need More
Scientific
Knowledge.*

Miss White, however, made this point:

“There are many schools in villages and rural sections where physiology and hygiene are taught, but where there are no special teachers of any sort. Granting that we have the material at hand, but that it needs vitalizing, we have an opportunity here for use in Health Education which we ought to seize. If we can give the teachers the help they need, an opportunity offers itself for teaching along this line which would be wasted if special teachers were, in every instance, insisted upon.”

The Chairman next introduced Mrs. Lucy Paul, Instructor in Bacteriology, Physiology and Hygiene, Pratt Institute, Brooklyn.

Place of Health Education in the Curriculum

Mrs. Paul:

THIS is going to be a discussion of the place of Health Education in the High School and Teacher-Training School.

First I will consider it in the High School.

The student now has left the realm of activity without an explanation and is able to grasp scientific reasons. We avoid scientific reasoning with a young child, instructing him in health habits by other means, both at home and in school. But at the High School age the child begins to question the "why of things." As soon as he arrives at this period, it is his just right to be given scientific reasons for an explanation of his question. Therefore, Health Education should be taught from this scientific angle.

But the knowledge is not sufficient unless it is applied. This combining of scientific reasoning with the practical application of it lays the true foundation for the child's health career. Health becomes a scientific truth to him.

As many complete their school career within these four years, they should have an adequate knowledge of how to live hygienically before they leave.

The actual teaching falls into three groups:

- (1) The Physical Training Department.
- (2) Scientific instruction in the first and second year of High School.
- (3) Scientific instruction in the third and fourth year of High School.

The Physical Training Department should give hygiene talks along with their work as well as brief instructions in emergencies—this last being very important. These talks should be similar each year, but as the student passes from one class to another they should become more scientific.

Now we have come to the second group, which includes science instruction in the first and second years of High School.

In the first two years each student should have a general idea of the meaning of life taught through biology or general science. In general sciences emphasis should be placed upon the living sciences, particularly human physiology. It has been my experience in teaching general science that most schools wish this course to be an introductory course to chemistry and physics. This should not be so because the living sciences are of greater interest to a student. Whenever I have given my first lesson with the microscope I never have known it to fail that the first thing the students wanted to look at was a human hair or the human skin. Living objects are of much more interest to children than inanimate things. This not only applies to children, but to mature persons as well.

*High
School
Hygiene
Based on
General
Science.*

Biology, also, should place emphasis upon human physiology. The student should be taught that all living organisms possess similar systems as digestive, circulatory, respiratory and excretory, etc. This can be done by taking the one-celled animal or plant and have the students make their own comparisons between these and the gradual building up of a multicellular organism until the highest one is attained. There is no subject which brings about a more logical reasoning than the comparisons of living things, noting their differences and tracing their similarities.

If physics is taught in these first two years many hygiene lessons may be put in here. The human eye is an excellent example of a lens and the hygiene of the eye is easily understood here.

Also in chemistry there is no easier way of teaching the differences between the chemical and physical changes in the first lesson than by showing the chemical change which takes place in food when acted upon by enzymes, etc. Every student knows what is meant by a sour stomach, and right here in the human body is a good illustration of alkalinity and acidity, and it is more interesting than trying to illustrate these two properties by referring to chemicals of which the student has no knowledge.

*Physics
and
Chemistry
Contribute
to Hygiene.*

Lastly, in the third or fourth years applied physiology should be taught, with the above sciences as a background; the differences between plants and animals in food requirements could be brought out as well as the reasons for differences in their digestive systems, etc. This course should

include the structure, function and hygiene of each organ in a general way.

Physiology is not interesting to students unless it is applied. No student wishes to memorize the names of bones and muscles at this age, but they are interested in tracing food through its digestion, circulating it through the body as blood, tracing it to the cell and then from the cell through the excretory system out of the body.

*All
Physiology
Should Be
Applied
Physiology.*

If the student is taking a commercial course he should have courses in emergencies, biology or general science and applied physiology. No student should ever be allowed to leave a High School without a good understanding of the "house" which he must always occupy. This knowledge should come as early as possible through science courses.

Sex or social hygiene should come within these four years, and perhaps can be handled best by the Physical Training Department.

The second part of my discussion is the place of Health Education in a Teacher-Training School.

Here hygiene education should first give the student practical knowledge for her own well-being and, secondly, knowledge sufficient to teach it in turn to her students.

*Health
Education
at Pratt.*

As an instructor of Health Education at Pratt Institute, I will briefly sketch the way we give this instruction there.

The Physical Training Department at Pratt gives a course of personal hygiene lectures.

Beginning next year, in addition we are giving an emergency course the first semester. These courses are closely allied with the science courses.

The first year the students have an applied physiology course, which lasts throughout the year. Each organ of the body is studied from the standpoint of structure, functions and hygiene. The instructors have conferences at which each student is discussed. If the student is not living a hygienic life she is turned over to the physical training instructor, and if she does not live up to the instructions given she is told that she cannot be recommended for a position, even though her scholarship is adequate for her certificate.

In the second and third year an intensive course of applied bacteriology is given which applies to everyday life.

The microorganisms of milk, water, air and foods are studied and then the student is encouraged to try out prob-

lems which she is interested in. One of the students this year compared the bacterial count of underclothing which had been washed, boiled, dried in the sunlight and ironed, with the silk underclothing which cannot be washed in an alkali and hot water or dried in the sunlight and ironed with a moderate iron. The results proved beyond question that the silk underclothing retained a large number of bacteria from the human body. This applied bacteriology makes the student realize more than anything else the meaning of the word hygiene.

After the completion of physiology and bacteriology a home and community course of hygiene is given which is a résumé of physiology and bacteriology, and also includes social hygiene, mental hygiene and hereditary tendencies, etc.

The above courses are closely allied with the courses in chemistry, physics, cookery, nutrition, etc. Whenever we feel a subject can be studied to better advantage, say, for instance, osmosis in the physics course, we put it in that course. When I take up lactic acid bacteria in bacteriology, the chemistry instructor has her students study the chemistry of lactic acid. This close correlation is our strongest point. While I am taking up the digestion of foods in physiology, the instructor of chemistry teaches the chemical composition of the carbohydrates, etc. At the same time the preparation of the different food stuffs is taken up in the cooking laboratory. The student is taught the same subject matter in this way from many angles—that is, the digestion of foods, their chemical composition, their preparation and their application to the health of the body, etc.

If we have a student who is underweight, I have her write out her menu for a day, and the class as a whole criticize it for her. In this way the student's health is always considered first. A student said recently that no matter where she was at Pratt she heard hygiene—in fact there was no escaping from it.

Correlation, especially of hygiene, is absolutely necessary to make science courses effective.

Education means more than knowledge to us now. It means the right thinking and the right living. Every student who ever has attended school must be taught, as far as it is possible to teach, these two things—right thinking and right living.

*Hygiene
Should Be
a Synthesis
of All the
Sciences.*

Teachers must set the example and unless the student applies these two principles to her own life we teachers have failed in our teaching.

Discussion

The discussion was begun by *Miss Marion Lerrigo*, Teachers' College, Columbia.

"I have been reminded this morning of a most startling and remarkable statement that came to my notice this winter in one of the hygiene papers: 'After a germ gets into the body, it swells and swells and swells, until it gets into the whole system, and then you have the disease.' It seems to me that at Pratt, Health Education seems to have swelled into the whole system until they now have an interesting and beautiful case of the disease.

"Health Education should permeate our whole educational system, including the relationship of teachers to pupils, medical inspection, school buildings, school lunches, school management, as well as curriculum, so that we might almost say, 'The place of the curriculum in Health Education' instead of 'The place of Health Education in the curriculum.' However, as practical people, we have to get Health Education into the subjects of the curriculum and there are two points which the talks this morning have suggested to me that I wish to make.

"I do not wish to be disrespectful at all, but this Conference yesterday reminded me of an octopus spreading out its arms into almost all the fields of science and trying to take out the parts relating to Health Education and assemble them together. The problem is, where are we going to put all the knowledge we assembled yesterday? Mrs. Paul told us about Pratt and her work there in bacteriology, physiology and hygiene. I am particularly impressed with the point that she made: Last year or the year before certain subject matter was included in bacteriology, the next year in chemistry, etc. I wish we might apply that principle all the way through, from the Kindergarten up.

"It is extremely difficult to say whether a part of Health Education is more effective in English, in geography, science, home economics, or physical education. I believe that the only way we will arrive at very definite conclusions is from just such experimentation as was made there.

"The other point that I wish to make is this. If the civics teacher, for instance, had been here this morning, or the dramatics teacher, she would have been appalled that Health Education specialists should annex these subjects for the purpose of teaching health. There is a place in the curriculum for other things besides Health Education, and I want to make this plea: When we use English, or use arithmetic, or use dramatics in Health Education, let us observe the rights and personalities of those subjects themselves. We have no right,

even in as important a matter as Health Education is, for example, to teach health through a health play as atrocious from the dramatic point of view as some of the health plays have been. So I wish finally, just to repeat these two points, a plea for experimentation in health teaching, and a plea for respecting the personality of the other subjects in the curriculum."

These remarks provoked some lively discussion, started by *Mr. Chase*, who said: "Apropos of respecting the personality of subjects and their proper place in the curriculum, may I say that we are not teaching subjects, but are teaching children?"

Dr. Winslow:

"You are not teaching subjects; you are not teaching children. You are, I hope, teaching subjects to children."

Dr. Wood:

"May I offer a paraphrase to *Dr. Winslow's* emendation of *Mr. Chase's* statement, that we really ought to be helping children to train themselves by the use of subjects."

Dr. Small:

"We want to stick to the doctrine that we are teaching children *by means of* subjects and, more important, we are teaching them *by means of or through activities*. The real difference between the modern progressive education and the old traditional education is right there.

*A Question
of Definitions.*

"Now, the correlations that we are making in Health Education may be failures or they may be very fundamental and sound. In an ancient, mediaeval book, there is an example of the kind of correlation that we wish to avoid, though it is often, alas, found even today: 'Johnny caught a fly; he pulled off six legs and two wings—How many legs and wings had the fly? What a wicked boy was Johnny!'"

Miss Julia Wade Abbot, Specialist in Kindergarten Education, Bureau of Education, Washington, D. C., added the following story, bringing out an important point. She said:

"The great difficulty in teaching children through their own activities is that we do not know whether we have got the thing over. We are the pipers and the children dance. I will illustrate this point by the following story: An aesthetic art teacher had a class of children; she thought she had the best methods, and used the most beautiful colors, etc. The children used these through their own activities. She thought she had developed an appreciation in the children of art, and was really confirmed in that opinion, when, at Christmas time, they gave her a copy of *Mona Lisa*. But somebody had been in the shop when the selection had been made and this is what she heard: 'Teacher loves muddy colors,' said one of the children;

'let us find the ugliest picture we can. Here is a picture of a homely woman.'"

Dr. Bigelow:

"While we are teaching children through subjects, according to Doctors Wood and Small, I hope we will teach them some subject matter, through facts, according to Dr. Winslow."

The Chairman next introduced Miss Emma Dolfinger, Associate Director of the Child Health Organization, and recently Supervisor of Science in the Elementary Schools, Louisville, Ky., who spoke on

The Place of Health Education in Elementary Schools

Miss Dolfinger:

THE contents of the paper which I have the privilege of presenting to you, is the outcome of several years' experimentation in teaching health in some sixty elementary schools of varying social and physical environment, and the chief reason for giving this talk is that this account may provoke discussion which will help to clear up some of the questions awaiting solution.

The experiment in Louisville passed through two stages,—first, the propaganda stage,—to interest teachers and to capture their imaginations; and second,—the stage in which it now is, namely, where the need is, to keep the enthusiasm and activity, but to guide it so as to give it organic form and to affiliate health teaching with elementary science.

There seem to be three necessary points to be developed in a Health Education program. The first point is opportunity for children to practice, or report on home practice of health duties, together with the opportunity to acquire training in the proper technique of health habits. By this is meant that children must be taught, either at home or at school, how to do these health activities in such a way as to acquire their full benefits. Such things as tooth brush drills; breathing exercises; standing, sitting and walking properly; choosing proper meals in the lunch room; and eating them properly are some of the situations where nurse or teacher can see that health activities are correctly per-

formed. All of these must have as basis the developing of enthusiasm for such practice.

The second point in the health program consists in giving the child an enlightened attitude towards hygiene and sanitation. This phase means giving information and ideals through the usual channels of books, trips, pictures, and so on. It is important to do this in a live way, by appeals to the children's true interests. Success here again has as a basis the development of enthusiasm for health.

Successful Teaching Depends on Enthusiasm.

The third important goal is providing conditions in the school environment, at least, which make the correct impression in order to strengthen the bonds we are striving to form. Conditions that are important are adequate lavatory conveniences, gymnasiums, well conducted lunch rooms, hygienically arranged programs, adequate nursing and medical service, and so on through the program of all those activities accessory to a modern school program.

Over the first two parts of the program mentioned the classroom teacher has control. The third part, for which she is dependent on other people, can by its absence, make her efforts very hard of fulfilment. The usefulness of Parent-Teacher Associations, in getting good conditions, has not been exploited as much as it might be.

With the foregoing point of view, it is evident that Health Education cannot be confined to one place,—it must permeate the curriculum. To do this effectively, there must be both a definite place in the program for certain specific health activities, and fully thought-out correlation, since health instruction is more effective for being given from many points of view.

Health Teaching Must Permeate the Whole Curriculum.

Definite time assignments which must be planned for, and which cannot be left to chance or to merely possible correlations, include the following:

First, daily inspection or some form of health habit accounting and some constructive use of the findings.

Second, regular time for weighing and measuring, with discussion and use of the data as a basis for later health work.

Third, physical training with corrective work for those who need it, in addition to organized or free play.

Fourth, weekly lessons, well planned and motivated in the grades above the fourth, at least.

The aim should be for scientific as well as for ethical or mannerly concepts, but throughout, such instruction should be kept on the "play level." The lesson series should be grouped about real problems, such as "How can we bring up our weight to normal, and what are the reasons for these steps?" "What are the reasons for the rules given us for caring for our teeth? What can the class do to make a 100 per cent. record for sound teeth?" "What can science teach us that will help the boys score well in the Athletic Contest?" "How much of the food advertising in the magazines is really true?"

Such questions have led to sound health lessons with simple but sound science behind them. The unusual opportunities here for training in English expression are too obvious for discussion. Trips, experimentation, demonstration, are preliminary to, or concurrent with, reading, oral and written expression, as means of obtaining subject matter.

An important subject for consideration in a discussion of the place of Health Education in the curriculum, is the opportunity for correlation. Opportunities legitimately occur in the use of other subjects as *tools*, when a live health idea is to be put across. English, art, arithmetic, manual training, home economics, may be so used. Often the reverse is true, as when unconsciously to the children, but *never* to the teacher, geography, history, literature, even statistical mathematics, may introduce or develop a health project, a health ideal, or a health message. For example, in the study of geography, health subjects must be considered in such topics as food industries, textile industries, water-power, water supplies and their conservation, the Panama Canal, and so on with many of the geographical topics included in the course of study. Opportunities arise in history, in the study of the civilization of the Greeks, the living customs of the Middle Ages, the contrast of colonial, pioneer, and primitive life, with that of today. Biography offers us the stories of Pasteur, Roosevelt, Stevenson, with the great health message of those lives.

In short, the great problem is to get the teacher to set her health problems for herself, adapting them to the needs of her group,—and then to take stock of the opportunities her entire curriculum offers for solving this problem. Such

procedure will result in real correlation. To help develop this type of work is the great opportunity of supervisory officers and the obligation of the Normal School. To bring out examples of health activities truly correlated with other subjects in the curriculum, is the purpose of the discussion that follows; hence, time will not be taken to do this now.

Finally, let me say a word about the help that is due the classroom teacher, who has to execute the plans and ideas above outlined. Her supervisor owes her guidance according to her training and experience. The supervisor must make her thrill to health ideals for herself, as well as for her pupils. The supervisor must put her in touch with the substance of professional literature (subject matter), and with current methods of health teaching in a stimulating and easy way. The supervisor must provide her with material, encouragement, and wise guidance. The supervisor must devise ways to help the teacher evaluate her work and eliminate unproductive efforts. Finally, this supervisor should stimulate and give publicity to whatever the teaching force produces, that is good.

*Super-
visor's
Obligations
to Her
Teachers.*

Enthusiasm for Health Education derived from a sound knowledge and joyous healthy living must be in the teacher, before it can get into the children's lives,—no matter what its theoretical place in the curriculum.

Discussion

To lead the discussion of this paper, Dr. Wood presented Miss Mary Moriarty, a teacher in Public School No. 158, New York City, as the author of a most fascinating guide book—"Many Roads to Health."

Miss Moriarty said:

"In listening to Miss Dolfinger's paper one thing that appealed to me was the matter of giving the child an opportunity to report on the home practice of his health duties.

"In communities of a foreign nature the child who goes to school and who speaks English plays an important part in the home. He is a guide to the clinics and hospitals and does a large part of the shopping. He decides upon the stores to be patronized. The knowledge the child gets in school is greatly depended on by the parents. The child should know what constitutes a proper meal, how to lay a table, etc., and that it is poor economy to patronize a dirty store.

"In homes of foreign communities, the parents often express surprise at the ease with which the teacher succeeds in getting the

*Children as
Health
Teachers in
Foreign
Homes.*

children to do things, such as brushing their teeth, drinking milk, going to bed at a proper hour, etc. In New York State the nurses, doctors and school officials depend upon a classroom teacher to carry certain points over to the parents, who are proving hard to convince. In teaching health in a live way I have found playing the game one of the best methods. It at once catches the imagination and puts the child on the track of receiving further health instruction.

"After the children know that apples are a good, healthful kind of food and good regulators of the body they enjoy making posters showing apples with faces, legs and arms. Dr. Wilkes proved that beyond a shadow of a doubt in Trenton. The posters are made neatly and not in a slovenly fashion; they are taken home and placed on the walls and the parents enjoy them too.

"Health should not be confined to one place. The teaching of health does not constitute a divorce between health subjects and the ordinary subjects of the classroom, but lends itself in a fascinating way to the teaching of English, both written and oral. For instance, if a teacher decides on a composition on 'Milk,' and puts the children in possession of the facts—how much milk they should drink and how they should drink it, etc., if the teacher should decide that this sort of composition will prove in the long run more useful to the children than compositions on such subjects as 'I Wish I Were a Lion,' 'The Violets,' 'An Autumn Sunset,' 'How I Spent My Vacation,' etc.; if she decides that this composition on 'Milk' will help the children as much as the other subjects, then she should go ahead and substitute her composition on 'Milk' and proceed in the usual way. The procedure is identical, except that the children will show much more originality and a desire to express themselves.

*A Health
Newspaper.*

"In my classroom we run a paper called 'The Health Edition.' All that is needed is some children and some drawing paper. This little paper comes out every month and is in great demand all over the building. It is a side line and the children do it at home and at extra periods when their work is finished. One boy is editor-in-chief. Other boys are assistants, and the rest of them are reporters, and I was appointed assistant editor, I must say, much to my surprise. Sometimes the children bring in very good articles, but they cannot be published, because they are not properly spelled or are badly punctuated. The reasons why they cannot be published are pointed out. Then the child will get out his dictionary from the bottom of his desk where it reposes most of the time, and he will get the brighter members of the class interested, and after a while the article comes back correct.

"Next term I decided to let the children write their own supplementary readers. This occurred to me when I saw how nicely a boy had written a short story and how fascinated the other children were by it, and how interested they were in reading it, even more so than if it had been published by the Macmillan Company.

"In the formal work of an ordinary classroom much time is devoted to teaching the importance of punctuation. This can be taught in its health relationship. In dictation exercises, the teacher can ask the children, 'How many of you were in bed last night at eight

o'clock? Were the windows open?' The period, the interrogation mark are entirely recognizable by the children. Results will be obtained.

"History work presents many places in which there can be correlation with health work, as in the part that health played in the lives of the great heroes, Daniel Boone, Kid Carson, etc. In the arithmetic work also, every teacher who has taught, knows how hard it is to teach the child to use a ruler intelligently. A margin of $\frac{1}{2}$ inch or $\frac{1}{4}$ inch means exactly the same to them. An $\frac{1}{8}$ of an inch does not exist for them. When you put a tape line up against the wall and they start taking each other's height, in ten minutes every boy in school can measure most accurately. You will hear one of them say, 'He is skinning me out of $\frac{3}{8}$ of an inch on my height.' The same with the scales. One-eighth assumes a very important place. Many problems may be prepared dealing with quantities of milk drunk, the weights of the class, etc.

*Correlation
with
History
and
Arith-
metic.*

"The teacher expects to use every effort to bring the children up to grade. She should know how many children are coming to school habitually dirty, how many are using bad postures. She ought to be able to detect the 'ten o'clock scholar' by the shadows under the pupil's right eye, without being so terribly learned.

"These defects of vision and hearing, of children suffering from chorea, malnutrition, etc., and her skill in getting them corrected, should show up to her credit the same as it would in balancing up the deficiencies in any other subject.

"A class inspection for 30 children takes exactly five minutes, and the children look forward to it. I forgot it when we were terribly rushed one day, and a little voice piped up: 'Aren't you going to look at us this morning?'

"If a boy comes to school dirty, don't fuss about it too much. Treat it the way you would treat any accident. Just say 'John, wash yourself before you sit down to the table.' He takes a bar of soap and a towel and goes out. Next morning he comes to school clean.

"In homes where the mother is dead and the boy of 13 takes cares of himself, or where the mother is out working all day and the boy apologizes for his blouse not being washed, because the mother has mislaid the flatiron—when that boy gets seven points, it is not just a happening, it is a victory.

"At the end of the month the points are counted up, and the boy who gets the greatest number of points gets a tangible reward. It is not given as an objective at all, but as a form of recognition for distinguished achievement."

Miss Abbot:

"I want to know how Miss Moriarty received her enthusiasm. How did it come to her as a public school teacher?"

Miss Moriarty:

"Well, I received that enthusiasm from the Child Health Organization."

Returning to the discussion of where and how the subject matter should be taught, *Miss Effie Knowlton*, Superintendent of Health Education Department, Department of Education, Binghamton, N. Y., said that from her experience in Binghamton, she felt that much loss of time and overlapping in handling a Health Education program was prevented by placing the work in the hands of the classroom teacher, who could correlate the many Health Education activities with the other school subjects. To do this successfully the teacher needs the assistance and supervision of the specialists on the education staff, who in turn, should work in close cooperation.

Dr. Franklin Barrows, Assistant State Medical Inspector of Schools, State Department of Education, Albany, N. Y., then described as follows the program of Health Education which the State Department of Education has been promising to the teachers of New York State for some years back, and which will probably be distributed this fall. He said:

*The
New York
State
Syllabus in
Health
Education.*

"The syllabus has been completed through the 6th grade and we hope and contemplate that it will be possible to continue the syllabus through the 7th and 8th grades to the High School. I must speak then of our plan as carried out to date.

"The one thread that runs through this syllabus from beginning to end is the formation and practice of health habits. That unites one lesson to another and one year to another and forms the theme, and there are plenty of health habits to be instilled into the children.

"We also present with these health habits a sufficient amount of information—and by information we mean material that may come under the head of physiology or function or anatomy or structure, although we do not use the label of physiology or anatomy for the matters that are presented in this way—and some 'Safety First' teaching. Safety First is as important as the formation of any other health habit.

"Our aim is also to present to the child before the end of the 6th grade all the material, all the information, which in our opinion it is possible for him to learn and utilize up to the end of the 6th grade. We have exercised care not to present any material too far advanced for 6th grade pupils. We have taken special pains not to make the lessons too long—a syllabus jammed too full is worse than none at all. It confuses the teacher and makes her work doubly hard in having to select from it what she can do and pass the rest by. We have tried to make each lesson a possible lesson with a possible class, and a teacher that is sometimes almost impossible. I wish we were talking about teachers instead of syllabi and pupils. The syllabus is worked out with the idea that the child will leave school at the end of the 6th year. Many do not return after that. That

child has had a complete course in hygiene, with physiology and anatomy. He will be well fitted for life, without any more schooling, as a school can possibly make him.

"If we have the privilege of introducing a syllabus for the Junior and Senior High Schools, what else shall we teach, except the same thing in an advanced form? We have a whole syllabus from Kindergarten up to end of 6th grade. The syllabus is progressive. We have to repeat certain material several times. Many habits are repeated, but each time the habit is repeated it is repeated in an advanced way for a child of somewhat better mental equipment than the child who had the same lesson a year or six months before. In the 7th and 8th grades new material is presented—new health habits may be presented with very great effect—and you may call it a review of physiology and hygiene in more advanced form."

Miss Gertrude Whitton, Department Health Development, Oakland Public Schools, Oakland, California, then offered for consideration a plan being tried out in Oakland to determine the proper distribution of health practices and subject matter through the grades. According to this plan teachers in the field were compiling lists of the knowledge and activities relating to health which seemed to be appropriate at the various ages. This material they hoped would assist them to allocate the distribution of health instruction on a sounder basis than was being done at the present time.

The Oakland Plan.

Professor C. E. Turner, Assistant Professor, Department of Biology and Public Health, Massachusetts Institute of Technology, commented on the value of experimentation in Health Education programs, as follows:

"All the different programs or experiments which can be carried out in different communities are going to be useful to us. I have thought of the conditions which have been mentioned in some of the cities as compared with conditions in Malden, where we are using the first four grades for informal health work. We have formal instruction in the 5th grade, continuing through to the 6th, adding in the 7th a knowledge of community hygiene; in the 8th, first aid and home nursing; in the 9th, practical applied physiology. This may not be the best thing for many communities or the best thing for us, but it seems to be the logical program at the present time.

"One of the things we are looking after in the elementary grades is the biting of finger nails by children. We can practically eliminate bad habits in that respect in the 2d grade in about six or eight weeks, whereas in the 5th, 6th and 7th grades it is almost impossible to stop that habit—it has become so fundamental a habit on the part of the child.

*Many
Possible
Health
Programs
Safer Than
One.*

"We have found it can be done a little better in one place than another. As we are all studying material and placing, we are going to come into this zoning period, but I am particularly pleased that we are developing our discussion in such a way that we are going to bring out a large group of possible programs from which we are going to select. I believe we are on safer ground than if we try to develop one program."

Miss Jeanie Pinckney, Department of Home Economics, University of Texas, Austin, Texas:

"Why wait until the child enters the school before we have a definite program in the community? Why wait until bad habits develop before we do anything? Why cannot we have a prevention of bad habits as well as a prevention of other things? Why not warn the mother beforehand what is the thing that is going to happen to her child? Why not warn her that the child will cry for food that it should not have?"

*Pre-School
Child
Health
Conferences
in Texas.*

"In Texas, we give a program in the different communities—a Child Health Conference. The mother has to ask for an appointment; we never take children except by appointment. A record is given to the mother and only the defects observed in the child are recorded as it is the purpose of the examination to center the mother's attention on the child's needs, and in the long run that is what she is coming to the conference for.

"We are trying to get the children into perfect physical fitness before they enter school. We not only correct defects but do as much preventive work as possible. The dentist does only preventive work, and if he does not find any defects he takes time to tell the mother about future teeth, and he never fails to tell her about the six-year molar."

Dr. Edwards, School Dentist, Board of Education, Trenton, N. J., rose to speak of the importance of placing early in the grades the beginnings of oral hygiene teaching. He said that owing to the tremendous importance of the six-year molar, such educational work should begin at the earliest possible moment, i. e., in Kindergarten. He stressed two factors as being essential to producing good teeth.

- (1) Proper diet—beginning with pre-natal life.
- (2) Proper care, including prophylaxis and repair.

Miss Mary A. S. Mugan:

"Being the assistant superintendent in one of the textile districts, Fall River, Mass., where one comes in contact with the class of parent described by Miss Moriarty, one realizes that the education for the preservation of the six-year molar and for many other things, must begin earlier than the Kindergarten.

"It must begin with the mothers. We hope that the children we are teaching now will be intelligent mothers in the future, but we cannot wait for that time. We must get hold of the mothers of

these children by mother-classes in connection with Kindergarten and school, especially for working mothers. All school systems should make provision for the instruction of mothers. So, through wise legislation in the Commonwealth of Massachusetts, the Public School Department is allowed to organize classes for mothers under the direction of the School Department. These classes are State-aided. For every cent that we spend, the State pays one-half of the cost of the classes, if we bring them up to the State standard, which is very high. We have classes for mill women in the evenings in our public schools. We have trained nurses carefully selected to give courses to these women, and there was so great a demand for the courses that we had to stop them on account of insufficient nurses."

*Massachusetts
State-aided
Mother
Classes.*

Dr. Wood, in concluding the morning's discussions, said:

"I do not know whether I can help you or not, but I am going to venture—not as official chairman but as a teacher—to sum up briefly my impressions of the last few days, to give you something to differ with, and to help perhaps to focus our attention for a review.

"I seem to get these impressions with reference to the 'Place of Health Education in the Curriculum':

"1. That there should be conscious provision by school officials and teachers for Health Education in each year of the child's life in school—in each month—in each week—and perhaps in each day.

"2. That Health Education should permeate the life of the child in school, at home, and in the community, in its practical applications.

"3. That the provision of time, and place of Health Education, its specific arrangement and adaptation in relation to other subjects, or as given by itself, will depend upon the school, its general program and policy, and must be worked out appropriately, for each school system.

"4. That the training of the teacher for this profession of Health Education is of paramount importance.

"5. That there must be the most efficient available supervision, because of the large numbers of children, and the several or considerable number of people involved in the Health Education of the child. Because of the danger of overlapping, of conflict, of duplication, intelligent supervision alone can provide the coordination, proper gradation and progression of the material in Health Education, wherever its place in the curriculum."

Mr. Safford brought out a point which seemed a fitting conclusion to the discussion—namely, that all of the points of view presented during the morning were most important but the vital one could be expressed by the thought that the process of education takes place in the relationship between the pupil and the teacher and all other things are contributory to that wonderful and marvelous end.

Summary.

Section IV

PROMOTION OF HEALTH HABITS

A. Incentives and Motives

B. Successes and Failures

HOW most efficiently to get the health message over to the child is, after all, the crucial point in any Health Education program. Upon analysis of the problem, these two important questions arose for consideration. First, what incentives and motives are pedagogically and psychologically sound—in short, are really valid; and second, what methods and devices have proved successful, and what failures? Why has this been so?

From the evaluation of the pooled experiences of the Conference on this point, the committee felt that we ought to derive a sounder basis than we have yet had for a program of the promotion of health habits.

Incentives and Motives

To present the subject of Incentives and Motives that are applicable to Kindergarten and Primary School children, the committee went to Miss Julia Abbot, Specialist in Kindergarten Education of the U. S. Bureau of Education, and to Professor Patty S. Hill, Director of Kindergarten and Primary Education, Teachers' College, Columbia University.

Dr. Wood, therefore, introduced Professor Patty S. Hill to address the Conference on

Health in Early Childhood

Professor Hill:

IT is somewhat dangerous to appear on the program late in the week, especially when one's audience is made up of experts in the aspect of education under discussion. I should like to say a word about the relation of those of us who have the general care and education of children to experts. We need as never before expert help in the guidance and direction of classroom practice. We need our findings, and theories, and convictions, put to the test

of proof and in this way classroom teachers and experts can cooperate for the welfare of the young child.

My topic, as you know, is *health in early childhood*. The importance of the establishment of habits of health in early childhood goes without saying in such an intelligent audience as this. The great problem is how to get these habits of health established in early child life. Other problems are,—*when* shall we begin the inculcating of these habits,—where shall it be done and by whom? When it comes to a study of the best age we are beginning to realize that the sixth year is too late, and that much waste exists as the result of the tendency of the school to set this as the chronological age for training in health habits. Even the Kindergarten age from four to six may lose time, and at present many interesting experiments are being made in this country and abroad with children as young as two years.

The next problem is one as to the best place and the best guides in this movement. This work must be done not only by the home through the mother, and in the school by the classroom teacher, but in the community through public clinics and maternity centers. In other words, we need the full cooperation of all of those who come in contact with young children if the best results are to be attained. When we get the mother, the school doctor, the school nurse, the classroom teacher, the family physician, and the child himself on the job, the work will be done.

Much can be done for the child by setting him in a health situation or environment. For example, if we train the mothers of young children in the importance of certain health habits which naturally arise in home situations, much can be done there. In the school we need not only the supervision of the medical inspector and the school nurse, but we need a new type of classroom teacher for children under the eighth year. The best description I can give of this teacher of the future is that she shall be trained not only as an instructor, but that she shall give something of the maternal care of a mother in addition to the scientific care of a trained nurse; but no environment of health will suffice unless the environment is used intelligently by the mother, the teacher, and the child. We need a new type of curriculum. A curriculum that lays emphasis on activity of body as well as activity of mind. Schools make young children prematurely lazy by inhibiting their natural ten-

*When to
Establish
Health
Habits.*

*A Need for
New-Type
Teachers
and
Curricula.*

dency to physical movement, and by setting a premium upon the use of the mind at the cost of the body.

As we look at the stages of childhood we realize that in infancy everything has to be done *for* the baby. He can do nothing for himself and is absolutely at the mercy of those who have the care of him. Now that we are studying the possibility of educating children at the second year we find that these "toddlers" or "runabouts," as they are called in the day nurseries and nursery schools, can be trained to do much for themselves. In other words, we can, and must, get at health *through* the children. It is the *self* that must get to work, as no amount of care in providing a health environment, or in health care by adults, will suffice until we secure the cooperation of the child.

In order to form these health habits which require the cooperation of the child, we have to gain his interest and his help, as it cannot come by coercion. The young child has little or no native interest in health, and yet he is never so susceptible to disease at any later stage of his development. For this reason we are mapping out what we call a "Habit or Conduct Curriculum," in which a very large proportion of the habits to be included are those which have to do with the prevention of disease and the promotion of health and growth. Anyone who has worked with young children knows by experience that you can arouse a child's interest in his growth in height and his increase in weight.

To me the most important problem for us to consider in health work with young children is the fact that health *ideas* will not suffice. It is *health habits* and not health knowledge which will carry the issue through to success. A habit is a thought or an idea put into action and repeated until we can depend upon the response of the child without the help of teachers or parents. In other words, it is the actual establishment of these health ideas in action. Whether it be in the home or in the school, whether it be done by the parent or the teacher, this is the goal toward which all must work. My personal criticism of much of the health work done in the schools is that we hope through *health ideas* to solve the problem. In addition to this the work is handicapped by our attempt to do in the schools what should be done in the homes, and can be done in the homes when we reach the parents. Until we realize that the training of the parent is just as much a part of the

A
"Conduct"
Curric-
ulum.

"Health
Habits"
Versus
"Health
Ideas."

education of the child as the work done with the child, we cannot reach the core of the matter. In other words, those habits of health which must be carried out in the home must be placed before parents in their true light and importance. We can reach them only indirectly in the classroom and when this indirect method is used we have no guarantee that they will carry over into action in the home. As an example of this we have the importance of long hours of sleep and of fresh air in the sleeping room. These are not situations which arise in the school, and the most that we can do in the school is to enlighten the child, hoping that he will carry them out in spite of the difficulties and lack of intelligence on the part of his parents. On the other hand, if these habits are explained to the parents, the parents should be held responsible for their formation in the home. Most of the devices used in health work are due to the fact that we, as teachers, are trying to do with the children what we should do with the parents instead. We have a direct responsibility to the parents as well as to the children. We are trying the experiment in the Horace Mann School of putting our habit curriculum in the hands of the parents, asking the parents to keep a record of the children's progress in those habits peculiar to the home, and those of importance in both the school and the home. In turn we, as teachers, report to the parents on the progress of the child in the health habits which should be formed in the school.

Until the child forms certain habits of health he has no protection when separated from the care of the parent or the teacher. Therefore, he must be taught to protect himself and to protect others by direct and definite training in the conduct of health.

It is highly important for those who have the care of very young children to realize that we have emotional habits as well as habits of mind and body. We are just coming to realize the grave importance of the psychology of the emotions in relation to mental and bodily health. Much that we blame on heredity and trace to original disposition, can easily be accounted for by the early establishment of bad emotional habits of fear, irritability, rage, jealousy, discouragement, depression, timidity, melancholy, suspicion and discontent. On the other hand, we can definitely set for ourselves the goal of forming habits of

*Cooperation
between
Home and
School.*

*The Relation
of
Emotion to
Health.*

happiness and enjoyment and enthusiasm in our daily life; of courage, of amiability, and of generosity toward others. Self-confidence is largely a matter of training as well as heredity. Belief, not only in one's self, but in one's fellows, may be traced back to habits of early life. Until we realize that negative emotional habits have just as much to do with ill health as germs, we have fallen far short of our standard. We know today as we never knew before, that happiness and contentment affect the flow and the circulation of the blood, respiration, secretion and excretion, and that as the negative emotions affect them disastrously, so may the positive emotions become what Dr. Montessori calls "an inoculation of health." I will list a few of the health habits taken from our habit curriculum:

1. Not to handle one's own food or that of others.
2. To keep hands and materials out of the mouth.
3. To keep fingers away from the nose and the ears.
4. Posture in sitting and in walking.
5. The right use of the toilet.
6. The correct use of the individual drinking cup at luncheon.
7. The correct use of the handkerchief.
8. The washing of the hands before eating and after going to the toilet.
9. The drinking of milk and water.

We hope to have this habit curriculum ready for circulation in the early fall, and when this is published we wish to circulate it among teachers and parents, so that both the home and the school can work together in saving our children in the future.

My final word is that our children are to be saved by the intelligent cooperation of all with whom the child comes in contact, as well as by the child himself. When we all realize that this is a sacred responsibility we will pull together, and we can help, not only to prevent disease, but to build up a new conception of the importance of health in the minds of the children, the parents, the teachers, and the community. It ought to be just as important—even more important—for a child to pass an examination in progress in health as to pass in reading and writing, and the school must have the same sense of responsibility here that it has in the subjects of the curriculum.

Discussion

The discussion of Professor Hill's paper was led by Miss Harriet Wedgwood, of the United States Bureau of Education.

Miss Wedgwood:

"There are many things that seem to me to be very important in the address you have just heard. It seems to me that we must emphasize in the training of teachers—first, that the child must be studied as an individual. The child has an energy of his own and it must be used to the full for the child's own happiness. It must be used in ways to give satisfaction to the child, if you are going to effect the complete use of it. Think of the child as a dynamo. If you can connect with that dynamo you have the energy from the child himself to get this thing over. In large measure you have to make these connections—these are what you might call the 'motives.' It is more than a matter of devices. Sometimes you make what seems to be a legitimate connection, with no results. Repressions and inhibitions must be thought of. They are individual, but you must take account of them.

"The speaker has also emphasized the fact that you must make use of situations as they arise. In order to do that the teacher must have a large reservoir of information and she must also have enthusiasm for teaching health. Moreover, it is understood that most energies of many adults are expended to fulfill childhood wishes—wishes that are no longer really practicable, but something that had always been wanted and must be got for the satisfaction of that individual. If that is the case, the wish for health must be implanted in the child at a very early age. The wish for health must also be so strongly implanted in the teacher that she must 'ooze' health.

*Implant
the
"Health
Wish" in
Childhood.*

"A physician said that he was treating a patient who could not get well. There was not much wrong with her, as far as he could see, but she would not recover. He said to her: 'I wish you would make out a balance sheet for me—on one side put all the reasons for being well and on the other side all the advantages of being sick, or a little delicate.' She brought it back, well filled out, for she was quite honest, with a few reasons for being well and two pages of advantages of being sick. She got well.

"The pain-pleasure motive operates in all of us. We go after the thing that is going to give us satisfaction, and some of us have forgotten how we thought and felt when we were children. We think we know children pretty well—some people say we do not know whether we know them or not. Keeping an open mind is what I want to urge."

Miss White made this comment on Professor Hill's paper:

"We have been trying out in Detroit since January the experiment of which Miss Hill speaks. We have been fortunate enough to have

Miss Grace Owen's assistant from England to help us with our work. We believe we should take more advantage of the intelligence of children. We have children from 20 months to two years, and they are very intelligent. Fortunately, they have a very keen sense of individual possession, which enables us to get across the idea of the individual toothbrush, towel, blanket, etc. They resent interference from anybody else. Even at this early age, the group sets standards, particularly standards for behavior, and the children respond to this in a very unusual way. In our work with the mothers, we put emphasis on the idea that the child at this early age does form habits. Parents say the words, but they do not quite understand that what the child is doing, in relation to his behavior, is forming a habit. You must make them understand that the formation of the right habits, even at an early age, is very important. They fail to recognize the importance of behavior habits upon the health of children. We must get across to the parents this fact, if the mothers are going to cooperate with us in forming the right kind of health habits."

Miss Rood said:

"We get the spirit of the nurse over to the teacher, and the health knowledge of the nurse over to the mother. Everyone realizes the necessity of the mother's cooperation. But first, how are we going to get this spirit of the nurse over to that teacher and the knowledge of health over to the mother? And second: What is the best way of preparing the people who prepare the teacher to get this knowledge over to the mother?"

Miss Ethel Perrin, Assistant Director, Health Education, Detroit Public Schools, returning to the Nursery Schools, said:

"A very important thing in the Merrill-Palmer School of which Miss White spoke, is that they take time to allow the children to make failures and mistakes and to learn from those the proper habits. My experience is that in the public schools our teachers never can take the time to allow the children to make mistakes. In the Merrill-Palmer School, I have seen a child allowed to take a pitcher much too full and pour the water on the table and floor. The teacher said nothing—the child did not know that she was noticing it—but went to work and cleaned the mess, and things went on as usual. They take time for the children to learn from their own experiences—this time is not allowed in the public schools."

Professor Hill added:

"We must get the nurse habit over to the teacher. The latter should have a good big part of the course taken by doctors and nurses. At Columbia we have teachers now teaching children in the Kindergarten, pre-Kindergarten group and first grade work. They have their regular work with Dr. Wood in 'School and Personal Hygiene'; they also work with Dr. Kenyon, the baby doctor, and with the nurses; and the next year in the baby clinics. It is a well-

known fact that with this pre-Kindergarten work in England (which they call the Nursery School), they have their teachers do a part of their work in the Baby Hospital. There may be some waste of time there. I believe we should bring up a body of teachers who are nurse-minded. They must have all that knowledge of the trained nurse which functions in the schools; a mother-teacher-nurse person must have the care of the child up to eight years."

Dr. Barrows then called attention to the fact recently noted in letters from London, appearing in the *Journal of the American Medical Association*, the statement that during the past year, out of the thousands of children who were examined by medical inspectors with the help of nurses in the schools in England, 80 per cent. were examined in the presence of one or both of their parents. He said that when the time came that we could get eight mothers out of ten of the children in our schools to be present during the examination of the children and to talk to the doctors, even though they may ask questions that are irrelevant—when we got to that point there would not be so many problems in connection with school health.

The Chairman then introduced Miss Julia Wade Abbot, Specialist in Kindergarten Education, Bureau of Education, Washington, D. C.

Interests of Young Children as the Basis for Health

Teaching in the Kindergarten

Miss Abbot:

WE can formulate methods, we can standardize subject matter, but, thank God, we cannot standardize children! Last summer I heard Frederic Burk give a new definition of the Project Method. He said it was using the child's own "hunch." That is what all the previous speakers have been doing, and I, too, shall use that method and talk quite freely from my experience with young children. We cannot think of "Incentives" and "Motives" without thinking of children.

But before we come to the children I want to say a word about the Normal School student. Courses given in Normal Schools have often been of two extremes. The content courses have been made up of technical, academic material which the student masters by "cramming." The

so-called "method" courses have consisted too largely of devices to be practiced on innocent children. These courses do not help the student to understand children, to know how children think and feel. The result is that when she becomes a teacher she either uses devices or she falls back upon the methods that were practiced upon her when she was a child. She may even employ the very bad methods used by her professors in the Normal School in giving her subject matter! All courses in the Normal School should embody the same principles and practice that the student is expected to use when she goes out to teach.

There would be need of fewer method courses if the Normal School girl could learn to know children during the period of her training. She comes to the Normal School or Teachers' College as a High School girl, not as a teacher. She must make the transition from getting direct results through her own cleverness, recorded in marks or in the acclaim of her classmates, to working through others. She must learn to use the most delicate instrument in the world—the personality of a child. She must learn to respect that personality. Caldwell Cook, in "The Play Way," expresses this idea very beautifully. "Once you realize that the teacher only exists for the learner, once you believe that the soul of any other being entrusted to your care is greater than the furniture of your own mind, once this belief in you reaches the level of a faith, then, believe me, the mountain of your learning and self-sufficiency is easily removed and brought to the feet of the prophet." Courses in School Management and Introduction to Teaching and History of Education will never give the student this attitude. She must become really interested in children, interested in their funny little ways, in their clumsy endeavors, in their whimsies that thwart one's own purposes.

How is this teacher-attitude to be established? By building on the interests of the High School girl so that she may get the child's own point of view. Teachers can only understand children by keeping young themselves. The student's joy in play and recreation should be abundantly satisfied. She should be encouraged to recall memories of her own childhood, telling the games she played and playing them again in game class, recalling the lessons she liked and those she hated—and why. She will be interested in going back to her earliest memories and trying to find out why those

*Learning
to Use
"the Most
Delicate
Instrument
in the
World."*

particular happenings have remained in memory. In such natural ways she will get the child's point of view.

And then there is the appeal to the imagination through literature. Such studies of children as Ewald's "My Little Boy," "Emmy Lou" and "Penrod" have their place in her training. But best of all is the actual experience of mothering some young children. Fortunate is the girl who had such an experience as early in her school course as Grammar School. Taking care of children on excursions, caring for them in day nurseries, makes the prospect of teaching a human thing instead of a military calling!

And now we come to the problem of teaching health habits to the youngest children in the schools. In its first stages, Health Education should be largely a matter of unconscious response to the right kind of environment. The teacher will make practical application of the technical courses she has had in Normal School in providing the right physical conditions for the children in her care. We don't realize what a tremendously strong ideal we must build up in the student's mind for being responsible for the health conditions in her school. The average teacher is so overburdened with numbers of children that it is natural for her to avoid movement and change in her school program. In cold weather there are so many wraps to put on and take off. It takes a firmly implanted ideal of health to take forty or more little children out of doors for a part of the morning. And in the game period it is much simpler to have the large group of children sitting or standing still while the few perform in an orderly way. The teacher must be so enthusiastic about health, and so intelligent about ways of providing for healthful living in the school-room, that in health the children "live and move and have their being."

*The
First Step.*

The teacher must remember that she must share with the mother the responsibility for the health of the younger children. Her Normal School course should prepare her for helping the mothers of the children to get a new viewpoint on the subject of health. She should be prepared to work with the mothers through home visiting and Mothers' Meetings.

But while mothers and teachers should be mainly responsible for the health habits of the younger children, children of 4 and 5 and 6 may learn some very definite

things about health. Real situations are the best means for teaching children of this age. There has been a tendency to introduce fantastic and artificial methods into the early grades to "get over" the idea of health. If children are living happily and naturally together in the right kind of school régime, plenty of opportunities will arise for teaching health without the introduction of artificial devices.

McDougall gives four levels of behavior—first, the instinctive, modified by pains and pleasures incidentally experienced; second, the level modified by rewards and punishments in the social environment; third, the level modified by anticipation of social blame or praise; and, fourth, the level of the highest kind of conduct—doing what is right regardless of praise or blame. It is a question whether we have not kept children on the second level in schoolroom practice, when we might have lifted them to the third level by using the natural incentives furnished by the life of the social group. In one Kindergarten that I visited I saw the names of the children on a chart hung up on the wall. Some of the names were glorified by stars, other names were plain and bare. I was told the non-starred ones were the underweight children. "Surely," I said, "that is a chart for the mothers of these little children!" "Oh, no," said the teacher, "that is for the children, they are so interested!" I wondered what kind of interest was manifested by the "non-stars." I thought of the neglect of early years, the poverty and ignorance that perhaps was back of that chart, and babies were being held responsible! And while the reward in the form of a star by one's name may seem small to us, we must remember the pathetic eagerness of children to receive crowns of glory even in the form of gilt paper stars!

In another Kindergarten the children were eating their luncheon of milk and crackers. It was a rainy day and there was some extra milk in the big pitcher. The teacher was talking to a visitor and Rosie came over and said, "Say, Miss Andrews, there's more milk." "Give it to the children who need it," she was told. In a few minutes Rosie came back and reported, "It's all gone, I give it to the skinny ones!" And there you have the contrast in the methods in these two Kindergartens—artificial rewards—natural situations. Besides using artificial rewards with children, they are often given information and facts about things instead

of learning directly from experience. In one Kindergarten the children were being gently inducted into the germ theory by being told all about the little "sick-seeds" that are scattered everywhere when one sneezes! There are plenty of real situations, such as blowing the horn that Joe has brought to school and just performed upon, or the using of soap bubble pipes and drinking cups. When Tony spits on the floor, much more effective than a lecture on germs is the ceremonial of Tony's getting a pail of water and scrubbing the floor under the disapproving eyes of "Teacher" and his "pals"!

We must beware of a negative emphasis in health teaching. Bobbie's mother told me this story. He surprised her one morning by asking for some coffee in his glass of milk. "Just one or two little drops, mother," he begged. She replied in amazement, "Why, Bobbie, you never have had coffee nor wanted it before, what are you thinking of?" "Well, mother," he said, "I want to tell my teacher that I've had coffee for breakfast, and see her face when I tell her!" Which reminds me of another story of a teacher who went back to her class after a few days of illness. She had heard rumors that the substitute had had a hard time, and she asked the children why they had behaved so while she was gone. They were very frank about it. "Well, we didn't like her, and I said to the other kids, 'Let's be bad,' and we was bad." "But why didn't you like her?" "Aw—she shocks so easy!"

*Beware of
Negative
Emphasis.*

We must not forget the mental health aspect of teaching. Normal, well-balanced teachers who understand children establish a social order in their schoolrooms to which the children unconsciously respond. Through this social order they learn leadership and conformity, self-expression and self-control. This life in the school community is really the beginning of civics. A child's natural attitude is that of "a little friend to all the world," but the natural emotions of children have often been so cruelly thwarted before they reach the Kindergarten that it is very necessary for the school to restore the child's mental health. I recall an incident of the charming frankness of a little five-year-old Kindergarten child in Washington. The children of the Junior Red Cross were to send a large bunch of red roses to Queen Elizabeth of Belgium. A little girl from one of the Kindergartens was chosen to make the presentation. Her

Kindergarten teacher said to her, "Louise, a real queen is coming to Washington—she is Queen of Belgium, and the children of the Junior Red Cross are going to send her some roses and they want you to give them to her. What shall you say to her? Let's play that I'm the queen." So they dramatized what was really going to happen. When the day came and Queen Elizabeth held her audience, Louise ran fearlessly to her and said in her clear, child-voice, "I brought you these pretty flowers, Queen of the Belgiums, they are from the Junior Red Cross." The queen's eyes filled with tears. "Remarkable," she murmured. And then she asked the child's age, and then she said, "May I kiss her?" And Louise held up her little round face, and received the salute of a queen!

*Learning
by
"Doing."*

Children in the Kindergarten learn through doing things, and they learn health lessons by the same methods. They go on excursions and make the acquaintance of the policeman, fireman, the farmer and the motorman. The janitor is their friend and a much more important person than the principal of the school. The children admire strength and dexterity, and through their admiration form health ideals. By means of excursions and gardening they become acquainted with fruits and vegetables and learn which are best to plant and to eat. They learn about food and water and cleanliness through the care of pets. Curiosity is a child's key to knowledge. Science teaching begins in investigation and in asking questions. Even children of Kindergarten age need facts as well as fancies, and children do not want their science in sugar-coated pills. Someone has said that murder is committed every day in our Elementary Schools, the murder of curiosity. Curiosity is killed by the use of silly devices or by mechanical instruction that has no relation to the life and interests of children. In the conversation periods of the Kindergarten and on excursions, the children ask many questions. "Is clay cooked?" "Does oak-meal grow on oak trees?" "Rubbers are made out of elephant's skin, aren't they?" And some of these questions will relate directly to matters of health, and should be answered in a commonsense way.

I have not the time to speak of the emphasis upon health that comes so naturally through the care of the doll and through play with doll families, and in the projects that are worked out in family and community life. To give just

one illustration: The Kindergarten children were making a grocery store. They had been to visit one in the neighborhood and had noticed that all the loaves of bread were wrapped in wax-paper. The teacher told them why this was done. When their own little loaves were made of clay, with no suggestion from the teacher, every one was carefully wrapped and sold under sanitary conditions!

Stories and rhymes have an important place in the Kindergarten. As the social order of the Kindergarten is the means for establishing habits, through stories and rhymes the appeal is made to the imagination, and we build up attitudes. In the introduction of health teaching into the school, stories and rhymes have been used very extensively. Even familiar rhymes like Mother Goose have been distorted to teach health truths. It may be interesting to the authors of these modern perversions of our good old friend to know that this idea is not original with them. As long ago as 1879 a little volume was published entitled *Mother Truth's Melodies*. The change of title is explained in the opening rhyme:

*Respecting
the Classics
in Teaching
Health.*

"Since little ones, are geese no more,
But knowing have become,
It ill beseems that 'Mother Goose'
Should dwell in every home.
So 'Mother Truth' in 'Melodies'
For babes, here lifts her voice.
Assured that parents, children, all,
Will welcome and rejoice."

I will give you one or two samples of these gems of truth:

"Humpty-dumpty, hip-o'-to-hop,
Baby was crying, but now he will stop;
What did he cry for? his clothing was wet;—
No wonder such things should make babies fret."

Here is another:

"Papa, when you dive me tandy,
Dive me only white,—
'Tause there's poison in the tolored,
Which my health will blight;
Thint how tiders drowl and drumble,
And then dive me food to eat
That will mate me well and happy,
Wheat and oat-meal, rice and fruit,
These will mate me dood and gentle,
'Stead of mating me a brute."

In the modern versions, I feel as insulted when the dear familiar "Sing a Song of Sixpence" changes into "Sing a Song of Tooth-paste" as I would if some one remodeled Hamlet's famous soliloquy into "To be or not to be clean, that is the question!" Of course, it is quite a different thing to have children make up their own funny little health rhymes. I have seen some delightful ones inspired by the "Child Health Alphabet." And there are children's rhymes which in their original form suggest ideals of health, such as lullabies and "Wee Willie Winkie" and Stevenson's "Friendly Cow." But health is a byproduct in these verses. Literature is for the joy it gives, not for instruction. Literary values should be preserved for the younger children as jealously as for the college student. And the use of pure literature does teach health in the very best way by establishing right mental habits. In the story group there is repose, the joy of contemplation, the feeling of the solidarity of the group that grown people feel in the theatre and church.

Besides the artificiality of changing rhymes to teach something, in the Health Education movement there has been a tendency to introduce the child to familiar objects in his own world under fanciful names. Nettie Nailfile and Henrietta Handkerchief are the creation of the clumsy imagination of a grown person. We forget that a child's whole life is dramatic, he is the hero of his own Odyssey. He is interested in everything that affects himself. A book of stories has appeared recently that is literature and that is full of stories of things which touch a little child's daily experience. I refer to the "Here and Now Stories" of Lucy Sprague Mitchell. I will quote from but one story that could be used effectively with the younger children in relation to the health habit of taking a bath. The name of the story is "How the Singing Water Got to the Tub," and I want to quote just bits of it:

"I bubble up so cool
 Into the pebbly pool.
 Over the edge I spill
 And gallop down the hill!"

*Valid
 Appeals
 to the
 Imagination
 of
 Childhood.*

*Le
 by
 "I*

“What shall I do, oh, what shall I do?
 Here’s a big dam and I can’t get through,
 Behind the dam I fill and fill
 But I want to go running and running down!
 If the pipe at the bottom will let me through
 I’ll run through the pipe! That’s what I’ll do!”

“Way under the street, street, street,
 I feel the feet, feet, feet,
 I feel their beat, beat, beat,
 Above on the street, street, street.”

* * * *

“‘My! but I need a bath tonight,’ said the dirty little boy as he heard the water splashing in the tub. The water was still the singing water that had sung all the way from the far-away hills. It had sung a bubbling song when it gurgled up as a spring; it had sung a tinkling song as it rippled down hill as a brook; it had crooned a flowing song when it bore the talking boats; it had muttered and throbbled and sung to itself as it ran through the big, big pipe. Now as it splashed into the dirty little boy’s tub it laughed and sang this last song:

“I run from the hill,—down, down, down,
 Under the streets of the town, town, town,
 Then in the pipe, up, up, up,
 I tumble right into your tub, tub, tub.

And the dirty little boy laughed and jumped into the singing water.”

In contrast, I want to quote from another type of story:

“One germ said, ‘I have tried to live in their mouths, but every time I get in they brush me out.’ Another had tried to live on their bodies but was scrubbed off every time. A wise old germ said that the flies would carry them all away to some new place to live.

“The little people of Happy Town had seen the flies and soon they all came marching down the street to Mrs. Easy-mother’s house and they were all singing Onward Children Soldiers. They were soldiers, too. None of them carried guns but each one of them had a fly swatter on his shoulder and they went right at the flies. This was a great surprise to all the flies. Swatters to right of them, swatters to left of them, swatters in front of them, swatted six hundred.”

We are so ignorant of the kind of images we create in children’s minds. I was telling a story called “The Crane’s Express” to a group of Kindergarten children. The climax of the story was given in these words, “And so the little birds were carried across the blue, blue sea to the land where it’s always warm and where if a little bird just opens his mouth a worm walks in for his breakfast!” The children were very solemn when the story ended, and one

little girl fixed her round eyes on me and said in a very literal voice, "I had to take medicine for worms once!"

Let us not be too anxious to make up new stories until we know more about the imagination of children. The old favorites are the best, after all.

I have attempted to show that students should be led to see how habits may be built up through the social order of the Kindergarten, how knowledge may be acquired in real life situations, and how attitudes may be created through the right appeal to the imagination.

Above all, we must help our students to realize that the open sesame into the child's world is to become as little children. The spirit of that child world has been sung by Stevenson in "A Child's Garden of Verses":

"The world is so full of a number of things,
I'm sure we should all be as happy as kings."

Discussion

The discussion on Miss Abbot's paper was led by Miss Jennie Haver, County Helping Teacher, Hunterdon County Department of Public Instruction, Flemington, N. J.

Miss Haver:

"Do you regard your work as an affliction?" is a very pertinent question asked in the July, 1922, number of the *American Magazine*. Whether the children in our schools regard health work as an affliction or as a fascinating game depends in large measure on the use of incentives and motives that appeal to their interest. Miss Abbot has just given in her very valuable paper many specific illustrations showing how the interests of High School girls are used as a basis for their work in the Kindergarten course of the Normal School and then shows how those girls, when they become teachers, may apply the same methods to their Kindergarten pupils.

"I heartily agree with Miss Abbot in believing that play may be one of the strong native forces used to motivate Health Education not only in the Kindergarten but throughout the grades.

"Joseph Lee in his epoch-making book, 'Play in Education,' gives seven instincts of play, namely, creation, rhythm, hunting, fighting, nurture, curiosity and team play. Today I wish to discuss how some of these instincts may be used to motivate Health Education in the grades.

"From the day the child makes his first mud pie his interest in creating things never wanes. The wise teacher uses this interest to motivate the health work. Fruit and vegetables and utensils used to promote healthy living are modeled from clay, health stories are illustrated by original drawings and clever cartoons are used

to clinch an important truth, clever posters like those beautiful ones shown in the exhibit room on the first floor are the rule now rather than the exception. Boys and girls interested in photography are using that medium of expression to further their interest in health. The technique of paper cutting is becoming a fine art and booklets and charts are being made in hundreds of schools. Original health stories are written and in many cases dramatized, scenarios for health moving pictures are written and pageants are developed and produced. The passion for creating properly guided adds color and interest and concreteness to many health projects.

"The fighting instinct (used in unsocial ways to create untold misery) can be used to advantage in 'Swat the Fly' campaigns, the conquest of consumption, the mosquito campaign, and rat extermination. These are war problems to engage the interest of any fighting boy or girl.

"Competition may, if intelligently used, become a stimulus in Health Education. It is the common element in all of our games; to leave it out of the game of health would be to make it flat indeed. Personally, I believe that the major use of school competition should be between groups of children rather than between individuals. Many of our school children are laboring under serious handicaps which give them an unfair disadvantage. I do believe in individuals competing with themselves and trying to surpass their own records.

*Pros and
Cons of
Competition.*

"Competition brings up the question of rewards and punishments. Miss Abbot is just in her criticism of the abuse of rewards and punishments, but sometimes we err on the other side; we fail to punish when punishment is needed and withhold the legitimate reward which has been earned. McDougall's fourth level of conduct, doing what is right regardless of praise or blame, is a splendid ideal. All of us are striving for it, but few have reached the goal. We must not expect too much from young children who have not reached that level. A button, a ribbon, a medal will leaven a big amount of uninteresting health material. A banner or a loving cup may revolutionize a school.

"The nurturing instinct shown by the Kindergarten teacher in her love for young children, and by the tiny tot's care of her dolls is used as a motive force in much of our modern health work. The care of dolls, the care of pets, the care of other children are all significant features of it. The responsibility and protection that older children may show for younger ones is brought out clearly in Safety First work.

"Last Saturday, the State Commissioner of Education, the Motor Vehicle Commissioner, the Director of the Department of Public Safety, the city Mayor and a long list of visiting dignitaries met in the City of Newark, New Jersey, to do honor to the School Safety-Patrol winners who had done so much during the school year to lower the death and accident rate among the school children of Newark.

"Team play, the last instinct mentioned in Joseph Lee's list, is far from being the least in its effective motive power. It appears later than many of the others but what it loses in time it gains in

*Psychology
and the
"Health
Game."*

intensity. General Sherman said that there is a soul in an army as well as in a man. The same might be said of the team. The team instinct forms the basis for the Health Clubs which are playing such an important part in moulding the health habits of thousands of boys and girls.

"This morning I have mentioned briefly just a few of the play instincts which may be utilized as a basis for the motivation of school health work.

"If we expect to make the game of health a success we must base our work on sound psychological principles and then go at it with a vim. We must use Tom Sawyer's method when he had to whitewash the fence. You remember that he put such artistic appreciation into his job, that the other boys instead of pitying him actually parted with their most treasured possessions for the glorious privilege of doing his work for him."

Miss Jean:

"I should like to tell you how very much I appreciate the note that has been struck here several times about not slaughtering good literature to teach health. We surely have enough imagination today among the people who can write to give us original ideas to put before the children.

"In connection with the use of stars, I feel very strongly that it is absolutely unnecessary to use stars in stimulating the younger children, and I was particularly glad to have Miss Abbot bring that out. But I do believe that competition can be used effectively in connection with the children's weight and can be done without making them self-conscious, though I do not believe it necessary to add rewards."

*Valid
Incentives.*

Miss Haver then said:

"We have found that competition between groups and rewards for the same are much more effective than between individuals and individual rewards. We give very simple rewards to individuals, perhaps a button, but for the group rewards a banner or a class certificate is given—something that they all want or are all proud of."

Miss Dolfinger, speaking of incentives, other than material rewards, said:

"The 8th grade boys and girls of a certain school are very anxious to take part in the Athletic Badge Contests of the Playground Association of America. They are not allowed to take part in these contests unless their health records show that they are physically equipped to compete, by having a background of good health habits and bodily fitness. To reach such a standard has been a real incentive, since they recognize the validity of the conditions imposed, and *want* to meet them."

Miss Mary Spencer told of her experience with a group

of children in the Horace Mann School, Teachers' College, saying:

"As I had no course of study, I had simply to study my own group. These were children to whom such things as taking a bath, etc., were not quite so essential, as they were accustomed to their morning shower. The point of contact I had to make was with the weighing and measuring. There are underweight children in the best families. On an average, five or six children out of 30 are 10 per cent. underweight for their height.

"We began with the study of foods. This proved quite an interesting point, and we had quite a competition in trying to bring weight up to height. We organized into clubs and named these the Giants, the Ants and Columbia Tigers, as these were quite prominent at that time. Right through the entire school year the competition continued. We made menus, after studying food subjects, and got our background in that way.

"I had a friend who did not like to drink milk and I told the children about her. We were all anxious to show her why she should drink milk. We all wrote her letters and eventually succeeded in having her like to drink milk.

"It is quite essential to make health fashionable.

"Toward the end of the year we tried out the project of making a health book. We put in letters, menus, and we also worked in rhymes and stories, and correlated them as much as possible with English."

Dr. Mary Brydon, Director of the Bureau of Child Welfare, Virginia State Board of Health, was interested to know of any incentives strong enough to carry health practices through the summer vacation. She asked:

*Projecting
Interest
in Health
into the
Summer
Vacation.*

"What incentives do the teachers use to carry the habits over in the vacation?"

"We had some pre-school clinics during the vacation and all the school children in the neighborhood came to see what we were doing at the school house. Five or six of them sat on the front benches as I examined the babies. When I finished with the babies I looked at the older children's teeth. 'Why, your teeth are so dirty,' I said. 'Don't you clean them?' 'No, indeed,' was the reply, 'Teacher has gone away, and I don't have to clean them.'"

Miss Haver responded:

"In our district during the last week in school the teachers talk to the children about continuing their health habits, and in the first week in September they ask about the results accomplished. The care of the teeth has in most cases slumped. The number of baths taken, however, have sometimes increased from one to seven a week, because the children have had more opportunity to get their baths."

Miss Margaret Sparks, Nutrition Specialist, Trenton Public Schools, gave another answer:

"I spoke to my classes in the Open-Air School just previous to coming here in regard to an experiment which might prove helpful to school children in other places—what they could do to prove to other children that they could keep their weight up during the summer. They drew up rules that they thought would be practical to follow up this summer. They are going to take them home and try them out, and in September we are going to find out the results."

Dr. Wood then introduced Miss Mabel Bragg, Assistant Superintendent, Newtonville Public Schools, Newton, Mass.

Incentives and Motives in Health Education

Miss Bragg:

ONE big thing I have learned from this Conference is how much we all need each other. This health work with the children means all kinds of people working together to gain a scientific knowledge of facts and to gather together a body of material that will help us all along the line of work for children, and for the general health of the community. It means an organization of material, and the help of scientific people who are able to do this. It means also that we must have people who are explorers of children's lives, and children's interests and activities. How are we going to get over to the lives of children what we think it well for them to know? How are we going to do this piece of work most effectively?

These questions bring us right back to the training of teachers in knowledge and methods and understanding of present-day educational problems. Never was there a happier time, never was there a better time than now for this work to be carried on successfully, because all Elementary School work is being changed. No longer are simply the facts of the fundamental subjects—reading, writing and arithmetic—imposed upon the children as just so much to be learned. No longer are they given mental food whether they are hungry or not, but the interests of the children are studied, their undertakings are studied, their needs are understood and they are brought into contact with the facts, the information, the wealth of the world's knowledge, as they need it in their own little undertakings in the home, in the Kindergarten, in the Primary School and on up into

the grades. We hope that some day this attitude will reach High School teaching as well—it must—it will in time! The exploration of children's needs and understanding them is the acquiring of this attitude.

If we are to help our children to become worthy members of the little community in which they live, we must study not only past and future values but immediate needs. They need health and practical skill and efficiency; they need to know the school subjects; they need to know citizenship, which to them means living together in their community, and they need to know how to play.

If we begin in the Kindergarten and teach a wiser use of leisure, we shall perhaps teach them how to discover more leisure, and that would certainly be a blessing. All these things we are doing in our health work with our children. We are helping them to see their needs; and their needs in the beginning are the formation of the right kind of habits. Little children do not thrive on principles; they thrive on habits, but the time will come when they want to know why they do these things and the teacher in the middle grades must be able to teach them why. The teacher in the middle and upper grades must teach physiology connected with the health habits of her children. The physiology of the lungs is much more fascinating related to the exercise and fresh air habits. Based on their food knowledge and habits the study of digestion is a subject of personal interest. So the study of physiology and nutrition as an outgrowth of their personal experiences, and closely related to them, have added power.

Let us not fail to teach our physiology; let us not fail to include scientific knowledge in our teaching of health. If anybody believes that some of us have failed along these lines, it is because we are laying our foundations and bringing the children up to the point of asking "Why is this so?" "Why is this necessary?"

We educated children, once upon a time, that they might get more out of life. Now children are being educated, not only for their own sakes, but for the sake of the community of which they are members, for the home, the school, the church, the city. They are to be better people and also better members of their community. That is what education means today.

*Training
Children
for Com-
munity
Life.*

In order to be better members of the community they must be physically and mentally happy. They must not be "pepless," but they must be full of power and energy, of life and happiness.

*"The
Power of
an Idea."*

Faith! The Power of an Idea! Is there anything more wonderful? The children in one of our schools are very much interested to be in good condition in September. They are having a campaign to keep themselves up to the standard of physical fitness. They have made up their minds that the responsibility is a big one—to keep up the reputation of their community during the summer. They have decided upon all the facts to which they need to give attention, and they have talked about why these things are necessary. They have worked out their needs,—the different things they must do. They mean to help themselves through these summer days, and they hope to keep themselves from losing ground if it is possible. When they come back in September we are going to have an account of efforts made. Here is demonstration of the power of an idea and we people who are working with these little children are getting hold of the value of this kind of teaching. The children do something to each other that we cannot do.

Another illustration of what can be accomplished with children through the power of an idea is shown in the way in which the pupils of one old school building secured improvements. The building was old and was not to be used much longer, but the children concluded they needed better conditions for their work. They made a study of the building and called it a survey—they made beautiful posters for the halls and rooms showing graphically improvements that would make their old building a better place for children to live in. The community became interested and conditions were greatly improved. The new building will be provided sooner than it might have been because of the power of an idea.

How are we going to get teachers to do this work? How are we going to get school administrators to give us time to do it? Some of the things we need are understanding and tolerance and rejoicing that so many people along so many lines are united on this one great need—the health of our children. They all come with their contributions for the good of all. We need better organization of material and we need experts with the children. We need the

wisest people who will contribute scientific content. We need the best of teachers who know children and method and subject matter, and who exemplify their knowledge in their lives. We need teachers who will give attention to the individual needs of the individual children; who are willing to throw away past mistakes rejoicing that "This is a new day."

In Teacher-Training Schools greater emphasis will be placed upon the personal health habits of the students that they may experience what they will later teach. New knowledge and better health habits will prepare our teachers better to meet the new opportunities of Health Education for children.

Discussion

Dr. Wood then introduced Miss Mary A. S. Mugan, Assistant Superintendent of Schools, Fall River, Mass., to discuss Miss Bragg's remarks.

Miss Mugan:

"The strongest incentive in Health Education is the increased possibility, the greater potentiality for service. This is the motive which makes a strong appeal to teachers. As they study a plan for Health Education and as they get it into action with their children they are stirred to genuine, worthy accomplishment because they realize the tremendous opportunity that is theirs.

*Service
as an
Incentive.*

"In the child's mind, too, when Health Education is carried through the grades with enthusiasm intelligently directed, two ideas are gradually but definitely developed—first, that he must have a sound body, so that he may be ready to do his share of the world's work; second, good health will make him fit, and will add to his enjoyment of his vocation and of his play. But no man may live for himself alone and his health education shows him how he may help in many phases of community welfare.

"Just here I wish to emphasize one point that has been made by more than one speaker. Cardinal Newman, in one of his forceful essays, has a strong passage on the value of judicious repetition. We must repeat and drive home again and again that the real test of all this Health Education is found in the answer to this question, Is it functioning in the daily life of the child? Is it carried over into the homes?

"The members of this Conference would not be here if they did not have enthusiasm for Health Education as well as knowledge and skill in certain phases of it. But one of the biggest pieces of work this body of enthusiasts can do, is to devise ways and means to get an ardent and active interest in this work among the superintendents and supervisory officials of school departments throughout the country.

*Interest
of School
Adminis-
trators
Indispens-
able.*

Although the dire need of this type of education has been urged by educators from Horace Mann to those of our time, the grip of formalism has very generally contracted the institution. In this new era of vital, intimate teaching that gets into the daily school life and home life, school administrators must see their opportunity to stimulate the organization of intelligent health movements. They must find the way to show teachers how to help themselves to develop and grow in power in this work. They must put into operation a definite program and curriculum, but they must leave the teacher free to adapt her plans to the needs of her class, which only she can know.

"In closing I must pay my meed of appreciation to the leaders of this Conference who themselves combine vision and idealism with sane, practical, workable knowledge and skill in many phases of this most important type of education. From this meeting should come very definite and widespread results that will be felt in ever widening circles in all the school systems of this country. For the sake of the children we hope that that day may come soon."

Miss Belle Kirk, Social Service Union, Steubenville, Ohio, spoke of incentives for teachers. She said:

*An Incentive
for
Teachers.*

"While we are not officially in the public schools, we have the permission of superintendents and principals of schools to give a prize to the teacher who will make the best physical improvement in her children between the first of February and the end of the school year. We have ten schools—three of them foreign. All of the ten principals, but two, gave permission and have allowed the teachers to carry on this health campaign. Most of the teachers went to work enthusiastically, and the result has been really wonderful. The prize which was offered to the teachers was not a money prize, but a trip which was to give her some real benefit, and as the schools are so largely foreign and there is so much uncleanness, it has been, as you can imagine, a transformation and it has benefitted all who have gone in for it."

Mr. DeForest referred to an important aspect of health training, saying:

*Repetition
Essential
to Health
Habit
Formation.*

"One word of many good ones that *Miss Mugan* said came particularly close to my heart, the word 'repetition.' We are holding up as a goal the acquisition of good health habits. Too many of us do not stop to analyze the underlying law of habit formation. If I were asked to write it out I should define it in four rules. First, interest must be aroused; second, action must be obtained; third, interest must be sustained and sustained; fourth, action must be repeated and repeated and repeated—repetition is the word that counts. It is the very essence of habit formation. Can any one point out how a habit can be formed without repetition? In arousing interest, a distinction should be made between the interest in prospect, and the interest in practice. It is very easy to arouse interest in prospect

without getting practice even once. We like attractive books, beautiful pictures, interesting stories. They are necessary to arouse interest and may even get action once, but we must remember that without a follow-up, interest may 'peter' away and the last state may be worse than it was at first—if interest is not followed up and sustained with action. In applying our law of habit formation we should keep in mind always the principles of child psychology. The most important ones are these: Every child wants to play. Every child wants to come up to a record. Every child wants to play that he is grown up and is doing things worthy of a grown-up. . . . You will observe, I am sure, that each one of these principles can be impressed by a method of indirect motivation. The child cannot be directly interested in health as a present abstract or future benefit."

In connection with Miss Mугan's statement that it is necessary to enlist the interest of the superintendents, *Miss Pritchett* made the point that many superintendents are already interested. They are hampered, however, by a lack of community backing which would justify them in setting aside school funds for this purpose. One way of securing this community backing is by arousing the interest of the Women's Clubs. Continuing, she said:

"We are trying a little plan in Pennsylvania that has been worked out through the State Department of Health and the Public Welfare Department, with which we have the closest cooperation. We organized first a Commonwealth Committee that travels over the State and from that we developed an organization whereby the county women may be organized in groups, each group standing back of a school and first equipping that school and making it possible to teach Health Education there, because 50 per cent. of the rural schools are not equipped for the teaching of Health Education. After equipment of the school, they then place in it some form of Health Education, beginning usually with the school lunch. This was virtually inspired by the women in the State, and before the organization was complete three counties had called for it. We now have three counties working for the equipment of these schools. The school superintendents will not consider that a fad. Their women are demanding it."

*Securing
the Coop-
eration of
Women's
Clubs.*

Dr. Brown:

"A real question arises in connection with stimulating a community's interest, not in the matter of equipment, such as scales alone, but in all public health matters. We have been using the willingness of a community to do things we believe to be effective, without providing the means of following up, or the personnel to carry out this plan in the community. We work this community to the point where the Women's Clubs buy the scales or other advised equipment; but without anything else being done the thing simmers down and the next time we try to induce them to buy a scale we have a

*Propaganda
Ineffective
Without
Organized
Follow-up.*

harder time. We must help them to follow through, not only with personnel, but with the possibility of carrying through that thing in the community."

Successes and Failures

THE papers next in order are accounts of successes or failures met with by various workers, and here described, and to some extent analyzed for the benefit of the Conference. The first such account was prepared by Miss Maud Brown, of the Elizabeth McCormick Memorial Fund, Chicago, one of our well trained scientific workers and an enthusiast in the health field. She has done some outstanding work in Kansas City, is helping to conduct a demonstration in connection with the Elizabeth McCormick Memorial Fund in Oak Park, Ill., and is now doing research work at the Iowa Child Welfare Research Station.

Successes and Failures in Teaching Health Habits

Miss Brown:

IT is a poor time for me to be discussing "failures and successes" in teaching health habits, for the simple reason that my investigations seem to have brought me to a point, just now, where it seems scarcely possible to distinguish between success and failure. I am in a state of suspended judgment about everything. But I am not discouraged—was never, indeed, so far from discouragement.

This year the Elizabeth McCormick Memorial Fund has given me the opportunity of digging up, turning inside out, and pulling apart every method of procedure which I have tried within the past few years. I have especially scrutinized the plan which I developed with the splendid help of Miss Jean, in Kansas City. Now, under the friendly and critical eye of Dr. Baldwin, of the Iowa Child Welfare Research Station, we are tabulating these data; and it will go hard with me if from these neat rows of figures and letters growing at the tips of our fountain-pens, there does not emerge some significant correlation which will act as a precipitant to my murky mind. One of the satisfying things about scientific work is that there is no gamble in it. If the work is honest, something is bound to come out of it—if not a correlation, then a lack of correlation.

By this time next year, consequently, I shall have something,—I don't know what.

The most fortunate of my experiences of the past few years, is that the intensive health study of the children of the small school with which I started my work in Kansas City was made *in the spring*. Ever since, it has kept my fingers crossed in the face of large gains—I mean large alterations in the weight-height ratio. In those studies where the figures run from September to June, and where there has been considerable reduction of percentages of underweight pupils, my fingers automatically cross themselves as my mind recalls the struggle which that most devoted and able group made to get a few paltry pounds on the demonstration group—*in the early spring*. The pounds came, but as the result of a completeness of health-service and cooperation that is at present impossible of attainment for the great numbers of school children.

Now, for the first time, there are accumulating some consecutive bodies of measurements for periods of twelve months at a time. This year I had the very interesting experience in comparing the three years' records of Kansas City and the two years' records of Newton to find the same rhythm! The methods used in the two places are widely different, yet some divinity seems to be shaping the ends of those weight curves so that, thus far, they come back in September to, allowing for normal variation, the starting point of the September previous. But two school systems—some forty-six thousand children altogether—aren't enough to draw conclusions from. If the gentleman from East Orange, N. J., will allow us to keep on measuring and weighing school children for a few years longer we shall eventually accumulate a sufficiently large body of data to base conclusions upon.

However, the extensive data (necessarily depending upon their numbers for authenticity) of a large school system continued year after year, supplemented by the intensive data (depending for their value upon exceeding care in controlling conditions and measurements) of a small system, should give results of some value. Now, if in October, the end of the first twelve months, the fluctuation of the growth curves of this school system follows the same rhythm already evidenced by Kansas City and Newton, it

will mean something—the next step will be to find out what. To that end the correlation of various measurements and traits is already under way.

*Definite
Successes.*

Meanwhile, there are two successes that I am sure of, no matter how the weight curve of the children behaves.

First and best, is the work of Miss Bragg's teachers in Newton, Mass., which I saw this spring. The way in which she has infused her spirit into her whole teaching staff, making each teacher devoutly to desire health for every child, is the finest thing I have ever seen. Those who have worked in any supervisory capacity with teachers know that it would be impossible to prevent the work from becoming perfunctory, were it not productive of real good to the children, which is clearly evident to the teachers. Authority can command observance, but it cannot evoke the enthusiasm which shines out of the eyes of Miss Bragg's teachers. Then no matter what the curve does in September—their teaching of health habits is a success.

Just so in another village of the same size—I know, *a priori*, irrespective of the behavior of any red, white, and blue lines, that when hundreds of homes alter their health program to an earlier bedtime, more milk, less candy, more greens—that it is good.

The greatest success which has ever been made in teaching health, it seems to me, is the Child Health Organization scheme of the Classroom Weight Record and tag. We must pull the operation of the scheme through the critical period corresponding to the baby's "second summer"—when children who have been trying for months to come up to weight and have made real sacrifice based upon our assurance that the scales would show the difference, see certain wicked lolly-pop eaters flourishing like green bay trees—and the righteous who eschew the picture-show at night cast down—a pound or more. Who is not familiar with "I eat pickles and drink coffee and am up to weight," or "I drink milk and go to bed early—why don't I gain?"

On the other hand, there are some mistakes to be avoided.

*Definite
Mistakes.*

First: It is a mistake to teach a few disconnected health essentials. (James 2:10—Now we will see who brought their Bibles). The child who drinks water freely will not be saved if he lose sleep. He who drinks milk must also eat bulk. He who plays out of doors needs to breathe through his nose. The whole health program must

be taught as a unit of behavior. It has the advantage of being much more easily remembered if it hangs together chronologically.

Second: It is a mistake to teach reasons to small children, and an equal mistake not to teach them to older ones (from 12 years up). Of course it is impossible to teach them the correct reason—since we do not know the reasons for many of the simplest essentials. I used to believe that it is better not to teach any reason than to risk teaching a false one. I have come to believe that it doesn't much matter whether the reason is true or not, so long as the fact is sound. But we must protect that boy from the ignominy of basing his conduct upon the opinion of the teacher—a mere woman! He must have the printed page. At the rate at which biological science is progressing at present all our present reasons will be of historic interest only by the time he is old enough to discriminate.

I have recently collected five perfectly good and true reasons why a child should not eat candy between meals. These reasons came from a pediatricist, a physiological chemist, a physical chemist, and a biologist. It does not matter which of the five reasons the teacher gives, so long as the child can see that it is written in a book, but some reason must be given.

The real reason why the teaching of health is so difficult a problem for the public school teacher is that she ought never to have it to do. It should not be necessary to teach the child to play out of doors, to rest when he is tired, to drink water when he is thirsty, any more than to teach him to tell the truth. The real health essentials are simple and instinctive. The real difficulty lies in protecting the child from the man-made complexities of our modern life.

*Health
Essentials
Swamped
by Com-
plexities of
Modern
Life.*

The teaching of health is not comparable with the teaching of any other subject in the curriculum. One reason for our failure is that since we have been giving thought to it at all, we have been trying to work it out as one of the regular content subjects, as, for example, history.

Health and ethics, only, belong together. They present the same difficulties, they require the same method. They are incomparably the most important part of the teacher's work—as well as the most difficult. Both health and ethics demand the habitual observance of a very few procedures. These being instinctive, require no skill in the performance, no background of information. The virtues and the essentials of health—their simplicity and their axiomatic quality—is their source of difficulty to the classroom teacher.

A child is in a bad way if he does not develop the habit of truth telling until his mind is able to follow the mazes of the philosopher who seeks to tell us why. The child must,

likewise, have the reactions to his environment which are necessary for healthy functioning of his body built into his tissues long before he is able to understand why. I do not like to be a wet blanket, and I would not say many things in a general meeting which I am talking out here. I do not believe in destroying an orthodox tenet until something which works as well is ready for substitution. But the longer I work on this problem the stronger my feeling is that, do as much as we may, we have not, so far at least, greatly modified for the better the conditions of the material which is turned over to us at five or six years. It may mean "mal-observation" on my part—I hope so. It may mean that the material is largely "set" by that time and that we are applying our efforts at the wrong fulcrum, or it may mean that we are essentially on the right track but have not sufficiently concentrated and intensified our efforts.

*Parallelism
of Health
and Moral
Education.*

The teacher is up against exactly the problem of the preacher, the endless iteration of a few simple truths. The health essentials, like the virtues, "when mouthed, become trite: when constantly reiterated, lose their freshness: when rubbed into the surface of consciousness, cause irritation." I am the more convinced the more I contemplate my failures in teaching health, that the whole thing is a moral problem. I am quoting, by the very kind permission of the chairman, Dr. Starbuck, from the manuscript of the report on a plan for moral education which recently was declared the twenty thousand-dollar prize winner. It might just as well be entitled, "A Plan of Health Education."

"During the early years," this report continues, "reduce self-conscious goodness and reasoned conduct to a minimum. Don't tempt the child to analyze the moral life until he has one. First, conduct; then sympathies; next, the imagination; and finally, reasoned behavior. To organize the feelings into higher ethical sentiments. To attain conscious self-control and help to direct wisely the life of the group."

In reading Dr. Starbuck's manuscript, I was so struck with the identity of the two problems that I am making a hasty application of this plan of moral education to the teaching of health. It is worth long and careful thought, I believe.

"First, conduct,"—simply doing the desirable thing. The child has the right to a sound and simple daily health regimen. It is his inalienable right, years before he can reason out the whys of a healthful diet, to be provided with

one. It is all wrong when we at school must needs put the child up to registering a protest against his parents' management of his health program. Better use every means within our power to have the initiative ostensibly proceed from the parent. The most successful primary teacher of health habits is the one who uses the telephone most freely, who has the most mothers' meetings. Mothers are quick to appreciate the difference between the teacher's using her influence to reinforce the home precepts, and using the same authority to provide the child with ammunition still further to bombard the all too frail walls of parental authority.

The clever teacher will usually succeed in convincing the mother that the initiative is her own, and the difference between the resultant of forces pulling together and the same forces at right angles will show so plainly in the well-being of the child, that she will be repaid for the extra thought.

The young child has the inalienable right to healthful physical and moral surroundings. And it should be more the part of the primary teacher to strive to secure these for him by home cooperation than to coach him to rebel against the home régime. "The child's moral muscles, like those of his body," to quote from the same manuscript, "are for use—not for analysis." And the next golden sentence might have been written from the standpoint of physical health as well as moral: "The normal impulses must be planted in the muscles of children, rather than flow smoothly across the lips." All teachers know the ease with which the recitation of the health essentials flows across the lips. But how to motivate the work so that the muscles gesture instant refusal of the proffered lolly-pop? Aye—there's the rub! All health-habit teachers have learned the mathematical truth that the quickness of the reaction is in direct ratio to the proximity of the reward.

We are constantly demanding action from the children on an ethical plane higher than our own. How many of us are capable of constant sacrifice of present pleasure to future good? How many times do we say, "I suppose I really shouldn't—but—?"

First, then, comes conduct; the child does right because it is the path of least resistance—fulfills the health essentials because it is made a part of his environment. He does

*A Health
Motivation
Sequence.*

the right thing because it is there to do and the wrong one isn't.

"Second, sympathies"—his environment becomes immensely complicated on entering school. Avenues of choice open to him. The path of least resistance is sometimes the wrong one. Here the appeal is to be made to his sympathies. He loves his parents supremely and his teacher is a glorified being who puts to shame our own conceptions of Deity. The strongest appeal to right conduct is the desire for their approbation or the sympathy of an admired companion.

"Third, the imagination"—the most difficult stage for the average, and the most delightful for the specially called teacher. The creation of ideals of health and beauty and goodness—just to stuff the storehouse of the mind full of this raw material, waiting for the fourth stage, "reasoned conduct," to build its standards from; for "That which the child in later years *thinks* is right, will be in terms of that which he has done and admired." Applying Professor Starbuck's words to health teaching, in the fourth stage he learns the facts which will explain the conduct and the altruistic other-ward uses for this strength of body. But his early performances, strengthened by his sympathies and burned into indelibility by the fires of his young imagination, determine the course of this reasoning.

For example, take one item which is the source of a large percentage of our failures in teaching health habits, the eating of sweets between meals, and see at what wide variance with the admirable course of procedure outlined above, is our actual treatment of the child.

*A Typical
Cycle of
Failures.*

"First,—simple conduct"—the child must be protected during his pre-school age by being provided with the proper diet. This is a task the most difficult. Grandpa slips him surreptitious peppermints. Aunt Mabel treats him to an ice cream cone. Adults one and all conspire, by their grimaces of pleasure when offering the baby sweets, by the custom of conferring candy as a reward or withholding it as a punishment, to develop what they label a "natural craving" for candy. When he has finally run the gauntlet of adoring adults up to his fifth year he comes to school and is taught by the children the desirability of the candy from the little store opposite the schoolhouse.

It is a hard thing to say, but most schools serving noon lunches capitalize this adult-taught desire for sweets by encouraging them to buy the candy which is the profitable item of the menu—for the principal needs to replenish her contingent fund. Candy sales are a common and abhorrent practice in—I am afraid—most school systems. The child carries home a red weight tag, carrying on it the prohibition concerning candy between meals, but at the same time munching the “good homemade fudge” or the “pure butter-scotch” which helps buy a new piano for the gymnasium. I am sorry, but I am not drawing an unusual or an extreme picture. Teacher has lovely posters on the wall illustrating the health habits. They all read a beautiful health story by Dr. Andress about the dangers of “Lolly-pop-town.” Teacher *may* even be consistent enough to wait until the children are at recess to pass to her next door colleague her weekly five-pound box of chocolates from “him.” The children are measured and weighed—the candy eater may be the proud possessor of a white card and he who denies himself remain in the group of losers.

Second, sympathies—he gets to High School and has his first “case.” The book of etiquette which he borrows and hides underneath his mattress tells him that his gifts may be books, flowers, or candy. And, of course, books and flowers eliminate themselves at once from consideration. In vain may the High School physiology teacher expatiate upon the effect on the complexion of candy eating. Edythe gives a satisfied smile into her vanity-case mirror as she abstracts a plump bitter-sweet, then touches up her lips with her lip stick. What matter to her what her complexion will be at twenty-five? She’ll be as good as dead by that time—so old it won’t matter.

The one constructive step we have taken in teaching this particular health habit is the serving of mid-session milk, so that the satisfied cells do not pull longingly toward the candy counter on release from school.

What is the answer to the whole baffling situation? As I said in the beginning, I don’t know. Yet I am sure of two things: One is that the first step in the program of moral education mapped out by Professor Starbuck and his co-workers, is the absolute *sine qua non* of health teaching, that the whole thing is hopeless if the pre-school child cannot have his normal instincts conserved until he enters

*A Possible
Way Out.*

school. This stage of protection while he learns the "doing of the deed" being granted him, it is relatively easy to get him through the second, where his love of parent and teacher makes the desire for their approval greater than his longing for the forbidden fruit.

From this he passes into the third stage, where his imagination is set on fire and his ambition stirred by heroic tales. Thence to the fourth, when he is given the material and the training for a reasoned planning of his own personal and community health program.

All this time that I have been seeking a way of teaching health habits so that children may be healthier, I have felt, and increasingly, the presence of something grim and unyielding deep underneath. I think it is this:

The present-day child is caught between the upper and the nether mill-stones of biology and modern society. The "irresistible body" of economic pressure meets the "immovable body" of biological structure—and the child is caught between. The child is paying in the most precious coin.

The structure of the human body is the same now as it was back in the days of ancient Greece, when school meant literally "a place of leisure." Biologically, today is only an hour removed from the days when Plato and his pupils sauntered beneath the plane trees—at "school,"—but socially, who can measure the distance? The human eye, for example, is the same structure which served primitive man. The muscles of accommodation which adjust the focus of the lens were contracted only occasionally as when the hunter had need sharply to define his prey. Then one day a man back in the Middle Ages had an inspiration—and, in a moment—society demands that these fine muscles pull hour after hour, upon the lens, holding it focused upon millions of little black marks upon white pages. For twentieth century relaxation it—the same biological structure that it was before the printing press—is taken into a dark room, directed toward a bright screen and fixed with all the intensity the child's mind can command upon the effort to hold still the rapidly passing figures upon a flickering screen—while the child-mind takes in the absorbing details of the society triangle. The same slender white nerves with the same inability to store nourishment for protracted demands have to hold every one of those fine fibers taut—those nerves, built in and tuned to the large noises and

*Biological
Need in
Conflict
with
Modern
Environ-
ment.*

great silences of the plains and forests and the slow cinema of the stars at night. The child in a trip down town uses more nervous energy than primitive man needed in a lifetime.

Is it any wonder that the harassed teacher fails to achieve any large measure of success in arbitrating between the irresistible and the immovable? Is it any wonder that thousands of teachers are themselves being sacrificed to the actually heroic effort they are making to hold apart with the strength of their own nerves the two mill-stones?

The essential health habits are instinctive. Modern institutions, so far as the child is concerned, are more plastic than these instinctive reactions. So the first step, without which there is no use at all in attempting Health Education, is to supply him while growing with the modern equivalent of the ancient conditions under which these reactions were built into his cells. This is neither so large an order nor so difficult of fulfillment as it sounds. The very fact that the race is biologically at the age it was before the dawn of all these complexities of modern life, gives the baby a fresh start, back at the tape. The very fact that the real essentials of health are instinctive makes them simple and easy of attainment, once the home is actually convinced of their necessity.

It is the contrast between the importance of their effects and the simplicity and relative ease of attainment that is the difficulty. If Health Pills were obtainable, at say a thousand dollars a pill, there is not a parent but would by some hook or crook manage to buy one for each child. No length of personal sacrifice would be extreme. But to believe that putting the child to bed early every night, and giving him certain simple foods, and letting him alone for the rest will achieve the same end—is too much. He must have the “good” things of life, and the “advantages” of which they themselves were deprived.

If we can only manage to get one crop of well-fed adolescent girls, with calcium and phosphorus in their bony structure; teach them the few essentials of efficient motherhood, to live simply and nurse their babies, the trick is turned. The maddening thing about it all is the difficulty of making parents and school officials see the picture in our own minds; the cosmic importance of the result, the utter simplicity and ease of attainment. Why, we could remake

*Remaking
the Race
in Two
Generations.*

the race in two generations if we could only shake parents and teachers into the realization of their responsibility and privilege.

It is, after all, a moral problem. It will have to be dealt with through the emotions. Never have I so longed for the gift of eloquence—to shake hell fire and damnation in the face of the present generation of adults to make them give us educable material at six, and build about the child surroundings that will permit him to live a simple life during the early plastic years. By the time he reaches the age when he can determine his own environment, his cells have pretty well learned their life habits. The only thing then left us is to capitalize that wonderful flowering time of adolescence and teach boys and girls their responsibility to the next generation. Those who have worked sympathetically with High School pupils know the amazing sensitiveness beneath the rouge of the “flappingest” flapper and the swagger of the “sportingest Seventeen.” It is as if Nature in disgust at our stupidity tossed us yet another chance at the problem, so plain as to be fool-proof and yet we miss it.

I should not write a paper in my present frame of mind. I resemble nothing so much as the twins' fox terrier when he starts down to China after the rodent which may or may not be there. I succeed only in filling the eyes of those about me with dust. If I unearth, beneath the aforesaid bank of figures and traits and averages into which I am at present engaged in burrowing, one single bone, I will lay it before you at our next Conference, and ask you to help me reconstruct the animal.

Let me repeat that which I said in the beginning and which the subsequent pages may have seemed to belie. In spite of my sense of having come upon a blind alley I have never been so far from discouragement as at the present moment. True, we can never return to the days of instinctive behavior—the toad hath spoken to the centipede—and reasoned adjustment must take the place of the insouciance of the myriapod in question, before its segments had become so numerous as to cause embarrassment.

But, perhaps Professor Lankaster's toad, like Shakespeare's, bears yet the precious jewel. The struggle of the centipede to coordinate the ineffectual appendages is rewarded by the slow slipping forward and concentrating of

ganglia. He is on his way toward organized conduct. Here's hoping.

Discussion

The discussion was opened by *Miss Margaret Sparks*, Nutrition Specialist, Public Schools, Trenton, N. J., who told something of the Trenton program during the last two years. She said that the local chapter of the American Red Cross had placed at the disposal of Dr. Wilkes \$10,000 with which to carry on this demonstration.

It was the effort to have the two hundred students of the academic division of the ninth grade civic classes really appreciate what Trenton is doing to safeguard the health of its citizens and especially the importance and necessity for such protection,—that was responsible for the health project of Junior School Number Two of Trenton, New Jersey.

The students were very much impressed with the solemnity of the obligations laid upon them, especially when they learned that all data relative to the experiment would be filed in the office of the school doctor. This was the sole incentive given the experimenters, and the hope of being of service to others, of making a real contribution to the health knowledge of the world proved more potent than any hope of mere personal reward. In fact it was the key to the unexpected enthusiasm of the project. Each child promised faithfully to make it a real, scientific experiment.

*A Junior
High
School
Health
Project.*

At the outset several very difficult questions presented themselves:

1. Could such an extensive project be included in an already overcrowded civics course of study?
2. Could enthusiasm be inspired in view of the fact that no supplies would be available other than those the children should make for themselves?
3. Could interest be maintained among boys and girls over such a long period of time especially when no reward was offered?
4. Would High School boys and girls enjoy an experiment of this sort or would they feel that they had exhausted the possibilities of the subject in the lower grades?

As is usually the case, the challenge of the difficult served only to inspire, not to discourage.

The first necessity was obviously to select the health rules on which the experiment would be based. At first a list

of twenty rules, any ten of which might be obeyed, was placed on the blackboard. This soon proved unsatisfactory. The girls of the third division objected on the ground of a lack of uniformity. They decided to select the ten which in their judgment were most vital. Each girl handed in a list of the ten rules which she thought most essential. From these lists a committee of three selected the ten that would be used by the class. The very day the revised list was adopted the class received a suggestive list from the Health Education Department. As this was practically the same as that of the class, the latter asked for and obtained a mimeographed copy of these rules for every student in the academic division of the ninth grade.

The list read as follows:

1. Sleep eight hours every night with windows open.
2. Brush teeth properly for three minutes after meals and at bed-time. Wash hands before each meal.
3. Cultivate the habit of keeping fingers and pencils out of the mouth. Keep finger nails clean.
4. Take ten or twelve deep breaths of fresh air every morning and follow this with hygienic exercises for three minutes.
5. Regular toilet habits.
6. Avoid undue exposure—always wear sufficient warm, loose, soft clothing.
7. Eat regularly three times a day—always include fruit and vegetables.
8. Eat sweet foods only at the end of a meal.
9. Drink milk or cocoa, but no coffee or tea.
10. Nourishing foods can always be made palatable and attractive in appearance. Avoid fads and self-analysis.

Most of the boys and girls kept this list in their notebooks. Some tacked them in the bath-room, some in their bedrooms and one over the kitchen sink.

The rules having been determined, each pupil received a health chart. On this, from cards given out by the Child Health Organization, each determined the gain he or she might normally be expected to make in a month. This was carefully plotted on the chart in a dotted line along which was printed "normal gain." The weight tables of the Child Health Organization were then posted on the bulletin board and were frequently consulted by the children in their free periods. Each month the students were weighed and the result plotted in a heavy line on the individual weight charts. From the first on intense interest in and rivalry

over weights obtained, and this was maintained until the very last hour of the experiment. The students were greatly elated as their weight line increased and very much disappointed when for any reason it fell below the dotted line. Frequently children asked, "What can I do to gain weight?" The teacher used this opportunity to stress proper nutrition.

Every month as the weight was plotted, each student was handed a card on which he wrote his special health efforts for the month and especially the reasons why he believed his line rose so far above or fell below the normal. These cards were very instructive. One girl's graph as a result of her ardent efforts showed a gain of five pounds over her entrance weight. She was inordinately proud of her record. Suddenly she developed the measles and at the next weighing fell three pounds below her entrance weight. Her disgust was amusing.

The relationship between sickness and loss of weight was startling to the children.

Every day some little encouragement was given the experimenters. One fact that was constantly impressed upon the children was that unless their statements expressed the real truth they would not be at all valuable.

Two health officers were appointed in each class, one to care for the graphic weight charts and one for the record cards. In addition a student was appointed to care for a health habit practice record. Those who observed eight rules received a mark of eighty, those who observed nine rules a mark of ninety, etc. At the end of the month, the marks were added to see which individual in a given group should have the highest mark and which of the six groups should excel the others. To stimulate interest between markings various interesting articles were read; *e. g.*, Mary Pickford on "high-heeled shoes," and "The Diary of a Stomach." In addition, special reports were given on various health topics.

The children asked so many questions that it was finally found necessary to make a "question box." A boy from the first division took special pride in making it as attractive as possible. This box was nailed in a corner of the room. It was to contain questions only on health preservation. Once a month the questions were taken from it and sent to the administration building, where they were

*Question
Box.*

answered by Dr. Wilkes, Miss Sparks, or Dr. Edwards, the school dentist. The children thoroughly enjoyed these questions and answers. Once when the teacher forgot to read them to the class she was rather vociferously reminded of it.

So many questions were asked about yeast and vitamins that the children were furnished with charts on which the function of each of the three classes of vitamins was set forth as well as foods containing each. Some idea of the amount of vitamins in each food was also included.

*Weight
Gains.*

In March the nutrition expert made a special study of the weight charts. These showed an average gain of 140 per cent. They also showed that the malnourished students had decreased from 16.4 per cent. to 9.2 per cent. Moreover the students of normal weight had increased from 57.5 per cent. to 77.1 per cent. The fourteen students who were found to be malnourished were given special literature on proper nutrition. The Medical Director and his assistants also came to the school and gave each a special examination, clinching it with advice peculiarly applicable to the case under observation.

With the coming of Spring weather, and the consequent increase of outdoor activity, there was a decided falling off in weight. However, strange to say, there was no diminution of interest in the experiment. Many expressed regret that it concluded in May instead of June.

At the close of the experiment, each student wrote a letter to the teacher telling what the experiment meant to him. The following are typical of the letters received.

A careful analysis of the letters revealed the following facts:

Ten children ate breakfast who had never eaten it before. The following exceptions are characteristic: "I eat some breakfast now although I hate to do so, but mother doesn't have to make me do it now."

Nineteen got more sleep, indeed one boy finds it "difficult to do without eight hours of sleep now."

Twelve ate more green leafy vegetables.

Five practised taking deep breaths every day.

Eight students who never did so before now wash their hands before meals. One boy says, "Now that I am obeying

the health rules I can't sit by the table and eat before I wash my hands."

Twenty exercised more.

Eleven ate more cereal.

Eight said the health rules had become such habits with them that they could not break them.

Sixty-one brushed their teeth more regularly. One little girl was well pleased because "Mother never tells me to clean my teeth now."

Forty-six drank more milk.

Thirty-two stopped using coffee.

Eighteen drank less coffee than formerly.

Twenty stopped using tea.

Five used less tea than formerly.

Thirteen said "they had had no headaches since the experiment started." No statement in all the letters was more interesting than this or more unexpected as the school is a one-session school and lasts from quarter of nine until three-thirty with only a half-hour lunch period.

Eleven gave up eating candy between meals, eating it only with meals.

Twenty-eight ate more fruit. One girl wrote, "I never ate fruit before."

Thirty-two ate more green vegetables.

Thirty opened their windows at night although they had never done it before. One boy said, "Before the health experiment, I slept with my windows open when mother opened them, but now I open them myself."

Eight tried to keep pencils out of their mouths although many confessed that they didn't succeed very well.

Seven tried to stop biting their nails. One of the girls succeeded in growing nails long enough for her cousin to manicure for her. She and a friend are now having a race to see who shall have the prettier nails.

Two "couldn't" stop biting their nails.

Four gave up eating between meals.

One girl who never brought lunch to school brought it as a result of the experiment.

One drank more water.

Three had more headaches.

One found the experiment uninteresting after the second month.

One group was greatly stimulated to action when one of the girls reported that the Rotary Club to which her father belonged was checking up on the same health rules as those given to the school children.

It was most satisfactory to see what an interest the mothers took in the experiment. Many students said their mothers saw that they obeyed the health rules.

The following tabulations are the final results obtained:

<i>Sex</i>	<i>Expected Gain</i>	<i>Actual Gain</i>
Boys and Girls	167¾	195
Boys and Girls	196¼	246¼
Girls	110¼	119
Boys	247½	266
Girls	81¾	87
Boys	246½	222*
	1050	1135¼

Percentage of gain for entire class, 100 per cent.

Conclu-
sions.

The conclusions drawn from the experiment were:

1. That there is a direct relationship between failure to gain and sickness. Vice versa there is also a direct relationship between a steady gain and good health.
2. That the subject of health *per se* is interesting to boys and girls.
3. That the thought of serving others is a more interesting reward to boys and girls than any prize.
4. That children like a visible demonstration of what they have accomplished, hence the value of the graphs.
5. That children will themselves assume responsibility for a gain in weight and will carry the inspiration for good health practices into the homes.
6. That in the majority of instances those who obeyed the rules most consistently showed the greatest gains.
7. That the actual gain or loss in pounds was a very small part of the class accomplishments for
 - a. Positive health rules were formed.
 - b. A vital interest in health was created.
 - c. Each individual through experience knew what healthy citizens can mean to a community, and
 - d. Best of all, through actually living out the health rules, each student knew how to approach, attain and ultimately (in the majority of cases), maintain, that ideal state of being a healthy and therefore a happy citizen.

Dr. Wilkes, upon being asked to describe the Health Program of the Trenton Public Schools, presented the following outline:

Trenton
Health
Program.

I. Observation and Detection.

- a. Daily observation and study of children by teachers to determine "normal" appearance of individual children, in order to be able to detect the earliest signs of departure therefrom. Any pupil appearing other than "normal" shall be isolated and referred to doctor or nurse as soon as possible.

*These boys are ardent baseball fans. Their record was considerably over 100 per cent. before the season opened.

- b. Routine physical examination of every pupil yearly—including dental examination.
- c. Subsequent inspections and re-examination of pupils found defective.
- d. Follow-up by nurses on defectives by home visits.

II. Corrective Measures

Correlated action in corrective measures by school medical, dental and physical departments, family physicians, dentists; together with parents, teachers and school nurses, to return defectives to, insofar as possible, normal at the earliest possible moment.

III. Preventive Measures.

For health preservation, especially of sight, hearing, posture, teeth, etc.

a. Educational for Child.

1. Correlation of health with all educational subjects, especially in elementary grades.
2. Talks upon request, by Medical Director, Inspectors, dentist, or nurses.
3. Literature, charts, graphs, posters, health rules, slides and films, games, plays, "snapshots" of best specimens, etc.
4. Individual examination and advice in consultation by director.

b. Educational for Parents and Others.

1. Personal message carried directly to parents at Parent-Teachers meetings by means of illustrated talks, demonstrations, etc., by members of Health Supervision Department, slides, and charts, etc., chiefly by Medical Director and Health Educator. Personality is as important as the message.
2. Personal contact with parents in homes on individual problems, by nurses and teachers making "home visits."
3. Literature distributed to parents through children.
4. Newspapers, organizations, etc., used for educational propaganda.

IV. Control of Contagion.

"Smother coughs and sneezes" and isolate all children departing from "normal" in appearance from the others until seen by the doctor. Send home on doctor's advice or that of the nurse or teacher.

V. Intensive care of special groups by measures intended for their care and restoration. For malnourished, crippled, anemic and tubercular contacts, blind, deaf, epileptic, cardiac, speech defects, mentally subnormals

—where sufficient are found, special classes are formed where the work and number of pupils is restricted.

a. Malnourished—rest or modified exercise in gymnasium periods, and milk in milk periods.

b. Anemic and Tubercular Contacts—Open Air School.

c. Cripples—Transportation to be provided and special desks to fit deformities.

d. Blind and Deaf—State provides care.

e. Mentally Deficient—Special classes provided.

f. Cardiac—Avoidance of stairs and gymnasium when advisable.

g. Speech defects—Survey and plan outlined, but no provision made as yet.

VI. Athletic Competition.

When the following things are done parents then feel that every precaution has been taken:

a. All school children engaging in competition shall be examined and supervised by the school physicians.

b. Examination by physician of injuries occurring on school property (when possible) before child leaves the building or field.

c. Medical examinations and advice to coaches upon request.

VII. Dental Work.

a. Survey of all pupils and charting of findings.

b. Repair 6th year molars of indigent children.

c. Repair teeth of children of indigent parents when they want to go to work. (They must pass physical requirements.)

VIII. Research.

Correlation of physical and dental defects with attendance, nutrition, contagion, mentality, vitality, etc.

Dr. Bigelow here raised the question as to whether there is danger that this routine examining of children and making them conscious of their condition, will have the effect of creating the most introspective, hypochondriacal group of young people the world has ever known.

Miss Bragg replied:

"I may be prejudiced but our children in Newton are very happy in this work. The teachers must be wise. The children who have become self-conscious have to be dealt with as individuals from the point of view of the right kind of treatment. It is only the stupid teachers who make children unhappy."

Dr. Wood added:

"I am in sympathy with *Dr. Bigelow's* inquiry as to the results 20 years hence, but I think that all these honest, well-intentioned,

Does
Routine
Examina-
tion Pro-
duce Un-
desirable
Intro-
spection?

most serious experiments that we can try, are worth trying. There may be danger in them. We learn more sometimes from failures than from successes, but we must remember for the sake of our associates who help us in our work, the tremendous significance of the consciousness of success, partial or comparative, the success dependent upon continuous, honest effort."

Dr. Bigelow stated that he had no fear for the normal or super-normal, only for the subnormal ones who are not succeeding.

Professor Turner added, going back to *Dr. Bigelow's* question:

"Apropos of this matter of worrying children and how we are going to get this thing across, I would say that I got a great deal of satisfaction from the teacher who said that everybody could not be equally robust, and that Mr. Darwin and Mr. Stevenson had succeeded in doing a good deal for the world, although they could never be quite as robust as some of the famous athletes in history. You have seen men come into college from high school with ability to make an athletic team in the institution and, because they broke training they were kicked out of athletics before the junior year. And then some man with a poor physique comes in and by a long and fine course of training builds himself up to a position of national championship. I believe it is possible to handle underweight children, when we use that project, without making them tremendously discouraged.

"There are two or three things we are moving towards in our methods of getting across to the children the things that we want. One thing is that we are talking about health for the whole school group and are not any longer in many places giving aid to a particular group of malnourished children until we get them up to normal weight, and then letting them go.

"We are coming to believe less and less in rewards and competition and records, or a combination of records and rewards as incentives and motives and to believe more and more in what Miss Bragg phrased as 'the Power of an Idea.' People are enthusiastic for health. I don't know what a boy won't do to get into athletic condition, and from what I read in the newspapers about the beauty parlors I do not know what a girl won't do to be beautiful. I am wondering whether we need special competitions. In Malden we have used weight records through the year, and I think we have used them without assuming that the weight record was a physical diagnosis. I do believe that we must be careful in the use of our weights. I think that none of us must ever promote children from underweight to a normal group except on basis of height at the time he is weighed. If anyone here who has used both methods can tell us by actual experience that a reward can produce the result which the power of an idea cannot produce I would like to know about it."

Miss Mary Murphy, Elizabeth McCormick Memorial Fund, Chicago, Ill., said:

"We have been interested, as many of you know, in two branches, in two school systems—one under Miss Brown (whose paper has just been given this afternoon) in Oak Park, Illinois, which is close to the city of Chicago, and really an American community, and another in a town of 6,000, about 40 miles from Chicago, where there are large industries and a large foreign population.

"We have had a very interesting reaction from many teachers. When the pupils were presented at the outset, the difference in poor health and malnutrition represented in the schools was thought to be a matter of ages, or a matter of grades or a matter of race. A classification was later made by grades, showing that no such thing could account for this. Each teacher set to work at her own problem. The interest and the health standard of each teacher was indicated by the progress made throughout the year. We feel that the personality and standard of health which each teacher has, is responsible for a large percentage of the progress that her pupils make in the grades. One other little angle I wish to mention. We were first interested in this problem of health teaching through the work in the open-air school. Part of our work has been promoting such schools. We soon came to realize by talking with people who worked with the subnormal and delinquent schools that what we were advocating for a select group were principles which should be applied to the entire school system. From the work that has been done in open-air schools with fewer children to a teacher it is evident that for best results we must have comparable conditions in all rooms, and advocate 25 to 30 children—not more, to a teacher. Let food be made available at least, if not actually served to children. Those principles, if good for the selective group, are just as good for the large group, and should be in the same school system where we will find these things for the selective group.

"And while we are considering Health Education I wish we might do more, as Miss Bragg and Professor Turner suggested, with the power of an idea, in making the school itself as well as the homes, through construction, administration and organization, contribute to health, while we are giving Health Education."

Regarding successful ways of forming health habits, *Dr. Kleinschmidt* said:

"We are in need of teaching health principles. I cannot quite believe that the only way to teach the child is through habits, and I heartily commend the idea that we can dig out plans and methods whereby we can carry over fundamental principles and ideas so that the child will form its own opinions and know principles of action."

The chairman closed this discussion by the statement that workers in Health Education particularly have a very keen appreciation of the importance of all that psychology can teach in its application to this field, and such help is of

*Give All
Children
the Advan-
tages Now
Enjoyed
Only by the
Handi-
capped.*

vast importance. He then introduced Miss Ethel Perrin, Assistant Director of Health Education, Detroit Public Schools, Detroit, Michigan, to discuss further "*Successes and Failures in Promoting Health Habits.*"

Before starting the discussion of her subject *Miss Perrin* described conditions in Detroit, saying:

"We have had a very wonderful opportunity in our new Junior High School or Intermediate School, and I am going to give you a report of it. Our first new building to be run under the new schedule was opened in February. There are 1500 children in that school, and they all pass through the Health Education Department. All those children pass through our hands for 60 minutes every day for 3 years. This means that our plant is well equipped. We have every opportunity there,—2 gymnasiums,—2 rooms for health instruction,—2 play courts,—2 playgrounds,—everything that we could possibly desire. We have 9 teachers, but want 10. We have 5 women and 4 men. About 150 girls come into the gymnasium for 60 minutes every day. They are divided into groups. The examinations are made through City Department of Health in conjunction with our people. Some go into the gymnasium and some to the playground. One group always goes into health instruction class. This is our setting in the new school."

She then proceeded to give a statement of recent Detroit experiences in Health Education:

Failures and Successes in the Promotion of Health Habits

Miss Perrin:

THE Department of Health Education in the City of Detroit has gone through the usual stages of development, starting with Physical Culture and the sort of work for which that name stands. When I took charge of it some ten years ago we changed its name to Physical Training, and placed its responsibility largely in the hands of the classroom teachers for this special subject. As we progressed to teachers who gave their undivided time, we changed our name to Physical Education, and when, a few years ago, through the stimulation of the Jean who put gene in genius, we awoke to our full responsibilities, we adopted the name of Health Education.

We consider our responsibilities to be seven-fold, namely:

*Seven-fold
Responsibilities.*

1. Development of a perfect physical body.
2. Teaching worthy use of leisure time.
3. Contributing to command of fundamental processes.

4. Contributing to worthy home membership.
5. Contributing to vocational ability.
6. Contributing to civic objectives.
7. Contributing to ethical character.

We believe that the foundation upon which to build is:

1. Control of growth.
2. Control of physical ability.
3. Control of illness.
4. Control of defects.
5. Control of accidents.
6. Control of energy and vitality.

We also believe that we can only reach control of these last six major problems, through the study of their nine contributing factors:

1. Food.
2. Rest.
3. Air.
4. Exercise.
5. Clothing.
6. Cleanliness.
7. Posture.
8. Leisure time.
9. State of mind.

The activity side of our program consists largely of games, athletic sports, dancing and self-testing activities, all of which are taken care of by supervisors and teachers trained for this purpose.

My talk today will only touch upon the side of the work we call Health Instruction, and I shall give you our experiences for the past three years.

The Modern Health Crusade was our first venture, and it gave us an excellent start. Through the cooperation of the Detroit Tuberculosis Society we were able to distribute the literature and buttons for this work free of charge to the Board of Education to every teacher who wished to carry on the Crusade. Thousands of children became interested and the community was awakened to the value of health habit training. We found that the interest died down because the work was ungraded and the children did not enjoy repeating it term after term. So we set about forming health clubs patterned largely after the Rochester Plan. One assistant supervisor gave her full time to grading these clubs from the first through the eighth grades. We then proceeded along approved experimental lines and

tried these clubs out in schools selected by the school authorities for all experimental work, thus putting our best teachers into it. They made a great success of it as far as we could see at first (which was not so very far), and we were immensely pleased. One day when I proudly took a visitor around, the question of open windows at night was being recorded, row by row. One little boy was looking sadder and sadder while the other children of his row were looking madder and madder because, as usual, they were not making a perfect score on the window proposition. I waited my chance to speak to him by himself and asked why he did not open his window. He looked at me rather pitifully and said because he had no window in his room. We straightened this particular case by voting that in such a case the opening of a door into a room where a window was open should score a point and all was well. This was an eye-opener into the objections to this method of teaching health habits when adhered to too rigidly and without a thorough understanding of the home conditions of the children. The boy was telling the truth and being censured by his class. He had no opportunity for self-expression and no chance to straighten out his problem.

At another time, when we were taking visitors to the schools, the teacher was in a great flurry and asked us if we would wait a little while. We later discovered that the cause of the delay was the absence of the Health Club captain. They sent an automobile for the boy and would not let the visitors enter until the captain was there. That club could not work that morning without the captain. Everything went well after he arrived; he was a true little captain and put the children through their paces in great style. That was another eye-opener to me. I knew that there was something wrong somewhere if we had to depend on one small boy to make the club a success.

*Health
Clubs
on Trial.*

Our next step was to show these clubs in process to an administering body of people called District Principals. It is their duty to look at new material for Detroit schools from the standpoint of its administrative possibilities. They are a very important and imposing group of people and we took all fifteen of them to one school. They were not nearly as impressed as we had expected and immediately found

all sorts of difficulties for the average and below the average school to contend with:

1. The assistant supervisor could never spend all that time in every school.
2. These teachers were above average.
3. Too much temptation to prevaricate for the sake of public approval.

Many more minor faults were found. So the verdict was thumbs down on this scheme at the end of an interesting and illuminating year.

*The
Present
and Most
Successful
Plan.*

We are now well on our way on our third and so far, at least, our most successful plan. Mr. N. H. Pearl is our Supervisor of Health Instruction and he put in at the beginning of the past school year, six months of constructive work on a course of study for the fourth, fifth and sixth grades. This is being printed by the Detroit Board of Education. Mr. Pearl then began experimenting in four schools of different types of children and teachers. The outline I gave you at the beginning of this talk is from this course and he worked in six rooms in each school with the six major problems. Although they did not have a full term the results were very satisfying and by means of scrap books, plays, posters, rhymes, slogans, songs, health clubs, student committees, campaigns, competitions, records, outside agencies, national and local organizations, correlations, textbooks, charts, personal experiences, etc., it was surprising to see the intelligence of these children upon the subject of Health, and their interest, keenness and attention to personal habits. This time we divided the District Principals among the four schools, and a far wiser move, we choose one of their own schools to experiment in. They were all satisfied that we were doing worth while work, and a committee from among their number is helping us plan an extensive use of it this coming year.

Discussion

Miss Helen Freeborn, of the Washington Junior High School, Rochester, N. Y., told of another type of experience with high school pupils. She said:

"I am not a Director of Health Education and I am not associated in any way with the Health Education Department of Rochester, N. Y. I am a mere member of the faculty of the Washington Junior High School. In addition to and apart from its Health Education teachers

and their work, we try to do something to formulate health habits in that school. As in Detroit, our Department of Physical Education is called Health Education. You probably know that the Modern Health Crusade was founded upon the Health Club idea as originated in Rochester, N. Y. The Washington Junior High School has nearly 2000 pupils and 100 teachers. It is a school in which there are four distinct methods of training—academic work—commercial work—vocational work for boys and vocational work for girls. We have unusual facilities and unusual means for carrying on any project that we start, because we have the things to work with. One morning in the spring of 1920 a boy came into our school. He had moved from Binghamton to Rochester and among his credentials was his report card and at the top of that was printed 'Health Education,—its object is to make health habits through education—to add years to the lives of the coming generation—and to increase people in their efficiency and habits by the training they receive today.' Below that were spaces for marking the pupil in personal appearance, school house-keeping, posture, play activities and classwork in hygiene.

"The same morning three of our foreign children had been sent to the basement to be cleaned up, because they were so unusually dirty. That same morning a large poster had been put in the main hall. On that poster were 7 Objectives of Secondary Education with *Health* heading the list. Perhaps it was the combination of circumstances, but the thought came to us why cannot we organize some plan by which the children in our school may be cleaned up and may start health habits? The matter was talked over with the principal, and a committee was formed to investigate what was being done in other places along the line of Health Education and to see what might be done in perhaps a very simple way at first to start health habits in our school. I am not going into details about what we did, but the result of the committee was that we have organized an annual Health Campaign in our school, which takes place during the last ten weeks of the spring term. The first Health Campaign was called Cleanliness Crusade, and we stressed only questions which had to do with personal cleanliness and the cleanliness of clothing. We put in the regular class inspection, which has stayed, and we used the slogan—'Cleanliness is the Citadel of Health and Happiness.' In the second Health Campaign our slogan was 'Health Through Cleanliness Leads to Happiness.' We added to the cleanliness rules of the year before a few rules about health. The third campaign this spring we called a 'Happiness Drive' and we used as our slogan 'Happiness Through Health and Cleanliness.'

"The justification of this method of promoting health habits can, of course, only be made through the results obtained, and we feel that we have obtained results. I am going to tell you a few.

"We have in every home room (there are 59 in our school), a daily health inspection, particularly for cleanliness. In all our plans we had to remember that the work was being done by teachers who were not trained in Health Education and that the time was limited. We have student government in our school, and practically all of inspection is done by student officers. The Health Campaign is so in-

*Health
Education
Permeating
a Junior
High School
Curric-
ulum.*

tensive during the ten weeks that the work is carried over into the next year. Another important result of the campaign is that there is not a coat or sweater worn by any boy in school from September until June. The girls have also adopted middies as their universal uniform.

"We have on each report card a space for marking pupils in Health Education. Before I close I should like to tell you the story which illustrates the effect upon our children of bringing to them forcibly the importance of health habits during their school days.

The Transformation of Peter.

"We had in school an Italian boy—Peter Gambetta—who was the most uncouth and most unpromising and roughest and dirtiest pupil. In about a year he elected vocational work and went to the machine shop. He had no self-control, no sense of the rights of others, and finally he was suspended from school because of his conduct. His father came down to plead for him and he was readmitted to the school. About this time our First Health Campaign started. Peter was simply transformed. He was one of the boys who took up the Health Campaign with the greatest seriousness and changed into a clean, happy, wholesome boy. He graduated from the 9th grade. He wanted to go on further, but his father would not allow this. He wanted Peter at home to work. Peter sent for the teacher to talk to his father and we sent one of our Vocational Guidance teachers. His father would not consent to his going to school any longer. While waiting for his father to come, Peter showed the teacher how he had worked at home. He had taught his mother how to wash dishes properly. He had painted the walls and woodwork of his house and had made an attempt to paper one room; he had scrubbed and cleaned the floors and had even attempted and succeeded in making a dress for his little sister so that she might go to school looking like the other children. He had 10 brothers and sisters. One of his brothers came to me one day and brought with him two other boys. He said to me: "These two boys look the way I used to look—will you see if you can do something for them?"

"Since I have come to this Conference I feel there are a great many weaknesses in our plan."

The Modern Health Crusade in a School Health Program.

Recurring to the references frequently made to the Modern Health Crusade, *Professor Turner* asked Miss Virginia Lewis, Director of the Modern Health Crusade of Ohio, if from her experience of the Modern Health Crusade it could be put on as a school health program, or whether it has a different type of place as an initial step in developing a school program.

Miss Lewis replied:

"None of us feel that it is a school health program. It is a method that can be used, but I think it is a method only."

Professor Turner:

"How long do you think it can be used in the rural school? Is the program one which can be used year after year?"

Miss Lewis:

"This question can be answered by the practice of a certain southern county superintendent of schools, who has used it every year, putting it on as two programs—one in the spring and one in the fall."

The chairman then announced the next paper in the series of Successes and Failures. He presented *Mrs. Isabelle Baker*, Director Instruction in Home Hygiene and Care of the Sick, National Headquarters, American Red Cross, Washington, D. C.

Home Hygiene and Care of the Sick

MAY I assume that everyone here believes that the most important thing in Health Education is to teach the *principles* of health and right living in addition to automatic health habits?

Children should be taught the *reasons why* the organs of the body should function properly; why personal cleanliness is necessary; why harmful results follow when regularity of life and simplicity of diet are not cultivated.

The aim of the Red Cross course of instruction in Home Hygiene and Care of the Sick is to give such practical illustrations of the subject of health preservation and disease prevention as may be applied at once to self, school, family and community. The objective of the course is to give elementary knowledge of personal hygiene and household and community sanitation; to provide authentic instruction for women and young girls in simple nursing procedures in order that they may care for members of their own families during minor ailments and that they may also be prepared to carry out intelligently in the absence of a graduate nurse the orders of the physician, and learn how to care properly for small children and babies, according to the most modern scientific theories, thereby checking infant mortality. The "ounce of prevention" principle is an integral part of the course in Home Hygiene and Care of the Sick. Safeguarding the home and school by prompt attention to early symptoms, application of the principles of health rules, and the control of communicable diseases, together with a knowledge of how to take proper care of babies, children and mild illnesses is surely the A B C of common sense as well as of a national Health Education program.

Moreover has not the schoolgirl of today the right to expect some direction toward her future duties? Upon her will eventually rest the responsibilities of making a home, keeping her family well and happy. We must visualize her future as wife, mother, club member, as a person sharing with the sterner sex civic responsibilities and perhaps political ambitions, as well as a potential business or professional woman. New vocations continually evolve for the twentieth century graduate. She may be the sanitary engineer of the community and State in the years to come. Should we not keep pace with the march of events by giving her such health education as will enable her to accept intelligently and efficiently such a destiny? To a great extent the health of the nation must always depend upon its womanhood. Can we afford to ignore the opportunity to ground our girlhood so securely upon health principles while youth and enthusiasm make the task most simple, that maturity will find them ardent disciples of the goddess Hygiea?

*Fitting
School
Girls for
Modern
Life.*

Perhaps no subject in the school curriculum may be so practically linked up with allied sciences and branches of study as Home Hygiene and Care of the Sick. Even the High School boy may be induced to take an interest in the subject, through the Manual Training Department, for one of the most important phases of the course is the teaching how to improvise sick room appliances and substitutes for costly hospital apparatus and bedside comforts out of simple materials at hand, at almost no expense and trifling labor.

Similarly the sequence from biology to physiology suggests itself, in the presentation of the lessons in Home Hygiene and Care of the Sick. The cooperation of the sewing teacher is readily enlisted when child care brings up the subject of layettes: of the instructor in home economics when the invalid's tray is prepared and sick diets prescribed.

It should be borne in mind that primarily Home Hygiene and Care of the Sick is not a course in Health Education and was never intended as such, but it is a phase of it and in the schools may be regarded as an elective or required subject for a selected group whose study has consistently led up to this supplementary instruction. Such a group of High School girls, for example, is the ideal material with which

to work. Its study, however, is not limited to any particular grade or group. The subject matter is capable of extensive modification and adaptation.

Whenever home hygiene instruction is made a part of the High School curriculum the subject matter of the textbook must be divided and presented in a simpler and more concrete way than is necessary when instructing classes for adults, for whom the textbook was primarily written. It is scarcely necessary for me to say to this audience that the pupils in the High Schools (Graded, Parochial or Private) are not only immature but are inexperienced in life as well.

Moreover the customary periods of each lesson in the adult course, consisting of from one and one-half to two hours, are entirely too long for the school girl. Furthermore the average period in High Schools is forty minutes, a fact which has necessitated an additional adaptation of the text in the presentation of the subjects. During the past three years we have been endeavoring to have a double period once a week set aside in High Schools for this instruction, but we have taken the time allotted and adapted the course, accordingly. Our experience has shown also that it is quite often impossible in the case of school pupils to meet the requirement of the American Red Cross to keep the classes small—preferably 14 to 16—because a class must be taken in its entirety, regardless of its membership. The class may number 20 or 30, who must take the instruction in a given period of only forty minutes' duration.

A solution of the school period problem consists in accepting the group as a whole for instruction in principles and for demonstration work; afterward breaking up the group into smaller units—four, six or eight—for their laboratory or technical class work. Such methods frequently obtain in colleges and universities in the case of subjects where practical demonstrations or personal research work is required and has worked out very effectively in the case of Home Hygiene and Care of the Sick, especially in rural districts.

The best results are obtained when a room is set aside for this particular instruction fitted up to resemble as nearly as possible an ordinary bedroom in an average home. I cannot too strongly emphasize the fact that the simpler the equipment the more valuable the lesson. If a girl is taught a simple nursing procedure for the home, with

*Adapting
the "Home
Hygiene
Course" to
High
School
Conditions.*

hospital equipment, she is not going to remember in the stress of emergency, or under the strain of anxiety when a member of her family becomes ill, something that was perhaps casually mentioned in the class as a "practicable substitute." Whereas, if she has worked from the beginning with home-made appliances, substitutes and simple home apparatus she will not lose her head but will be able to proceed with confidence and efficiency.

My criticism of many of the classrooms equipped in the schools for this course is that they lack the home atmosphere and have too much of the appearance of a hospital ward.

Regarding the question of credits, our experience has shown us that Home Hygiene and Care of the Sick is just as often allowed credit as a separate subject as when correlated with another subject. In one school the course is correlated with English, receiving one Regent's count. In a number of schools it receives one point toward their credits for hygiene, which is a required subject. In others the same is true with reference to gymnasium, biology, home-making, etc. All of which points to the practicability of including it in the curriculum.

In passing I must not fail to call attention to the far-reaching possibilities of building through this course of instruction closer relations between the school and the home, and in fact, the entire community. Whenever exhibits are held, featuring the school work, the interest of the parents is centered in a two-fold way upon Home Hygiene and Care of the Sick. First, through the demonstrations given by the girls of such simple nursing procedures as are capable of public exhibition; second, through the home-made appliances made by the boys in the manual training department. The family and the neighbors and friends are awakened to the value and far-reaching benefits of Home Hygiene and Care of the Sick by just such means, and every interested observer becomes a potential advertisement for the extension not only of the course itself, but of attention to health and hygiene in the community at large.

The place this course has won for itself in the estimation of school boards is shown by the action taken in the State of Arkansas, where one of the best known school systems has already taken the further step—following the State adoption of the course toward which the State author-

ities are working—of making Home Hygiene and Care of the Sick a *required course* in the Home Economics Department.

The instruction has been given in many schools as part of the curriculum in different localities all over the country, including the Philippines. In many instances the local Red Cross Chapter provides the nurse instructor, the equipment and even the textbooks, as a demonstration of its value to the school girl and the community. But in many more instances it has been the principal of the High School who requested the Red Cross to furnish an instructor for the course which was to be added as a regular part of the curriculum.

Home Hygiene and Care of the Sick is a subject that every girl, no matter what her individual bent, finds interesting. There is such variety in the scope of the instruction that whether hers is the scientific, the practical, the imaginative or the creative type of mind, before she has progressed very far in its study she finds some phase of it peculiarly fitted to her own individuality and inclinations.

As an Americanization agent, and as a solid foundation upon which to build an enduring structure of social standards and civic fitness, especially in the cases of that class of young women who do not complete their education, but who must become wage-earners at an early age, or who marry young, the value of Home Hygiene and Care of the Sick is incalculable. In a certain locality on the Pacific Coast, for example, most of the pupils are of Mexican blood. This type of girl marries very young and probably has had little in the school curriculum, which is calculated to fit her for her domestic duties. It is scarcely possible to overestimate the immense practical value of this course in enabling her to live her own life successfully and to rear children that will not be a drain upon the State because of improper care.

In its immediate benefits to the individual, the family and the community, this course is of fundamental and far-reaching value. Every girl, whether she continues her career as a wage-earner and professional woman, or enters politics and public service, is fitted to be a more healthy and useful member of society herself, and a more successful and happy wife and mother because of the knowledge

*Home
Hygiene
as an
American-
ization
Agent.*

gained through this instruction in Home Hygiene and Care of the Sick.

In short, the successes and failures of Health Education depend—I think—upon how well the scientific facts have been applied by the pupil to herself in her everyday life.

Discussion

Miss Rood then led the discussion of the above paper, as follows:

There are certain points in Mrs. Baker's paper which I should like to emphasize in a concrete way—using as a basis a very successful piece of work which is now in progress in the two High Schools of Tacoma, Washington.

The first class in Home Hygiene consisting of twelve students was organized three years ago, as a unit of the Home Economics department—under the immediate direction of the public health nurse for the High Schools. The class has grown to 4 classes with a total enrollment of 108 students, open only to Junior A's, Seniors and Post-Graduates. The classes meet forty-five minutes daily for one semester, $\frac{1}{2}$ point credit being given as well as the Red Cross certificate. Beginning next September, Cooking I. will be required of all students taking the Nursing Course. This announcement, which was made only recently, resulted immediately in the enrollment of three large cooking classes in each High School. Previously there had been one cooking class.

Scope of the Course

The Red Cross course is covered—with such adaptations as are necessary to fit the particular needs of the students. In outlining the course, the aim has been to relate it closely with other subjects in the curriculum which have a bearing on health, and to bring about a discussion of practical problems. In arranging this, Mrs. Smith, the nurse, seems to be peculiarly prepared to infuse into this course the elements which are vital if the knowledge is to function in the lives of the students. In the first place she knows the health condition of the students; she knows intimately the social problems arising in the school, and their relationship to these health problems. She knows the living conditions in many of the homes, and in special cases she perhaps has more intimate data than anyone else. She has a knowledge of health conditions as found in the community at large, and because her work brings her into close contact with other health and social agencies she is able to give these young students a clear idea of

*Junior
High
School
Successes
in "Home
Hygiene."*

their place in the municipal health program and to rouse a sense of responsibility for health conditions in the school.

In going over the plans for the work we find incorporated into the entire program specific study of three aspects of health teaching. *First*—Promotion of personal health. *Second*—Protection of health, which topic includes methods of early recognition and prevention of infections, first aid in emergencies, and the simple nursing care of the person in the home who has deviated from the health path. *Third*—Promotion of community health and the opportunity and responsibility which the student has *now* in working out health problems.

Method of Presentation

The course is made alive by class discussion, demonstrations, simple talks, and personal reports of student investigation and reading, visits to institutions which exemplify the effort of the community to meet health situations, and most important of all by the participation of all students in the health activities of the school.

I shall select at random from the outline certain points which will show the way in which these activities appear in the program.

1. A demonstration of examination of eyes, nose, throat, teeth; also weighing and measuring.
2. Equipment of a cabinet for use in the emergency room of the school.
3. A tour of inspection with the engineer of the school.
4. Talks by nutrition specialist. Planning a day's menu showing an adequate diet.
5. A visit to the local dairies.
6. A talk by the Superintendent of Mountain View Sanitarium for Tuberculosis, and a visit to the institution.

Outstanding Activities.

How is this made to function in the lives of the students?

1. Every student in the course assists at some time in the health examination room when three hundred to three hundred and fifty freshmen are admitted in the fall. By the time these examinations are over, the students are able to recognize the ordinary defects found in children. One girl said to Mrs. Smith not long ago, "I see more children now with adenoidal faces and malnourished children, when I never noticed any before."

How It Works in the School.

2. Every student serves in the Red Cross emergency room for a certain period of time. All are anxious to do their share, and gladly donate their study period for this work. A great deal of practical work is obtained in this way. A daily record sheet is kept, giving date, pupil's name, roll room, for what purpose he came in, and the name of the girl in charge, as well as a record of what was done. No one is allowed to come in except in emergency, without a slip from the teacher. The room service is open, however, to boys and girls,

if there is need of care and advice. That they feel free to come in is shown by the fact that they frequently come to have a sore leg or arm "well bandaged" before going to a wrestling match or into the football game. Follow-up work is done on any case needing further attention.

3. Every student assists in weighing and measuring the students, helps select underweights who are to receive special attention. These students also assist in the regular weekly weighing of the nutrition class. Working in close cooperation with the Home Economics department, nourishments are furnished these students at 10:30 each day. The cooking class makes the nourishments, the Home Hygiene girls serve them, wash and boil the glasses and return them to the cooking room.

4. The students in the course are constantly on the watch for suspicious symptoms in the student body. One of the students recently on duty in the Red Cross room came to the nurse and said, "Mrs. Smith, I just saw a boy in the hall, with something on his face that looked like impetigo. I don't know his name but I know what room he went to. May I go and get him?" She did get him by asking the teacher to send the boy with the breaking out on his face to the Red Cross room. The eruption proved to be a bad case of impetigo.

The students often bring or send in cases of scabies. If they see anyone with a suspicious eruption they step up to them and courteously advise them to go to the Red Cross room.

*How It
Works in
the Homes.*

The practical knowledge gained in the course is used in many ways in the homes. Advice is frequently requested regarding special home conditions which involve beside care, first aid treatment, child care and feeding. Occasionally a girl comes to ask just how to do certain things for a mother who is in bed. Advice is asked about dressings for the injured father or brother at home.

Many mothers come to tell how much their girls have enjoyed the course and how valuable it has been. Several are sending their daughters to take hospital training after first consulting with the nurse regarding the choice of a training school.

The knowledge gained by Mrs. Smith from private conferences with the school principal regarding social offenses, talks with the school physician, home visits, contacts with student organizations, with the Woman's Protective Division, with the tuberculosis nurses, visiting nurses, has a definite, though sometimes inconspicuous place in this plan for health promotion.

One occasion which seems to give the greatest opportunity for connecting closely and in a dramatic way the work in this department and the Physical Education de-

partment with the general community activity, comes every year in the celebration of the Annual Stadium Day,—an affair in which every school in the city takes part before an audience of approximately 50,000 people.

A tent is furnished as a first aid station, the Home Hygiene girls planning the entire equipment, including also a cot, stretcher, and a car, which is usually donated by some student who also gives volunteer service in case it is necessary to send some one home.

This year four Home Hygiene girls were assigned to each of the 26 sections of the Stadium, reserving four for the tent. The boys' gymnasium teacher provided two boys to be on call as stretcher bearers. All were supplied with arm bands to designate to the public that they were there for service.

As it happened the two boys provided were two of the most mischievous boys in school, members of a group calling themselves the "Dirty Dozen." One was the son of a prominent doctor and one the son of a prominent undertaker. One of the boys remarked that he wished they would remember their respective professions if they were needed.

*Enlisting
the Boys'
Cooperation.*

This year Stadium day was unusually warm and as the children had to stand in line for some time preparing for a mass formation, it was necessary to carry several to the tent. The boys soon found that they needed more help, so brought six more members of the "Dirty Dozen," who said if they could have an arm band they would be glad to work. Of course they could not possibly have worked *without* the arm band. When the service sheet was totaled for the day it was found that the eight boys had carried 91 children and six adults to the tent. Not one of the boys and girls stationed at the tent saw any of the exercises, with the exception of one boy who said, "I saw the field once when you sent me over the top for another mattress."

A waiting list of boys who have volunteered for next year's Stadium day is already on file. One member of the faculty remarked: "I think it was a stroke of genius to interest those particular boys in this work and to keep them busy—for you may be sure they would have been doing *something*. They were certainly a credit to the school."

You can appreciate the spirit which must permeate a group of young people who gladly deny themselves the pleasure of witnessing a program of sports and dramatics for participation in organized group service.

If every course in Home Hygiene could be made as alive and dynamic as this one there would be no question of its place in the High School program.

The success of the work, I believe, is due first to the personality, enthusiasm and personal example of the instructor, who is a firm believer in the value of health, and its direct relationship to efficient living; second, to the cor-

dial, whole-hearted way in which the entire school staff has supported the program for health.

The thing which I believe has been awakened and which is of much more importance than the actual skill in the care of the sick is the consciousness that health is an absolutely live, vital thing which is simply invaluable to every boy and girl.

Dr. Brydon, Director of Child Welfare, Virginia State Board of Health, in indorsing these views, stated:

"We have Home Nursing classes in Virginia. Two hours a week for the whole year is given to cooking and two hours to sewing—one hour for one semester to Household Management, and in last semester one hour a week is given to Home Nursing. The State Board of Health worked up the course, and we are giving credit in those schools. I believe there are 38 of them."

The chairman at this point asked for further accounts of experiences, successful or otherwise.

Miss Estella Bogardus, Executive Secretary, Yonkers Tuberculosis Association, in speaking of the work of her Association, said that at the present time:

"The greatest stress is being laid upon the care and work that can be done with children, because infection takes place most often in childhood.

"When I came down here from Yonkers, I thought our work in the schools of Yonkers had been pretty well completed and that we could take up another branch of the work. But since I have been listening here I have made up my mind very definitely that what we want is an appeal to provide funds for an instructor in Health Education to put on a demonstration. After we make the demonstration for one or two years, then it will be possible for us to get the Department of Education to incorporate it in the school program. This is the way most of the health work has been put on in Yonkers."

Miss Jean added to *Miss Bogardus's* remarks that the reason that the work had been so successful was that the Association had been willing to stand back and have the schools and the Health Department credited with the work.

Miss Perrin, referring to the great helpfulness of many extra-school organizations in a health program, said:

"We use the Scouts a great deal in Detroit—both the Camp Fire girls and the Girl Scouts are helping very largely in emergency work. They are a very vital influence, and should be in all public school work."

Miss Anna Ruth Medcalf, R. N., Line Fork Settlement, Kentucky (Pine Mountain Settlement School), said:

"I have not any plans or programs to bring to you, but I would like to tell you some of the difficulties, not failures, peculiar to our region. Our valley is very remote. A Ford automobile cannot come within 15 miles of us. We have two teachers and a public health nurse. We have great distances and difficult trails to make. I deal with one person, where many of you deal with hundreds. The trails are long and rough and narrow, and it is very silent and lonely—all that one hears is the creak of the saddle and the wood creatures. The geographical difficulties are great. Our people have been isolated for so long that they are not anxious to take our advice immediately. One of them told me this story: 'I dreamed I went up on the ridge back of our school house, and I saw a big Mother Bear, and along with her came three Baby Bears, and she said to them, "Step just where I step." Our folks down there are still stepping in the steps of their fathers and mothers. I try to put on a little school program. I go to the school house and talk to the children and take them pictures—they have no supplementary readers. Health talks and posters thrill them. One mother said 'It is a sight to see how those youngsters like the pictures.' I talk to them, play with them and tell them fairy stories. They have a keen imaginative sense. But though I often get discouraged, we know we are sowing seeds in their minds which will grow and perhaps one of these days they will carry out in their own homes the things I am trying to get across. One school house is a little log cabin. There are windows in it, of course. There are no blackboards. We write on the walls. The seats are not attached to the floor, and it is a good thing they are not. The chinking between the logs has fallen out, and the children stick mosses in. We have to move the seats around to keep out of the leaks. The stovepipe does not reach up to the roof, and if there is a fire in the stove, and it gets too hot, the roof catches fire, so we spend most of the time putting the fire out.

*Health
Education
under Dif-
ficulties.*

"I am trying to spread the Gospel of Health anywhere and everywhere I can. You all do not realize the problem, when perhaps 100 per cent. of the children have hookworm, and the teachers, too. And trachoma is frequent also. In nutrition they are 100 years behind the times. We have to overcome these conditions before we can do anything. It is no good talking to them about drinking milk, for if they have a cow, it is not well fed and does not give enough milk. They do not know how to feed the cows or till the farms.

"But I think we have some material to work on. We must have education of all sorts. The teachers have a third or fourth grade education. The County Superintendent is not very well educated, nor are the doctors, preachers—anybody. We work single-handed, and we have to be content with little victories.

"One day I went to see a schoolchild's little brother, who was sick. I brought the older boy back with me to my cabin and gave him a dose of castor oil to take back to the baby. I asked the child if he had his supper, and he said: 'Yes, mum, I have, but I hain't washed

my teeth yet.' We have toothbrush drills. In one community I have been trying to impress them with the necessity of brushing their teeth. They have no toothbrushes, so we use dogwood sticks and go through the motions and they get the idea. They promised to use the sticks twice a day, and they are trying. Two rural schools have taken to using handkerchiefs. It is a habit absolutely unknown to their parents.

"I could go on indefinitely. Water in the schools is usually brought from springs—sometimes they have a bucket and sometimes not, and if not, they fall down flat on the ground and drink.

"You can see how successes in our remote country are hard to wrest from so unprepared a people, and so unopened a country. You can realize that we can have few successes without—oh—so many more workers than are now prepared."

Dr. Wilkes, by request of a member of the Conference, gave the following list of factors that had contributed to success in Trenton. He said:

"In Trenton we have found that the interest of the teachers, children and nurses is stimulated by:

1. Graphs showing improvement of children within a school—plotted by teachers. (Exhibit.)
2. Same, plotted by schools for the city. (Exhibit.)
3. Intensive study and demonstration of individual case of a child, with explanations for various deviations in rate of gain shown. (Exhibit.)
4. Height and weight charts with classification stars. (Exhibit.)
5. Circulating libraries, i. e., sets of health books and pamphlets on various health subjects to be loaned to teachers for definite length of time.
6. Photographs of interesting cases of physical improvement.
7. Special lectures.
8. Playlets—preferably original and worked out in correlation with regular grade work.
9. Health Booklets—prepared by the children—Rules of the Game and daily scores; menus for breakfast, dinner and supper (and recipes for proper preparation of them) illustrated by cut-out pictures from magazines, original drawings in colors (crayons or water-colors) or in black and white effects.
10. Exchange letters—both within and without the system, from children, teachers, organizations, clubs, showing appreciation or offering new suggestions.
11. Slides and films. These are often available from many free sources, viz.:
 - a. Ford Motor Co. Educational health films through local dealer.
 - b. National Dairy Council—through local dairy companies.
 - c. State Museum or Library often have health subjects.

*Methods
and De-
vices Con-
tributory to
Success.*

- d. Many local and State departments of health have loan films and slides.
 - e. Many organizations (especially dental or medical societies) can be induced to finance the purchase or even the preparation of an original film or set of slides.
 - f. National nursing and public health organizations have films at nominal rental cost for loan.
12. Costumes and "props" for playlets.
 13. Jingles, compositions, etc., in competition.
 14. Health Clubs and morning inspection.
 15. Periodical exhibitions of projects or improved children to the class.

16. Malnutrition—A determination of what could be accomplished by purely educational methods conducted by the teachers who were kept informed of the condition of each child was attempted this year. The work was entirely self-supporting, except for the salary of Miss Sparks, who aided in the supervision of teachers' work in the schools and collected the best methods devised by the teachers. Nutritional information, especially, for the training of teachers in food classification and value was our most prominent effort this year, but only very elementary facts were deemed to be of practical value to the teacher and child. Food games, posters, menu books and other projects, height and weight records with classification "stars" were used successfully. Milk periods were established in most schools and 4000 children took milk in school. Many others drank milk at home. Every child knew his height and weight and his gain or loss at each weighing, and comparison with the "average" for his age and height gave material for the arithmetic lesson. Graphs were kept before teachers and pupils to stimulate interest.

17. Teeth—A dental survey of the pupils by our dentist (a Forsyth Dental Infirmary man) has impressed us that a clean tooth is not always a healthy tooth and vice versa. The correlation between decayed teeth and nutrition in our studies is not strictly accurate because in the better grade (socially) districts more dental repair work obtains, and these schools will not show the true correlation of tooth decay with the nutritional studies.

18. Re-examination of pupils—Many defects were improved and previous recommendations were withdrawn. We grow more conservative with experience in diagnosis of certain defects.

With the presentation of these "helps" the session on Successes and Failures came to a close.



Section V

THE PREPARATION OF TEACHERS IN
HEALTH EDUCATION

THE stock-taking step in the Conference had now been reached. A great mass of material on the "What," and the "When," and the "How," of Health Education had been presented—some of it essential, some of it desirable—some of it in the province of the classroom teacher, and some of it in that of the specialist. The outstanding and self-evident fact, however, was that teachers, to put across these plans, first needed training, and then later, needed the assistance and guidance of competent supervisors. How then, to plan the equipment of teachers for this work, was the topic of the last session of the Conference.

As the person who has, perhaps, had the largest group of contacts with teachers, Dr. Williard S. Small, of the U. S. Bureau of Education, was asked to make the first address on this subject.

The Preparation of Teachers-in-Training

Dr. Small:

I FEEL as though I were bringing to you tonight, if not exactly the "funeral baked meats," at least some cold dishes of thought. It happens that the Round Table group which is considering the problem of teacher preparation held a meeting last night, and in the course of the discussion I expressed pretty fully my views upon that subject. I come before the full Conference this evening and am obliged to try to warm over and make palatable what I said last night. I hope it will not be less nutritious for being warmed over.

The matter of teacher preparation in its relation to Health Education is not single and simple. In the first place we must remember there are many teachers already on the job who need some re-education, some further development. On the other hand, there are the teachers in process of making, in the schools and colleges for the prep-

aration of teachers. A fairly definite line of demarcation lies between these two classes. Second, there is the distinction between those who are to be the leaders in this special field and those who are to be just teachers—the every-day leaders of children. Here is another fairly distinct line of demarcation. Again, there is a marked difference between the preparation of High School teachers and Elementary School teachers—the difference between preparing for departmental teaching in one case and for “general teaching” in the other case. Further, in the country and city, conditions differ, and certain things that are reasonable and feasible in city conditions are not reasonable and feasible in country conditions. Finally, there is the problem of the individual who is being educated. This problem is first of the individual as an individual; and second, of the individual as a teacher.

In order to keep myself within reasonable bounds, I shall confine myself tonight to a discussion of the preparation of the teachers-in-training in Normal Schools and colleges who are preparing for the vocation of teaching—those who are to be the every-day leaders of children in the school. I am assuming this limitation because I know that Professor Turner will want to talk about the training of those who are to be the specialists and supervisors in this field. Furthermore, the things that are essential in the preparation of regular teachers are fundamentally essential for those who are to lead and supervise teachers.

The first thing I want to say in regard to this matter is that after all, in spite of apparent popular belief to the contrary, the teacher is a human being; the teacher loves and hates, and eats and sleeps and lives in a general way like other people. The teacher has a personal, individual life. Sometimes, in looking over the programs for teacher training I am almost persuaded that teachers are thought of not as human beings at all but merely as relaying mechanisms through which schedules, forms and cultures are automatically transmitted to children. I want to make a plea tonight for the teacher as a human being; and for the education of the teacher as a rational and whole human being. In so doing, I am not at all unaware of the importance of what we are pleased to call the professional training of teachers; but I want at this time to emphasize especially the importance of the education of the individual

*Different
Type
Training
for Dif-
ferent Type
Workers.*

as the matrix of professional training. I am quite aware that there are many persons—perhaps there are some right here—who think that the supply of human talent in this world is so small that we cannot expect very many talented—even reasonably talented—individuals among teachers; and that therefore it is not worth while to try to develop the personality of teachers but is worth while only to train them to execute programs. That the supply of talent or superior intelligence is fairly meager, is not a new discovery. It is an old fact. It does not, however, justify shifting the emphasis in the preparation of teachers from personal development to program execution, in preparing teachers for the instruction and leadership of children. And especially in preparing them to instruct and lead children with respect to wholesome living, they must be guaranteed experience out of which may come understanding and appreciation of wholesome living.

From this point of view there are three or four things that are essential in the organization of the institutional life where the young woman of 18, 19, or 20 years of age (the day of the man in the Elementary Schools is largely passed) is to spend two or three years preparing to teach. I am not attempting to give what follows in the order of importance. Perhaps all of the factors mentioned are equally important—with the exception of the first.

The Importance of the Constructive Health Examination.

First of all I would emphasize the educational significance of the individual health examination and the service of conference, consultation and advice that inevitably grow out of a good health examination. If the educational possibilities of this form of service are to be realized—and they can be realized—we must get our thinking straight in regard to three or four matters.

First, the health examination is not merely an isolated event at the time the student enters the school. It is rather the essential first step in establishing a right relation between the examiner and the individual student whereby the student may be continuously influenced as needed throughout her stay in the institution. It means subsequent re-examination, consultation, conference and advice in accordance with individual needs. Second, the health examination must not be thought of as solely or primarily a matter of discovering diseases and defects. Of course, it must do that and it must point the way for correction and remedy

in cases where specific disabilities are found. But the educational purpose and opportunity are realized only when the pathological atmosphere is avoided. The doctor-patient complex must be dissolved. Students must come to feel that the examination-conference-advice procedure is entirely normal. This will come about if the examination and the information resulting from the examination are used for individual instruction and guidance.

And this takes us quite naturally to the third matter of importance. We have been told over and over again in this Conference that health is a good deal more than physical condition—that mental hygiene bulks large in the matter of individual and social health. The health examination, therefore, is quite as much concerned with finding out the habits and attitudes of the student as in finding out anatomical and physiological conditions.

May I be forgiven for turning aside for a moment into an alluring bypath? Health, both in concept and reality, is a fairly complex thing in spite of the enthusiasms of the *monists* in the realm of hygiene. So persuasive are the monists, however, that at different times we are almost persuaded that health is merely a matter of freedom from infection, or of properly tending and feeding the alimentary canal, or of dissolving unrecognized complexes, or of assuring harmonic saturation of the organism or of something else. My only excuse for this digression is to emphasize the fact that the health examination must be broad in conception and wise in execution. And that means, to quote Dr. Croasdale, that it must be "leisurely"; and that there must be provision of time for following up the "leads" for individual instruction and guidance.

The examination-advisory service thus conceived becomes the instrument for effecting the most vital kind of individual education. It hits the students where they live; and the things that are merely academic when presented academically become personal when treated in this individual way. Sometimes the method is drastic. I recall an incident told to me recently by the Dean of Women of a State Teachers College. A girl came to the physician in a hysterical condition. She recited her tale of woe for about 15 minutes, winding up with the ejaculation, "What shall I do? Oh! What shall I do?" The doctor didn't tell her what to do, but said quietly, "Do you want to know exactly what is the

The Health Examination Takes Cognizance of Habit and Attitudes.

matter with you?" "Yes!" "Well, the matter is that you are so monumentally selfish that you cannot be anything but a nuisance if you do not get over it." Nothing about complexes! Perhaps the method was not psychoanalytically correct, but the girl straightened up, left in anger and had not had a similar attack for months when the story was told to me. Incidentally, the doctor was a woman.

I am not going to discuss details or difficulties at this time. My sole aim at this time is to present to you the idea of the health examination as an educational procedure. That this conception of the health examination is logical needs little argument; that it is practicable I can assure you out of personal observation and experience with a number of institutions where the idea is successfully operated.

*"Those
Who are to
Teach
Must
Know."*

The second important element in a program for the preparation of teachers to do good health work in the schools will be inevitably a knowledge of hygiene. Those who are to teach must know. They must have a substantial body of knowledge. I will not attempt to discuss the details of what that body of knowledge should include—we have a committee wrestling with that problem—but I want to express my agreement with Dr. Winslow and others that teachers or other individuals must have a substantial body of sound scientific knowledge if they are to function successfully. Please keep in mind that I am emphasizing all the time the education of the individual as an individual. Such knowledge is essential as a matter of constructive personal welfare, but it is quite as important as a defensive measure. It has been pointed out by other speakers in this Conference that knowledge, in a measure at least, is prophylactic against quackery and charlatanism. Not long ago I visited a college class in hygiene in which the topic under discussion was a phase of heredity. The instruction was good, entirely sound and scientific, and yet so handled as to be intelligible to the student. The constantly recurring question was that of pre-natal influences. Every student seemingly knew of some case of marvellous pre-natal influence. Each case, so far as time permitted, was analyzed and the validity or invalidity of the case was shown. I am not sure that these students were all convinced, but I am sure that they received clear and accurate information in harmony with present scientific knowledge of pre-natal influences. I am sure that some of these students were

convinced. Whether the conviction will be good for a lifetime is another matter. The same doubt might arise in connection with any knowledge or conviction.

The third thing that seems very important to me is that the conditions of living in the institution shall be wholesome. I have not time to elaborate this point, but by wholesome conditions of living I mean something more than sanitary physical environment. The water supply, the sewerage, the ventilation, and other sanitary conditions may be right, and yet the conditions of living may be unwholesome. By way of illustration, one institution with which I am very well acquainted for years had a daily schedule such that no student could possibly get enough sleep. As the result of a survey made last year by the Director of Hygiene, the schedule was so changed that an hour was added to the sleeping time of the students. It is quite as important that the regimen of the institution shall be wholesome as that the physical environment shall be sanitary. Furthermore, it concerns the programs and modes of living of the individual students as well as the regimen of the institution as a whole.

*Living
Conditions
Must be
Wholesome.*

Fourth and final, it is essential that provision be made for abundant invigorating, joy-producing, physical activity—physical education in its true sense, as applied to students of this age. This is a matter that will not take care of itself, as is abundantly shown by the fact that the situation in most Normal Schools with respect to material facilities, time-allotment and competent leadership is far from satisfactory. There cannot be outdoor sports and games without space for the same and without time and without competent leadership. The students need such physical activities, not only for “keeping fit purposes,” but also as experience upon which may be based the special training for leadership in physical activities of children.

*“Joy-Producing
Physical
Activity.”*

To recapitulate: We are dealing with individuals, and if we are going to prepare young men and young women to be good teachers of health we must do all that can be done to make them acquainted with health in themselves. To this end, four things are surely essential: First, the health examination, educational in purpose and method; second, sound instruction in hygiene; third, wholesome living conditions where the students are undergoing prepara-

tion; and fourth, provision for wholesome recreational physical activities.

Discussion

The Chairman then explained that Dr. Howe, State Medical Inspector of Schools, State Department of Education, Albany, N. Y., had been prevented, through illness, from coming to the Conference, and that he had asked Dr. Franklin Barrows to take his place. *Dr. Barrows* spoke as follows:

"Dr. Small has spoken of the health examination as the first essential. I might say that it is one of the greatest essentials in the preparation of the teacher. I contend that a teacher who has been subjected to—better still, who has sought—an annual examination, though it may be only for the two or three years that she is in training; who has understood this examination because it has been well explained to her; who has tried honestly to profit by it in order that she may increase the positive side of her health account will be so impressed with its value that she will want all those she teaches to follow in her way.

"We cannot make a human machine efficient if we do not devote to it the attention, or the small amount of time, that we devote to the ordinary machinery of the farm and kitchen. When you suggest a yearly examination of the Normal School student, there are always educators who want to know what that has to do with teaching. I would also add to the annual examination a demonstration of the annual examination and the follow-up work as applied to the pupil and practiced upon the children of the Observation School, and I think perhaps Dr. Small intended to include this in what he said.

"I agree with Dr. Small that a thorough scientific knowledge of hygiene is essential. For this reason—and others—there should be careful censorship and careful examination of the qualifications of those who come into the Normal Schools to teach."

Miss C. M. Scovel, of the New York Training School for Teachers, here described the present course in that institution thus:

"Our two-year course for students is in the experimental stage, and I will give you briefly details of the course we have given this past year. We found it was very necessary to have personal hygiene. The examination of the Juniors when they came to our school was given to me. The nutrition work was also with Juniors, with whom we have had, in addition, a Method Course which has been my special work. With that course we have taken up the study of our city syllabus quite thoroughly, and in connection with that we have gone into the Model School for students to see the observation work, which has been very helpful and interesting. We talked to the teacher and found out what lesson was to be given; we talked it over with the

students and we saw the lesson. Following the lesson, the teacher came to my room and we discussed it. The students were then asked to write a paper on their observations, which involved quite a little correlation with other subjects.

"I also bring to the students material from outside, and we make a little Hygiene Catalog, listing reference books and telling where and how to obtain different materials. In making catalogs the students correlate with the Art Department in the decoration and with the Librarian in the arrangement. In method work we also have borders and charts passed upon by the Art Department.

"These two courses, Personal Hygiene and Methods, not only deal with teaching hygiene in the grades, but certain other procedures and questions come up—for example, skin diseases. The method of inspection is taken up and opportunity for practice is given. The students go down with me to see the nurse or teacher give the inspection, and we have it once a month in our own room.

"In our syllabus there come up such subjects as industrial hygiene, which we think very important because so many of our children go out from the sixth grade into factories and work.

"In the Senior work the students have had a course in physiology, but that will not be the final arrangement, because we think that physiology and personal hygiene should come at the beginning. The question came up in one of my examinations as to where the tonsils were located, and the answer was, 'The tonsils are located at the end of the palate—hanging down.' The need of physiology is very great."

Dr. Alvin Powell, Director of Health Development, Oakland Health Center, Oakland, California, said that he would like to see added, in the case of the girl who is being taught in the Normal School, not only a physical examination but a requirement that before she graduates, she make such corrections as have been found necessary, and that it also be made a requirement of the graduation that she have a dental prophylaxis once a year.

Dr. Wilkes, referring to the training of teachers in Normal Schools, had the following to offer:

"Since there are always available so *many* teachers and since the child's health can be markedly influenced by the teacher, she should be trained for health teaching—in Normal School preferably. If not, then in the school system. What shall the various specialists contribute to the Health Education of the embryo teacher?

"*First*—I should place full realization and appreciation of her *obligation* for the child's physical as well as mental improvement. In the business vernacular of the day, she must be "sold" the idea of health as definitely as she has been the idea of mental development in education.

"*Second*—I should impress upon her that example is more than precept. She cannot successfully talk health and happiness and still exemplify 'death and destruction.' Improved physical *condition* of children and herself and not *knowledge* is the gauge of her ability in Health Education.

"*Third*—She should learn of the child's present habits as to use or abuse of 'The Rules of the Game' and impress upon him the value and necessity of the constant regular and effective application of these rules until they become automatic, i. e., HABITS.

"*Fourth*—In her Normal School training the teacher should be given a background of such parts of anatomy and physiology as will enable her to answer intelligently and reason convincingly as to the value and efficiency of any health habit advocated, or answer any ordinary pertinent question that a pupil may ask about health *preservation*.

"N. B. She is not expected to discuss disease with children.

"Every teacher should be equipped *before graduation* from the Normal School to aid in the promotion of health. *Every teacher can do this*. Some, perhaps, better than others, as in every calling, but *all* must be trained and aid in the work. Teaching is an art which has its own technique—especially in the elementary grades, where Health Education is most urgently needed. Unfortunately, this fact is not sufficiently appreciated by most health specialists, and often those who possess the 'content' or material feel themselves, thereby, most able to teach it to children. This, I believe, is a great factor in retarding Health Education in the Public Schools. Unfortunately, also, the teacher has been supplied with very limited material or left to her inherited notions on health matters, by the public health workers who are best fitted to supply this material through such Conferences as this. Textbooks we find are hard to use below fifth grade. The Health Educator can bridge this gap and bring about real cooperation between the two agencies."

Miss Lewis, having in mind the statements made regarding the importance of health and happiness to the teacher herself, raised the following important point:

"Is there anything that can be done to better the living conditions of the teacher in the rural communities? Because the people who have had rather superior training, the people who would be willing and able to get over a health program, are not the type of teachers who are going into the rural schools, since the living conditions are so bad that they cannot stand it for very long. There may be some solution; I do not attempt to offer any, but I want you to think of it, because all the rural communities need it."

Dr. Wood then presented the next speaker on the program, Professor C. E. Turner, Assistant Professor, Department of Biology and Public Health, Massachusetts Institute of Technology, Cambridge, Mass.

The Training of Specialists in Health Education

Professor Turner:

THERE is a story of a countryman who bought an old and rather decrepit horse, and started to haul some wood through a college town. As he proceeded, one stick after another was jolted from the load without his noticing it and most of the wood which could not of its own accord climb down from the cart, was assisted by some of the college students as the old man drove past the campus. Directly after passing the college he was obliged to drive over a piece of muddy road. In the midst of one of these mudpuddles the old horse stopped. The man looked around, beheld the empty cart, and said in the greatest dismay, "Stuck, by gosh, and nothing to unload."

I find myself, indeed, in a very similar position when I rise to discuss the Preparation of Teachers in Health Education before a Conference of experts which has for three days held round table discussions upon teacher training. At a Conference of this sort one sometimes feels that he should precede any formal statement with a "confession of faith" and a recitation of the health creed to which his particular denomination subscribes, in order that his point of view may not be confused with the different beliefs of other people. We recognize, of course, the many different views which prevail in different sections of the country regarding what should constitute a proper health instruction program, but it seems to me that the general agreement of viewpoint in this Conference has been remarkably unified. We are interested as a group in teaching health to all children and we appear to realize in a very sane and generous manner the contribution which the various people who take part in a school health program have to make. From the teacher, nurse, physician, dentist, and the specialist in physical activities, we have definite contributions. We are here interested in rounding out a program particularly of health instruction, without forgetting all the other phases of school health work.

The discussions of this Conference have demonstrated that hygiene is not merely a theoretical subject but a practical science upon which is based in part the fine art of living. I am not worried regarding the outcome of what

some have felt to be an apparent contradiction between science on the one hand, and, on the other hand, the interpretation of science, which sometimes becomes so free as to merit the ill-sounding name of "propaganda." The Department of Biology and Public Health at the Massachusetts Institute of Technology, under the leadership of the late William T. Sedgwick, has been specially training people for public health work during the last thirty years. We have always been concerned to give our students exact information and to see that no student secured credit who did not have both a basic and detailed scientific knowledge of the subject. But we were rather pleased when the Child Health Organization came along and said that these dry bones—hygiene and physiology—shall live again, because we believe that with the scientist insisting that the information shall be correct, and with the interpreter or teacher using every available means to make these facts real in the lives of children, we shall secure a practical and effective Health Education program which will prolong thousands of lives. I am not sure that one should even rebel at being called an enthusiast, because it is *possible* to be enthusiastic and at the same time scientific.

We are further recognizing at this Conference that the grade teacher is the foundation stone upon which our health instruction, particularly in the lower grades, must be built. The previous speaker has dealt with the training which should be provided in our Normal Schools and Teacher-Training Institutions for those people who are to become the Elementary School teachers of the future. Another problem which has not received treatment at so great a length is the training of special teachers who will organize and direct the Health Education program, for we would agree, I suppose, that a school health system must have some efficient supervision if the instruction is to be unified and if the interest is to be sustained. There may be organized at various places in this country special courses of training for this kind of specialist.

I shall at first deal with neither of the two above mentioned problems, but with the somewhat more immediate problem of supplemental training for the teachers who are already in the field. May I take the liberty of telling you the opportunities for training which we are providing in Boston, first, for the general or grade teacher, and second,

for the specialist? It is not vanity which prompts me to do this, because we are not confident that we have ideal methods. It would, indeed, be much easier to escape criticism by outlining what one thinks would be ideal than by stating definitely what is actually being done. But this is a place where we profit from each other's experience and I am asking permission to discuss our own work, first because it is typical of the sort of thing which can be done in any educational center, and secondly because it is definite and specific and therefore more readily provocative of criticism and discussion.

For teachers and school nurses we provide special summer courses such as might be made available at any university where there is a department of public health. One course is offered in Methods of Teaching Hygiene and Public Health in the Public Schools. This subject, however, has a somewhat broader interpretation for the word "methods" than that given to it in a Conference of specialists such as this. In this course we outline the nature of a sound and complete school health program, indicating the part taken by the various professional workers and the possibility of liaison between the various groups. Following this we discuss grade by grade the instruction program for the Elementary Schools, indicating a variety of methods which may be adopted, providing for the student in so far as possible a complete list of teaching aids and sources of both information and inspiration. There is an exchange of experiences in the class and there are visitations to places where various kinds of child health work are being carried on in the vicinity of Boston. Such a course, we believe, gives the teacher a broader perspective and a stimulus for the development of her own initiative along various suggested lines.

In addition we are offering at the Institute this summer three courses in subject matter designed to present fundamental facts in a form to be most useful to the teacher in Elementary Schools and avoiding much of the technical detail which is insisted upon in courses provided for the training of specialists in the field of public health. The first of these courses is in Personal Hygiene and Nutrition and considers such fundamental topics as posture, exercise, bathing, clothing, sleep, ventilation, mental hygiene, basal metabolism, maintenance requirements, overweight, under-

*Summer
Training
for Teachers
in Health
Education.*

*Subject
Matter
Courses to
Meet the
Grade
Teachers'
Needs.*

weight, etc. The second course is called Sanitary Science and Public Health, and provides a comprehensive view of the nature of health and disease, parasitism, resistance and immunity and the broader public health aspects of water supply, waste disposal, food control and public health administration. The third course, Elementary Bacteriology, is designed to give the teacher or general student a well-balanced survey of the nature and behavior of microorganisms and the part they play in affecting the environment of mankind.

The Making of a Health Supervisor.

The second phase of my discussion has to do with the training of special directors, supervisors, or teachers, who are to assume the responsibility of organizing and putting in operation the health instruction program for the municipal school system. Pennsylvania and Michigan are already working upon a four-year course of study which will take the student directly after High School and produce this particular kind of specialist. We are not offering this type of program in Boston because we are not well organized to do so. What we are doing, however, is to provide a supplemental course of study for those people who are already at work in this field. The student's previous training is taken into consideration and there is prescribed a program of study which will round out the fundamental training in physiology, hygiene, sanitation, teaching methods and physical training.

We arranged last year in the School of Public Health a one-year course of study open to people of four types of preliminary training. They must all have had a High School education and in addition their training may have consisted of (1) graduation from an approved School of Physical Education with teaching experience; or (2) graduation from an approved College with specialization in health subjects or their fundamental sciences; or (3) graduation from a Normal School or Teachers' College with teaching experience; or (4) training in public health nursing with school nursing experience. We assumed that people who are to develop a program in Health Education should have a good grounding in, first, the subject matter of physiology, hygiene, sanitation and public health; second, teaching methods; and third, the nature and place of physical activities in public schools. On this basis we accepted people well prepared in one or more of these fields,

and provided a one-year program which would supplement their previous training where additional study was most needed. This course of study was offered under the co-operative arrangement through which the Harvard Technology School of Public Health has been conducted and with the additional cooperation of the Graduate School of Education at Harvard which includes in its curriculum courses in physical education. The result of such a cooperative arrangement made available to these students practically every course at each institution which had a bearing on the subject of Health Education. For the most part the subject matter in the field of public health was secured in courses at the Institute and the work in teaching methods in physical education was undertaken at Harvard.

*Training
Adjusted
to Ex-
perience.*

In each case a separate program was made out to fit the individual needs of each student. It was approved by the Administrative Board. In order to give you a better idea of the type of program undertaken by these students let me cite the subjects and classroom hours of a single student. This student had been graduated in Physical Education, and it should be borne in mind that the program for a Normal School graduate or a nurse would be different in many respects. The classroom hours indicated in the following schedule include laboratory as well as recitation hours:

<u>Place of Study</u>	<u>Name of Course</u>	<u>Classroom Hours</u>
Harvard	B 1 Psychology and Mental Hygiene	45
Graduate School of Education	E 1 Elementary Education	30
Massachusetts Institute of Technology	General Biology	60
	Nutrition	20
	Home Nursing	8
	Sanitary Science	20
	Histology and Embryology	70
	Personal Hygiene	30
	Physiology	160
	Infection and Immunity	40
	Bacteriology	50
	Colloquium (for training in public speaking)	30
	Industrial Hygiene	30
	Municipal Sanitation	60
	Health Education and Practice Teaching	90
City Hospital	Clinical Communicable Diseases	24

In addition to the above courses approximately 90 hours were spent working in the Nutrition Clinic of the Boston Dispensary, the Posture Clinic of the Children's Hospital, and in assisting at the physical examination of children.

This same type of program is to be continued in the future at the Institute of Technology through its cooperative arrangement with Harvard University and with the added cooperation of the Division of University Extension of the State Department of Education which is to issue certificates to those people who satisfactorily complete the program of study. By this means we hope to increase the number of adequately trained specialists and to make it possible to supply cities and counties with well-trained workers who may be taken from their own group. Such a course should make it possible for any specialist accepted as a student to expand the work in which he or she has been engaged into a well-rounded Health Education program.

We may ultimately desire a different course of training, but for the present such a one-year course of study has the advantage of making special workers quickly available without making the educators feel that we are forcing upon them a new type of specialist. We hope that from our experience and from the suggestions of our friends we shall continue to improve this course of study and to develop it in the most profitable direction. You are all cordially invited to visit our classes or our field work at any time and your criticisms and suggestions will be most welcome.

Discussion

The discussion of Professor Turner's paper was led by Dr. Anna Gove, Director Department of Health, The North Carolina College for Women, Greensboro, North Carolina. *Dr. Gove*, in addition to her endorsement of Professor Turner's point of view, stated that she also believed there should be a character qualification.

"It is," she said, "perfectly hopeless to have a teacher coming in contact with children who are to be taught about hygiene, if she is not a person of upright character, and in almost perfect physical condition. Naturally we expect the person to be alert—to be approachable—to be interested in carrying out all kinds of health activities. I would suggest that aside from making out good programs for teach-

ing, we make out a rather rigid rule for the exclusion of the unsuitable.

"In our particular section we have to deal with a great deal of indifference or positive opposition to the teaching of hygiene on the part of our students. They have had poor instruction in the public schools. The young people therefore do not wish to be instructed about health, because they do not care about it, except so long as it does not interfere with what they wish to do." This, she felt was to a large extent, due to the personality and methods of the teachers.

Dr. Brown, referring to the varied qualifications that are desirable in a Health Education teacher, made the following comment:

"Your laboratory man and your scientific man are seldom able to express in a form attractive to the lay-reader the results of their research, and it remains for another group of people to dramatize this and to make the dry bones of physiology and hygiene a real, living, vital thing that will influence the boys and girls of this country.

"I do feel that Professor Turner's paper tonight is a distinct contribution to the training of the type of individual who can help here. I would further like to express my belief that Dr. Small's paper has touched some very fundamental things. If we are to produce the kind of teachers who are to go out into the schoolroom, and get over vitalized health teaching to the children, they must certainly have the fundamentals that Dr. Small has laid down for us tonight. I believe we cannot look in any different place than in the Teachers' Training Institutions to produce that kind of an individual."

Miss Knowlton, referring to the need of providing training for teachers in the field, said:

"We have found it necessary in organizing our program in Binghamton to supplement the knowledge of our teachers and to revise their methods of work. We had to give them something of the information of the nurse. They must know something of first aid work. They must see deviations from normal conditions, as readily as they see a mistake in arithmetic. We have wanted to give them some of the fundamentals of physical education. Also since we have taken up a new project like nutrition, it has been necessary to give our teachers classroom methods and diagrams for that work, as very few of them had had any special training. The Superintendent arranged to have conferences regularly when all teachers are present. In addition to that we have offered a normal course—in evening classes. Physical specialists give playground work and setting-up work. Nutrition specialists give nutrition courses.

*Increasing
the Efficiency
of
Teachers
in Service.*

"That, I think, is a very wonderful means of getting the work over to the teacher. Conferences must be real conferences, helpful conferences with a helpful spirit. The response of the teachers has been very wonderful, and they themselves are enthusiastic over the advantages that they have attained. They themselves have greatly improved their own physical condition and happiness as well as the children's. They have helped children to have ideas of health."

The Trenton Health Education program embodies the idea underlying Miss Knowlton's remarks. To quote from a portion of Dr. Wilkes' paper, prepared, but not read:

A supervisor of Health Education, who is primarily an experienced teacher of elementary grades, with proper training and personality, is an essential part of every well-organized school system. She should be equipped with sufficient understanding of modern medical thought and practices of preventive nature, to be able to translate this knowledge into presentable form for teaching purposes and to enlist, with the cooperation of the teachers themselves, the pupils' interest in the practices of personal and general hygiene as citizens so that their community will be a better place in which to live.

School superintendents must be made to realize that in their organizations provisions must be made, both in finances and personnel, for the promotion of health as an educational measure of more than minor consideration, and that time, training and competent supervision must be provided for the teacher to do her part in this work. The work of the part-time physician and the nurse are already definitely established and their time is fully occupied with the physically defective children. The maintenance of health is largely the job of the teaching force.

Conferences with this supervisor and other health specialists should be held regularly at times convenient for teachers, and they should be urged to attend. Our experience in Trenton proves that the teachers are willing and anxious to correlate health teaching when they are given the time and material, and they have devised some excellent methods of presentation which have produced tangible results in raising the physical standard of Trenton school children.

What are the duties of such a "Health Educator" in the Public Schools? Of course these will vary somewhat in individual cases, but after much experimentation we have about agreed that the Health Educator should:

1. Keep informed on modern methods of health preservation by reading articles selected by the Medical Director; attending health conferences, etc.
2. Gather *methods* of presentation originated by the best teachers in various schools and distribute them to less original teachers after

constructive criticism and correction by other selected teachers of the same grade.

3. Collect, schedule and dispatch books on Health Education as "circulating libraries" when finances do not permit of copies for each school building.

4. List all sources of helpful material from which subject matter can be obtained gratis or at small cost, and gather "samples" therefrom for criticism and use of teachers.

5. Assist teachers in preparation and use of health educational material, such as graphs of nutritional surveys, individual cases studied and improvement shown, snap-shots of children excelling in some health activity, such as health-habit practice, gain in weight, making health posters, etc.

6. Keep in touch with other cities for data, plans, methods, projects, etc., on the subject of health promotion.

7. Aid in correlation of health with other grade subjects.

8. Meet teachers in groups or in grade meetings for discussion of methods or subject matter.

9. Assemble and exhibit annually the best examples of work showing Health Education correlated with other school subjects, to further cooperation with other departments of school work.

Another contribution to the discussion centering around supplementing the training of teachers in service was made by *Dr. Mary Brydon*, who described some special work along the line of teacher training, and gave a report of it telling how the physical inspection of school children by teachers was made necessary in Virginia by the shortage of doctors and nurses caused by the World War. She stated that in 1918 the Assembly of Virginia passed a law requiring all teachers to have a course in what was called "Medican Inspection of School Children and Preventive Medicine," which every teacher in Virginia must have taken by 1925. Dr. Brydon was employed by the State Board of Health to put this over. No one knew how to do it. In Dr. Brydon's words:

"I went to the Board of Education and asked them how they wanted me to work, and they said that they did not know—'It is your job.' I went to the Board of Health and they told me the same thing. So I began in a very humble way to ask schools and colleges to let me come in and give a course of five lectures to the graduates on this hard-sounding topic. They received me very kindly. The Board of Education backed up the work by giving credit to every student who took the course."

Dr. Brydon continued by telling how the course was expanded to ten lectures and, on the insistence of the State Superintendent of Public Instruction, was made equiva-

lent to one college session hour, with the same grading as other college subjects. With the assistance of Prof. C. D. Hart and Miss Bell, and the assistance of a teacher, a public health man, a physician and a research worker, the course was finally completed. It was officially adopted by the State Board of Education as a part of their Physical Education course designed to meet the requirements of the West Law. It is hoped some day to see it named "Health Education" instead of "Physical Education."

Dr. Brydon continued:

"The subjects covered by the course are: Physical defects and their control; communicable diseases and their control; mental hygiene; organization of State and national health boards. You will say this is a great deal to put into 36 hours, and we know that is true, but we are in process of evolution. Every one of the 29 instructors last year complained to me that a great deal of time had to be spent on physiology, as the students coming out of High School knew absolutely nothing about it; that they could not teach hygiene or physical defects when the students did not know whether the lungs were in the head or the feet. So our State Superintendent of Public Instruction decided that in 1924 one of the prerequisites for this course should be a High School course in human biology and physiology.

"I want to report to you how this was administered in the 37 schools and colleges of Virginia. It has been my special work to get this course in every Normal School and College. The colleges were willing to put it on, because their graduates who had not had this course would not be allowed to teach in the State of Virginia. Out of the 37 schools and colleges 25 put on the course. Next year 11 more will put it on. One old conservative college said they would not put it on until 1925.

"Many things have happened that we do not like, yet it is all in the way of evolution. We started, as you may remember, with just one ignorant doctor going around giving five lectures. At the end of this session we have 29 instructors giving it in 25 schools. I did not bring any pressure to bear on the way they should conduct this course. The schools and colleges worked it out themselves, as also did the Board of Education, because I work very closely with their staff."

Dr. Brydon stated that 6 schools had put it under the Educational Department; 6 under the Physical Education Department; 5 under the Biology Department; 2 under the Physiology Department; 5 under Health, Home Economics and Science. As to the name of the course—5 called it School Hygiene; 3 Hygiene and Sanitation; 5 Hygiene; 1 General Hygiene; 1 Rural Hygiene; 1 Public Health Education; 1 Hygiene and Physical Education; 1 School Man-

agement; 1 Health. They made it a separate distinct course in all the schools and colleges except three, and of those three 1 incorporated it in Rural Hygiene, 1 in Home Nursing and School Hygiene, and 1 in School Management. Ten schools offered it to Seniors alone; 3 to Juniors alone; 9 offered it as elective in all classes.

Dr. Brydon continued:

"The number of hours that were given varied, but those giving less than 36 hours, of course, were not given credit. All but three schools required practical work of the students, and no credit was given those three. By practical work I mean actually testing vision and hearing, inspecting teeth, nose and throat, etc., and weighing and measuring the children. The students learned how to do it for the children by practicing on each other. The State Board of Health supplies free of charge material for physical inspection. Twenty-five hundred students took the course."

Dr. Brydon stated that a similar course was conducted by Miss Bell by correspondence for the benefit of an average of 600 teachers who could not conveniently attend the schools and colleges. She stated that the physical inspection work is being done successfully by many teachers of the State. They report only obvious defects and advise the attention of a specialist. Where there is a county health nurse, she does the follow-up work necessary to have corrections made. This has led to the establishment of many dental and throat clinics in the rural districts.

Dr. Brydon concluded by saying:

"Since Virginia is a rural State and has problems of its own, only similar to some of the other Southern States, we have found it absolutely necessary for those teaching in Virginia to know how to attack local health problems. For instance, we have to approach the problem of malnutrition from a different angle in Virginia because of the hookworm disease, since sometimes 100 per cent. of the rural teachers and children have hookworm. There is little use giving special nutrition work and talking school lunches in rural schools until we get rid of this disease."

Dr. Wood next introduced Professor Flora Rose, School of Home Economics, Cornell University, Ithaca, New York.

Health Education for Teachers Through Home Economics

Professor Rose:

IN connection with this question of preparing teachers in Health Education, quite naturally I have to talk from my standpoint, which is the home economics standpoint;

and, secondly, from the standpoint of the person who is especially interested in nutrition but who also sees a relationship between nutrition and these other phases that have been discussed.

It seems to me there are three main considerations in the training of teachers—any teachers—whether of health, mathematics, or anything else. After all, fundamentally our successes or our failures are based on these three considerations:

*Subject
Matter
the First
Consideration
in
Training
Teachers.*

The first is not necessarily the most important consideration, but it nevertheless is the foundation—that is the subject matter that we are going to try to put across. In this case it is Health Education that we are trying to put over to the teachers. In subject matter it seems to me we have two large groups of subjects. The subjects in the first group are those which deal with physical health. In physical health the health teacher should be well grounded in nutrition. As we mark the teaching of health, I am inclined to think that 50 per cent. of our teaching of health deals with nutrition. For example, when Johnny comes up for his teeth to be examined and we find that his teeth are poor and dirty, we may teach him to brush his teeth, but we must also find out why he has poor teeth. It is either one of two things—either Johnny is poorly nourished or Johnny's mother has been poorly nourished before or after Johnny was born, when she was unable to give him his natural food. He may be too tall for his weight or the breadth of his chest. It may be a nutrition difficulty—Johnny may have those teeth because he has not had the normal food. It may be traced back to defects in his feeding before he was born and defects after he was born, so that we find this is a nutrition problem. In the training of our health teachers one of the fundamental things needed is specific instruction in nutrition. They must have a sound foundation of facts.

One authority makes this statement as a result of his laboratory experiments and as a result of his observations of foreign people. He says that he believes the most important influences in producing healthy adults are four: First, normal food; second, right exercise; third, the fact that mothers should nurse their babies and should be able to nurse their babies; fourth, that the race should be abstemious and should not use alcoholic drinks. Three of

these are nutrition problems and the fourth is a physical education problem.

The subjects in the second group are those which deal with mental health. The best classification of the subjects in this group would be social and educational psychology, and mental hygiene and all that this includes.

As we watch the development of children we find that although the nutrition problem is such an extreme one back of the nutrition problem in 8 or 9 cases out of 10 is a child-training problem.

Our lack of knowledge of the mental sciences, in the first place, and secondly our lack of application of those sciences to our scheme of education, result in the fact that the average human being knows very little about his relationship to other human beings, particularly the relation between parents and children and between teachers and children. If we can bring this mental health into the training of teachers, through our study of mental hygiene, we certainly have one of the big problems of Health Education under way toward solution. It is absolutely tied up with these other problems and we cannot separate them.

To recapitulate: The *first* consideration in the training of teachers is a sound foundation of subject matter upon which the rest is to be built; but this is only one-third of the problem. The *second* of these considerations is spirit. We may be able to teach facts to a group of individuals or to a group of teachers. We may give them the material they need, but until we have given them the spirit itself we have not accomplished our result. It must be like the changing of protein into protoplasm if we are to give this matter to our teachers. We must be able to do it in the way they do it in Miss Bragg's schools. It is a possible thing to accomplish. We must enable the teacher to transmute fact into the spirit that is back of the fact if we are to accomplish results, and she must be able to live her health subject if later she is going to be able to teach it.

*The
Second
Consideration—
Spirit.*

We have agreed that in educational institutions you will recognize that there is a tremendous amount of factual teaching. There is very little of the spirit in association with it. We find a great many facts told to students. We find very few being taught by a teacher. We must have the thing transmuted from protein to protoplasm if we are to accomplish any result.

These are only two parts of this triangle. There is still a third thing that is necessary: a plan through which we may accomplish results.

*The Third
Consideration—
A Definite
Plan.*

First, we must have a sound foundation of subject matter; second, indomitable spirit, and finally a definite plan and the ability to put this plan through in some organized way. Ability, for example, of the subject matter person to diagnose conditions,—to diagnose physical and mental health,—to diagnose the needs of the communities for Health Education; then the ability to connect a live situation with the fact which is to be taught, because until that teacher is able to diagnose a live situation, and then make some connection that applies between the fact and the situation, we have no knowledge that is potent. We have no knowledge that is workable. It is a fact, but it does not work.

It is a very interesting thing to me—and here again it is a confession of weakness—to see how many years I have been teaching facts and how few of the facts that I have been teaching have been effective. It is a most tragic thing to watch this year by year.

At Cornell we have finally developed one method by which to estimate whether results have been obtained. In our Junior year we teach a course in dietetics based on science. At the end of the course we have a Practice House into which our Senior students go to apply the things which they have learned. Do these dietetic and nutrition facts function in their lives? I hope they do this year, but they have not in the past. We have taught our facts on a factual basis in an academic way. We are reforming. We have decided to discard traditions—to throw them to the winds. We do not care whether we cover a logical outline or not. What we would like to see is this—that each fact that we present functions in the life of the student. As a result of our experiment there is no subject that is so much discussed around the dormitory tables as the subject of dietetics—so much so that some of the other students in the College decided that dietetics enthusiasts were perfect nuisances. Whole Sororities have had their dietary habits changed because the members could not live in the same house with our students and get by with their old habits. Why have we got these results? Because the girls have worked out their own problems. They have selected their

own problems—part of it is personal, and what is not personal is as closely related to the personal as we could make it. It actually has functioned—the thin have grown fat; the fat have grown thin. Those who have had indigestion have been cured. So urgent are these young reformers that if a girl has no regard for the selection of food she becomes almost a taboo person; that is, if she needs to reform and isn't doing so.

To illustrate how each girl works out her own problem, we have one stout girl who said the last day of school: "I know all those other fat people are getting thin, and they look awfully well, but I like food so much that I have just decided that I would rather eat what I want than look well. I feel very well and don't mind getting fat." In other ways she is modifying her procedure. She is a perfectly wonderful physical specimen, and whether she wants to be fat or thin is her own problem. She is doing certain other things that she thinks she should do, as she says she has got to be an example instead of a warning.

*Working
Out an
Individual
Problem.*

We feel, therefore, that we must round out this triangle in the training of our teachers in Health Education. We feel very strongly that in home economics we are sending out teachers of Health Education who have the health bias; in nursing they are sending out teachers who have the hygiene bias.

We also feel that ultimately it will come to training the community, because it is a community problem. We feel, in training teachers, that one failure of the teacher is that she is taught to teach and give a classroom performance instead of learning to make her education function in the community through the classroom. I think that ultimately we have got to have the nutrition specialist, the physical education specialist, the nursing specialist, do their community training through committee work. If we use modern educational procedure and modern methods in the classroom we do a great deal of work through committees. Our present methods of procedure are through committee action. We have to do that same thing out in the community. We have to have this combination of people who are specialists, because we recognize that it is not possible for one to get complete information in all these subjects. The physical education specialist must have a background in all these things; the nutrition specialist must have the

same background; and so must the nursing specialist. Not only must they have their facts, but they must be trained equally in this whole educational side and in social psychology, for each of them is going to meet those problems as much as they are going to meet the health problem. We cannot get away from the fact that human relationships affect health through their interference with health habits just as much as a knowledge of the facts of this subject.

Discussion

Miss Margaret Sawyer, Director, Nutrition Service, American Red Cross, National Headquarters, said, in discussing Miss Rose's paper:

Interpreting Science in Terms of Environment.

"I am particularly interested in the teaching of foods, and I think we have failed because we have not taken into consideration that there are many unforeseen factors which always influence the selection of every diet. We send girls out from our nutrition classes and we find them saying, 'In order to have lime, we must live on vegetables, spinach, yolk of eggs, etc.' However, whether she is a nutrition specialist or whether she is going to feed her family, she has to face conditions varying from day to day and from month to month and from year to year which have to be considered before the food can be selected wisely. These conditions may be muscular activities, peculiarities of the digestive system, racial and religious principles, income, local market facilities, etc.

"I am reminded right here of a worker who went to a certain State with the idea that children *must* drink milk, *must* have eggs, *must* have green and leafy vegetables. There were no milk, no eggs, no leafy vegetables. She did not know how to begin. She worked out a plan so that a reasonably adequate diet could be provided in the community with local foods. In that vicinity there were very few cows—an average of about one-third of a cow to each farm. Powdered milk was brought in. There was some local grain and it was taken to a local mill to be ground, so that the inadequate diet could be made adequate. In foreign communities, racial prejudices and religious beliefs make it difficult to arrange a balanced diet.

"Teach foods in simple terms: Why drink milk? What are the things that we have to have in milk? Are such things to be had in other foods? I think we might begin and make a study of the lime requirements for a day, and then provide some sort of table which will show the amount of lime that one serving of various common foods provides, and thus establish some sort of practical standard for making adjustments.

"I think we do want to send students into the field with ideals that they can use, and use with variations. We are too apt to think about the localities in which we are located and we do not think about Missouri and Arkansas, etc. I was greatly impressed in my

trip to Arkansas by the extent to which local conditions influence the line of procedure. Nutrition workers ought to be well grounded in fundamentals, and so be able to build up an adequate program by using the immediate facilities and opportunities. Every situation can be made an opportunity if we only know how to make that opportunity."

Commonwealth Fund Announcement

At the close of the session, *Miss Jean* announced the significant offer of the Commonwealth Fund, whereby a child health program in three typical cities of the United States for a period of five years will be financed.

Mr. Courtenay Dinwiddie has been appointed Executive Secretary of the Committee which has been organized to direct the work. The program will comprise safeguarding the health of the mother-to-be, laying a good health foundation for children in the early sensitive and formative period of their growth, and health supervision and the formation of the essential health habits in school children.

The responsibility for carrying out this comprehensive child health program is placed upon the American Child Hygiene Association and the Child Health Organization of America.

A Joint Committee will have charge of all general policies and plans. This Committee has just held its first meeting with all members present, as follows: Dr. Philip Van Ingen and Dr. Richard A. Bolt of the American Child Hygiene Association; Dr. L. Emmett Holt and Miss Sally Lucas Jean of the Child Health Organization of America; Dr. Livingston Farrand and Mr. Courtenay Dinwiddie of the National Child Health Council; Dr. Donald B. Armstrong of the National Health Council and Mr. Barry C. Smith and Miss Barbara Quin of the Commonwealth Fund.

Mr. Barry C. Smith was elected Chairman of this Committee and Mr. Courtenay Dinwiddie Executive Secretary. The opening of an office at 532 Seventeenth Street, Northwest, Washington, D. C., was authorized. Active work will begin at once.

After careful consideration the Committee has decided that the first city to be assisted in developing a thorough program for child health will be selected from the upper half of the Mississippi Valley region. Two other cities are

to be selected in other sections of the country after work has been well started in the first. The general qualifications of the first city are that it should be from 15,000 to 25,000 in population with an infant mortality of approximately 100 per 1,000 live births, or greater. It must also show a desire to cooperate in the work during the five-year period and a reasonable prospect of assuming responsibility for carrying it on in the future.

Hope for efficient Health Education rises high when such experiments as this of the Commonwealth Fund, the Mansfield Demonstration, the Milbank Demonstrations—carefully planned, carefully watched, and honestly evaluated—shall go hand in hand with planned and guarded teacher-training courses in our Normal Schools, where through favorable environment and régime, health becomes instinctive, and a happy background for the constructive and significant work of the real teacher.



RECOMMENDATIONS

VERY early in the Conference, plans were made to give opportunity for discussing the papers offered in the sessions. In order to help precipitate the ideas thrown into solution in the general meetings, and to crystallize whatever conclusions should come therefrom, group conferences were arranged to discuss the general meetings. Round Table leaders were chosen,—Professor C. D. Hart, Normal School Group; Mrs. Lucy Paul, for the High School Group; Miss Emma Dolfinger, for the Intermediate Group; and Miss Julia Abbot for the Kindergarten Primary Group. These small Round Tables took this opportunity to examine more freely and fully the ideas presented in the papers, and to evaluate them in terms of their usefulness in a health program for each of these age-groups. Most of the Round Tables indicated what they considered the desirable characteristics of health teaching for their groups.

As a result of these small conferences, it was finally moved from the floor that there be formed a general committee to draw up a statement summarizing the findings of the Conference and pointing out what was considered fundamental in a course looking toward training teachers for Health Education. This Committee was composed of Dr. Bigelow, Professor Turner, Dr. Winslow, Dr. Gove, Miss Perrin, Miss Jean, Dr. Wood and Dr. Small, together with the leaders of the various Round Tables. Basing their conclusions upon the reports of the groups, and the outstanding opinions expressed in the sessions, this Committee prepared a set of recommendations which was presented to the Conference, and discussed point by point, with great care. The recommendations as finally accepted stand as follows:

REPORT OF THE COMMITTEE ON TEACHER TRAINING FOR HEALTH EDUCATION

Preamble

From the reports of leaders of the Primary, Intermediate and High School sections of the Round Tables, the following

outline is submitted as indicating what seems to be the desirable trend for a plan of Health Education.

Kindergarten, through 4th grade: That here, primary emphasis should be laid upon habit formation, in a healthful school environment. Health principles should be emphasized in relation to actual situations and in the project work in these grades.

In the 5th and 6th grades the basis should be more broadly biological and should convey a conception of the functions of the body as a whole, although the content of the course should still be correlated with health habits and practices.

In the Junior and Senior High Schools, while continuing the effort to fix the habits and broaden the knowledge indicated for previous grades, problems arising from group activities offered in the school, home and community should be stressed. In these grades the dominant idea should be service.

Recommendations Regarding Health Education for
Teachers in Training

I. HEALTH EDUCATION in a training school should include three factors:

- (a) A Student Teacher Health Service.
- (b) Healthful Surroundings.
- (c) Content Course or Courses.

II. STUDENT HEALTH SERVICE:

The Student Health Service referred to should include:

- (a) A complete health examination and such subsequent examinations as may be necessary.
- (b) Health advice and supervision of students throughout the course.
- (c) The correction of remediable health defects.
- (d) The maintenance of a healthful regimen of living. . . . "Healthful living" shall be understood to include proper hours of sleep, proper food, clothing, bathing and *exercise*.
- (e) As far as practicable, the student's attitude and conduct in regard to the above points shall be a basis for recommendation for a professional position.

III. HEALTHFUL SURROUNDINGS:

It is recommended that the administration of Teacher-Training Schools should make provision for supervision

and control of the living and working conditions of students, whether the students live in dormitories or elsewhere.

IV. CONTENT:

The following subject matter topics are suggested, in order that teachers may have an appreciation of community health work and may do their part in health instruction to the best advantage. It is important that there be adaptation of these principles to the problems of urban and rural schools, and it is further suggested that the best practicable distribution of time and relative emphasis be given these topics according to local conditions.

The fundamental subject matter should be derived from the following fields:

- (a) Personal Hygiene.
- (b) Nutrition.
- (c) Community Hygiene.
- (d) Social Hygiene.
- (e) Mental Hygiene.
- (f) Health and Care of Infants and Young Children.
- (g) Health of Childhood and Adolescence.
- (h) First Aid and Safety.
- (i) Hygiene of the Worker.
- (j) Home Nursing and Care of the Sick.
- (k) School Hygiene.
- (l) Physical Education.
- (m) Principles of Health Education and Practice Teaching. Practice Teaching to include practice in all types of contact with children incident to health work in the school.

V. THE PREPARATION FOR THE COURSE IN HEALTH EDUCATION:

The subject matter fundamental to the above course or courses in Health Education should include general principles of applied chemistry, applied physiology, applied psychology, applied bacteriology; to be taught in the Normal School if adequate work in same has not already been done in High School.

* * *

Following the discussions attending the adoption of this report, the Conference moved to accept the term "Student Health Service" as a fit phrase to express the kind of environment and training it was hoped that the above recommendations, if followed, would produce in Teacher-Training Institutions.

"Student Health Service."

Resolutions

During the Thursday session Miss McCormick made a duly seconded motion that it was the sense of this Conference that at some time in the future the Child Health Organization should arrange for a Conference of School Superintendents and Principals of Normal Schools to discuss the introduction into the schools of a more effective program of Health Education. The motion was amended by Professor Turner, who proposed that a committee of seven, to include the Chairman, should prepare resolutions regarding this subject, which would be brought before this Conference at a later meeting. This motion having been carried, the following committee of seven was appointed by the Chairman as the "Resolutions Committee," namely, Miss McCormick, Chairman; Miss Abbot, Dr. Brown, Miss Jean, Miss Rood, Dr. Small, Professor Turner and Dr. Wood.

After the adoption of the foregoing report on preparation of teachers, this Committee presented the following:

Whereas, The members of the Conference of one hundred workers and specialists in Health Education and the Preparation of Teachers are convinced of the important and definite improvements in the health of the school population to be derived from a practical program of health instruction,

Be it resolved, That the agencies which called this Conference endeavor in every practical manner to make available to the school superintendents of the country the benefits of the deliberations and the conclusions of this Conference;

And resolved, That each member of the Conference endeavor through personal appeal to school administrators in his or her own state to further the adoption of a practical school health program;

And resolved, That it seems desirable to the Conference assembled that the agencies which called this meeting should, if possible, arrange an International Conference on Health Education to be held in this country in the spring of 1923.

The Conference unanimously adopted the resolutions as presented.

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