

DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1929, No. 8

SCHOOL HEALTH WORK
1926-1928

BY

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[Advance Sheets from the Biennial Survey of Education
in the United States, 1926-1928]



UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1929

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SCHOOL HEALTH WORK, 1926-1928

By JAMES FREDERICK ROGERS

Chief, Division of Physical Education and School Hygiene

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In the biennium 1926-1928 the three hundredth anniversary of the founding of modern physiology was celebrated. A tercentenary is an exceedingly small fraction of the time since man discovered the use of fire, invented clothes and houses, and began to huddle together under conditions which have rendered knowledge of hygiene imperative to his welfare. It is but a half century since he fully recognized his ubiquitous enemies, bacteria. However, the foundations of physiology and hygiene having been laid, man's brain has been increasingly busy along these lines and even a biennium brings forth knowledge, or applications of knowledge, in school health work that is worth recording.

MEDICAL AND DENTAL WORK

As most significant in the field of medical and dental inspection, or "health examinations," we would place the passage of a law in New York State, which reads as follows:

Physicians to be qualified for certification as school medical supervisors shall possess the following qualifications:

1. Graduation from a medical school registered by the State education department and licensed to practice medicine in New York State.

2. One year of acceptable internship. Five years of successful practice in medicine may be accepted in lieu of one year of internship.

3. Six semester hours of postgraduate work in a school or schools of medicine in such subjects and in such institutions as may be approved by the State commissioner of education. The following subjects indicate the type of instruction that should be included in such postgraduate courses: (a) Medical examination of school children; (b) psychiatric problems of school age; (c) problems of growth and nutrition; (d) preventable defects of eyes, ears, teeth, posture; (e) school sanitation; and (f) communicable disease control.

4. Six semester hours of postgraduate work in a school or schools of education in such subjects and in such institutions as may be approved by the State commissioner of education. The following subjects indicate the type of in-

struction that should be included in such postgraduate courses: (a) Principles of health education, and (b) organization and administration of health education in public schools.

The State commissioner of education may grant a temporary certificate to physicians who present satisfactory evidence of successful experience for three or more years in medical inspection and health service.

The temporary license shall be valid for only one year, but may be renewed twice upon presentation of evidence of postgraduate work as suggested in paragraphs 3 and 4 above.

Where undergraduate medical instruction and training have included special preparation in the field of health service equal to the qualifications set up for postgraduate work, such undergraduate preparation may be accepted for the certification of medical supervisors.

The medical supervisor or inspector has hitherto rarely had any special training for his work. Part-time employment has been taken up, as a rule, to "help along" financially, while full-time workers have usually been so poorly paid that men with special training or superior capacity for this work have not been common.

Since the State of New York pays a bonus to the local community employing a medical inspector it became evident to the State authorities that they would only get their money's worth by making sure that this employee had at least a minimum of special preparation. With this required training the schools of New York will have a better medical service than formerly, even with the same type of men who have been employed. There is a tendency throughout the country toward the payment of higher salaries for directors of school health work, which promises a better personnel for this line of work.

What has been said with regard to the lack of training of school medical inspectors applies about as well to school nurses. New York State officials have not overlooked this fact, and they require, besides the usual professional training, the completion of "at least six semester hours in approved professional courses in health education." A nurse so trained and certified is now distinguished as a "nurse-teacher." It is to be hoped that in time not only the term "school nurse" but also "nurse-teacher" will be supplanted by a title which does not savor of the sick room.

The percentage of corrected defects by which (other things considered) the effectiveness of medical inspection is to be measured seems to be increasing and has reached as high as 85 per cent in some cities. It is impossible to make comparisons in this respect, however, owing to the elasticity of the word "defect" and also of the term "corrected." Strictly speaking, most defects can not be "corrected" at all, as for example, bad vision or defective hearing or a leaking heart, but they may be compensated for or possibly improved by treatment. Since few defects can be "corrected" or

"cured" reports in which these terms are used, when "treated" or "compensated" are meant, are misleading.

In the publications of this bureau emphasis has been placed on the importance of the presence of parents at the physical examinations of their children, since much needed information can be secured from them directly and they in turn can be not only told but shown the physical needs of the child without the expensive visitations of the school nurse so often required to bring about action in regard to defects. Hitherto, it has been necessary to point to the examples of English and Canadian schools but at present it can be stated that a high percentage of parents were present at examinations in Boston during the past year, and in Kalamazoo they were present at 100 per cent of the examinations. Perhaps other cities have gone as far in this direction. Within the year one inspector has complained that the "presence of parents slows up the work of examination." Perhaps it does, and it should where it is run on the speeding-up, piece-work plan too frequently in vogue. Overmuch time should not be spent on examinations and an experienced examiner can find out a great deal of importance in a few minutes, but many cases require much time if nice decisions are to be made, and these should be made. The cost and the risk are too great to recommend without due consideration such procedures as the removal of tonsils, and the wearing of glasses is not an unmixed blessing even when these are rightly fitted. Although the physician chosen by the parents is the final source of decision as to the need for treatment, he may agree only from courtesy with the school physician or he may disagree, both of which decisions are bad for the medical inspector and, in the first instance, may be bad for the child. Some years ago systems were devised by which a hundred or more children could be "run through" the inspection mill in an hour, but it is worthy of note that an average of 20 minutes per child is allowed for this by the city previously mentioned, Kalamazoo. For first examinations this is certainly none too much, and if the health of the school child is as important as it is often said to be, at least 20 out of 50,000 minutes devoted to his schooling each year may well be given over to the appraisal of his physical machinery.

An event of much importance for the future of medical inspection was the organization in 1927 of the American Association of School Physicians, which held its first meeting in 1928. The proceedings will be published by the society.

The training of teachers in the examination of children for physical defects proceeds apace both in training schools and locally in connection with the development of health work, especially in the

absence of school physicians or nurses. In Virginia, where examinations of children in rural schools are made almost wholly by the regular teachers, 95 per cent of the children were examined in the school year 1927-28; 73 per cent were found with defects of vision, hearing, nose, throat, teeth, or nutrition, and 14.5 per cent had such defects attended to and were enrolled as "five pointers." In one county 100 per cent were examined and 58.8 per cent of those found defective were reported as having all their defects "corrected." In the State as a whole the number of "five pointers" was double that for the preceding year.

STUDIES REGARDING PHYSICAL DEFECTS

For the medical inspector the question as to whether the tonsils of a child are or are not a menace has always been a troublesome one, and a decision in the matter is of the utmost importance, for, if possible, no child should be exposed to the risk nor his parents to the expense of a tonsillectomy. Unfortunately the medical inspector himself has added very little to his own knowledge, nor is he likely to until his records on the subject consist of something more than a cross after the word "tonsils" to indicate that they were apparently "too large" or "diseased" and a similar sign to indicate that they were "corrected." However, one excellent study from school medical inspection records (so far as those records go) has been made by Kaiser of Rochester by a comparison, after a lapse of years, of the condition of children who had had their tonsils removed with the condition of those for whom removal was advised but this advice was not followed. Kaiser published his first observations after three to five years had elapsed following operations. In 1927 (*Journal of American Medical Association*, December 31, p. 2238), he published the results of comparisons after an interval of five to eight years. These studies seem to indicate that there is a considerable reduction in frequency of head colds and sore throat, but the effect on other conditions assumed as related to the tonsils, such as rheumatism, chorea, carditis, are very disappointing. In these cases there was no separation of children with adenoids from those with supposedly dangerous tonsils, and the method of removal is not considered, which leaves much for the future investigator.

Another excellent contribution on this subject in the biennium, from material collected partly in schools, is that of Collins and Sydenstricker, of the Public Health Service. ("An Epidemiological and Statistical Study of Tonsillitis," *Public Health Bulletin*, No. 175, July, 1927). The findings of this study are fairly in accord with that of Kaiser.

The Public Health Service has also contributed a "Special Study of the Vision of School Children," by Kempf, Jarman, and Collins (Public Health Reports, Vol. 43, No. 27, July 6, 1928). By the use of a cycloplegic it was found that a large percentage of children who had 20/20 vision by the usual test were very defective. The authors reinforce the statement made in publications of this bureau that the Snellen test should not be used exclusively in the examination of the eyes, by recommending that "any child with symptoms of eye-strain should be sent to an eye physician for careful examination even if the naked eye reads 20/20 on the Snellen chart." This chart is of most importance in detecting myopia which these investigators found in 2 per cent of children at 6 to 7 years and it increases to 9 per cent at 12 years. It is highly important that such cases be discovered and treated.

An interesting contribution has been made in this biennium to our knowledge of "The Physical Status of the Urban Negro Child," by Dr. E. Blanche Sterling, of the Public Health Service (Public Health Reports, Vol. 43, No. 43, Oct. 19, 1928). She reports 31 per cent entirely free from dental caries and in almost 33 per cent of those defective in this particular the amount of caries was very small.

About one-third of these negro children had tonsils which were "considerably enlarged or diseased or both." A relationship between decayed teeth and abnormal tonsils has been said to exist, brought about either through the influence of the bacteria flourishing in the former or from some mutual causal relationship; but these statistics for colored children would seem to dispose of such a theory, for defective teeth are much more common among white children and the proportion reported as having defective tonsils is not usually so high among white children as among negroes.

Certainly in no biennium has so much constructive research along lines of physical defects been reported.

BETTER TEETH

Great progress has been made in the study of the causes and prevention of our most common disease, dental caries. The results of work along this line were presented in 1927 in the publication of the Bureau of Education entitled "Better Teeth." Since the time of that publication reports of a number of studies have been published, all indicating that faulty nutrition; prenatal and postnatal, are the chief cause and that the right feeding of the child even at school age is still a factor in tooth preservation. The lack of fruits, vegetables, and milk in the diet seems to be the most important factors in decay, although other things besides food may enter into the nutritional problem. The methods of prevention of decay worked

out in the Forsyth Dental Infirmary have been applied with excellent results elsewhere both in this country and abroad, and studies are in progress further to improve the technique for these procedures.

There is still an enormous waste of time and money in the removal, or ninth-hour repair of stomatic wreckage, but we may look forward to the application of the knowledge we possess in the detection of decay in its inception, or better, its anticipation by the repair of faults of structure in which decay usually begins. At least 90 per cent of the children can be sent from school with good teeth.

HEALTH EDUCATION

The development of health teaching has proceeded in the direction of the search for firmer foundations on which to build. This is evident in the use of the word "tentative" in the title of many recently constructed "outlines" or "courses of study."

There have been analyses of subject matter (as that by Miss Strang) and some inconsistencies of teaching revealed. The invocation of fairies and clowns seems to be a thing of the past and conventional health plays are mentioned by some as of doubtful value. It has become more and more evident that aside from the few habits, the results of which can be checked by the teacher from observation, there is need of the closest cooperation of the home in order to secure health practices.

The presentation of health information in connection with history, mathematics, etc., has received much attention, but such correlation presupposes a high degree of preparation on the part of the teacher and is easier said than done.

The high school remains the weakest link in the health education chain, the teaching usually being done inadequately and to a comparatively small proportion of the pupils. If our colleges were to require for entrance as much knowledge of the structure and behavior of the physical machinery, with which the student lives and works, as they do of Latin or mathematics there would be a vast change in our high-school teaching both in content and kind as regards physiology and hygiene.

NUTRITION

Nutrition work is becoming more a general feature of school health work with insistence on the practice of habits leading to better nutrition by all, and at home rather than in school. Children are now provided with better lunches than formerly whether these are brought from home or supplied at school. The school lunch in many rural schools has been improved, both as to content and feed-

ing practices, through such simple directions as have been published by this bureau. In Virginia the supervisor of physical and health education has brought about a marked improvement through the very simple plan of the supervised lunch. The children bring whatever is furnished by the parents, but are required to eat together in the presence of the teacher, with sufficient time devoted to the meal. By noting what other children bring and how their food is prepared and by the comments of the teacher there has been an improvement in the content of lunch boxes, while the leisure with which the food is consumed and other elements of hygiene have brought about a perceptible betterment in nutrition.

Open-air schools have not been reviewed for a decade and this subject has recently been taken up by this bureau. This study has not been completed but the most striking features of the information received is the variety of minimum temperatures allowed in different schools. Some still follow the early custom of adapting the child to the weather out-of-doors, but in other schools minima of 40°, 50°, 60°, and even 65° are maintained. It is also interesting to note that very few open-air schools claim, as formerly, better attendance than in other schools. This can be accounted for in part by the fact that the regular school buildings in these cities are not now superheated.

ANTHROPOMETRY

Anthropometry, which reached its height both in interest and in multiplicity of measurements about 40 years ago, has steadily declined until there has been little left of it other than weighing and measuring the height. It was abandoned by the physical educator and adopted by the nutritionist. Only those who worked in college gymnasias in the earlier epoch can appreciate the interest in his physique aroused in the student of that time by the taking and comparison of many measurements. It is true that most of those measurements were taken experimentally and were found to be of little or no intrinsic value, but we have gone too far in discarding so many of them. A revival of interest in this subject seems likely to be inaugurated by the studies of Raymond Franzen, of the American Child Health Association. From his investigations he finds that the breadth of hips is of more importance with relation to weight than is the standing height; while by a combination of measurements, of height, breadth of hips and depth and breadth of chest he can determine with great accuracy the correlative body weight. We may look forward to interesting developments in the practical application of this study.

PHYSICAL EDUCATION

The increase to 35 in the number of States having laws requiring the teaching of physical education and to 17 in the number of State directors of physical education and health has, of course, meant an extension of physical activities in schools. In some States the appointment of one or more assistants to the State director has made local stimulation and direction more possible. In Virginia, where a division was made into 10 supervisory districts, each with a director, these assistants not only visited in one year 4,600 schools, but introduced physical activities for the first time into 1,400 of them.

There has been a steady increase in the number and size of school playgrounds and some attention has been turned toward making them usable for as many days of the year as possible. The provision of after-school supervision of play for all pupils, rather than exclusively for those on competitive athletic teams, has been made in some communities and the need for this is more and more appreciated. Here the school merges with other agencies of civic welfare.

The conduct of interscholastic games is faced rather than ignored by school authorities and it may be expected that before long athletics will be managed by the school instead of the school being controlled by the athletic interests inside and outside its walls.

By a recent revision of the physical education law of Michigan "the superintendent of public instruction shall have supervision and may exercise control over the interscholastic athletic activities of all schools of the State." In Maryland these activities have long been under the control of the State department, while in seven other States having State directors of physical education, these officials are connected with the State interscholastic athletic associations and help to shape their policies.

In New York State an effort initiated by Dr. Frederick Rand Rogers has been made to render coaches and other adults less conspicuous in the management of games and to return them to the hands of the players where they properly belong. Such reforms are already spreading to other States.

The Carnegie Foundation for the Advancement of Teaching is making a study of athletics in colleges and has issued a publication dealing with athletics in schools abroad. Dr. Louis I. Dublin has been conducting an investigation into the longevity of college athletes. From his preliminary report men of such superior motor vigor do not seem to last longer than the average of the general public.

The biennium has brought forth a number of studies both in high schools and colleges of the showing of students participating in athletics as regards intelligence and scholarship. The results of some of these studies have been negative and some positive. On the whole,

there seems little relationship one way or the other unless it be that those who prefer football tend to rank lower in scholarship than those participating in other sports.

In the biennium a committee of the department of superintendence on health and physical education in junior and senior high schools made its report on programs for these schools and this was published by the National Education Association and by the American Physical Education Association.

The use of leisure in our twentieth century world becomes a concern for the educator not only during the period of school life but in preparation for after-school days. The monotony of the daily task of the average adult makes it the more imperative that the lengthening hours outside the office and factory be happily employed. If suitable opportunity and supervision are furnished, physical activities will, by choice, occupy the leisure of a large percentage of pupils of school age, and they are thus better prepared for such use of leisure in later life. The school physical education program therefore links itself with the general recreational system of a community. Whether it influences beneficially the use of leisure out of school hours becomes a test of its value. As Carl Schrader puts it, "Unless we can interest and hold the children during their leisure hours our usefulness in the field of education may well be questioned."

To anticipate the limitations of life in man's later years Sir Farquhar Buzzard, Regius Professor of Medicine of Oxford, suggests—

that a multiplication of interests in early life, the opening up of numerous association paths in the nervous system, is a measure to be encouraged and one which may well be calculated to check the advances of senility. . . . Fashions are notoriously fickle, but every few years there arises a vogue for physical culture founded partly on aesthetic grounds, but largely on the fallacy that our good health has some relation to the size of our muscles and that violent muscular exertion is a valuable antidote to the poisonous properties of mental effort. I do not hesitate to say that I have seen a number of cases of exhaustion neurosis resulting from this popular conception of hygiene, and there is little doubt that confusion reigns in the lay mind in regard to the relative merits of physical culture, the object of which is to develop muscles, and of games of skill, the chief advantages of which lie in the fact that they supply mental recreation. From the gerontologists' point of view, therefore, athletic games are to be encouraged in that they add to the list of cerebral activities, to the sum of varied interests. Even when advancing years prohibit personal participation, the rôle of an understanding spectator is not to be despised.

SANITATION

The problem of ventilation is far from solved either in theory or practice. In the past two years the New York Committee on Ventilation has resumed its studies. The experiments carried on in the

schools of Syracuse and in Cattaraugus County, N. Y., would seem to prove that there is considerably more respiratory illness among children attending newer schools with systems of forced ventilation than in the older buildings with change of air by gravity.

There has been steady improvement in the provision of sanitary toilets, especially in the Southern States where much of this change has been made mandatory by law. The consolidation of schools, with the provision of water-carriage disposal of sewage, has helped toward better conditions along this line.

A survey was made by the school health department of the Metropolitan Life Insurance Co. in 404 schools, housing 243,795 pupils, in 22 States. In 53 per cent of the buildings hot water was furnished for hand-washing, in 80 per cent soap, and in 84 per cent towels. Only about 20 per cent furnished hot water, soap, and towels conveniently located and at least one lavatory for every 40 pupils.

There has been much talk of prophylactic and curative effects of ultra-violet light, and some schools have become interested and special glass has been installed in at least a few buildings of the open-air type. Investigations bearing on the subject have not been encouraging to the use of special glass, since the amount of ultra-violet light transmitted (at least in the latitude of the northern half of the United States) does not warrant the expense. A few minutes in the open air prove more valuable than many hours under special glass.

CLOTHING

Since ventilation is looked upon now as chiefly concerned with the regulation of conditions affecting the elimination of heat from the body, the character of the clothing becomes closely related to it. Some of the recent studies of the New York Commission seem to give evidence of the relation of rapid air exchange to the more frequent chilling of the bodies of those children who have been exposed to wet weather. At any rate, wet clothing and, especially, wet shoes and stockings have long been known to be prejudicial to health. In the schools of some other countries dry stockings are furnished to children. In a few American schools the similar practice of having children keep an extra pair of stockings in their desks for emergency has recently been adopted. Such a simple expedient will no doubt prevent colds, sore throats, and even more formidable illnesses which have an important effect on school attendance.

RURAL SCHOOLS

The promotion of health work in rural schools has probably made more progress in the past two years than in any previous biennium. Legislation in a few States for sanitary improvements has been put

in practice either through departments of health or of education. In Virginia by the division of the State into 10 districts each under the supervision of a director of health and physical education, the water supply was investigated and made safe in more than 100 schools, and toilets were supplied or made sanitary in 800 schools; all of which was accomplished in a single year. Through better teacher-training more regard is had for the physical condition of school children and to their instruction in hygiene. As mentioned elsewhere the school lunch has been improved both as to food and to habits of feeding.

While the teacher working in a rural school on her own initiative can do much, it is by the special machinery possible only in a county or district organization that best work can be accomplished. In 1924 the operation of "school hygiene districts," under full-time health directors, was authorized by law in New York, and such a district was established in Cattaraugus County. In 1928 a second district was organized in Ontario County which will be watched with interest. The organization of county departments of health, which goes on apace throughout the country, has furnished in many of these counties the means for medical inspection and sanitary supervision of rural schools.

Many superintendents and teachers in rural schools are interested in the health of their pupils, but do not know how to go about its promotion. As a help to these persons this bureau issued in 1928 a leaflet entitled "Ten Steps in the Promotion of Health in Rural Schools." The interest in the subject was shown by the orders for thousands of copies which have been received. In Michigan an excellent outline for a "Suggested Health Education Program in Smaller Schools" has been prepared by the State supervisor of physical education. This outline has been presented at teachers' meetings throughout the State.

SUMMER CAMPS

While there is little to relate regarding the development of summer camps in connection with public schools, a number of colleges and universities have recently made use of the camp to bring their pupils in touch with materials studied in courses dealing with nature, such as botany, zoology, geology, and engineering; and at the same time furnish recreational facilities. The summer camp has become, of course, an integral part of the training of those who are preparing for the profession of physical education.

In at least one college camp "classes in art, mathematics, sociology, history, and English are carried on, in addition to a full physical education program."

RESULTS OF SCHOOL HEALTH WORK

It is but natural, especially in an age of measuring and standardizing, that a demonstration of the actual results of school health work should be asked for. In fact such work would be prosecuted with far more vigor if figures were available to show physical and mental improvement. Such statistics as might appeal strongly to the very "practical" man are not likely to be forthcoming, for health is not a static condition, and school progress depends on many factors, the most fundamental of which, an adequate cerebral machinery, being fairly fixed by heredity.

Comparisons of the mentality and physique of school children have shown a definite though not marked relationship, and as a rule children who rank high in intelligence and scholastic tests are comparatively free from serious physical defects. It does not follow, however, that, by the treatment of defects or improvement of hygiene, distinctly measurable results will always occur as regards school progress. In exceptional cases spectacular change does result, but not a large proportion of retardation can be so reduced. The mind of the taxpayer has been centered too much on the child who, because of serious mental or physical handicaps, fails to keep pace with the scholastic procession. He forgets that many of the ninety and nine who "pass" would do better work with improved physical equipment.

There can be no doubt that for every defect adequately treated or removed and every item of personal or school hygiene improved, the physical and mental machinery of the child reacts more effectively even though not measurably and, other things being equal, his welfare in future is more assured.

While health is not a measurable thing, certain signs of health (as absence of defects, progress in growth, and freedom from disease) can be appraised and deserve to be compared with the school practices which are intended to bring them about. The percentage of defects of school children treated adequately is a measure of the effectiveness of the school medical and dental program. For health teaching, perhaps the most careful appraisal of results has been made in the Malden, Mass., schools by Prof. C. E. Turner. In 1925 he presented data showing improvement in several health practices. In 1928 he presented evidence from a study of height and weight of children exposed to an intensive health education program as compared with like measurements of a control group. The "rate of gain in both height and weight for the children receiving health education was measurably and significantly greater than for the children of the control group." There was not, however, any fundamental change in the height-weight ratio.

The American Child Health Association has been making a thoroughgoing survey in a number of cities of health education methods and results, and the reports of their studies are looked forward to with interest.

It may be asked whether there is not some evidence from mortality records as to the general results of work for the health of the school child in and out of school. The death rates for children from 5 to 14 years of age (and also from 15 to 19 years) have declined somewhat in the past 10 years, but the decline has not been so great as in many other countries, partly because our death rates were already relatively low. Six other countries—Australia, Denmark, France, New Zealand, Germany, and Switzerland—had, in the period 1921-1925, lower death rates at these ages, so there is room for much further improvement in the United States. The health of the child is conditioned by many things over which the school has but a remote influence. In the high school and college, however, we might do more to further appreciation and support of general public health work by our future citizens.

NURSE TRAINING

Ten years ago a school nurse was any nurse, with or without the usual hospital training, who might secure a position in this special field. As her work was chiefly that of exterminating verminous and other skin diseases, giving first aid, and making occasional home visitations, her preparation was usually ample. Comparatively few school nurses to-day have more than the usual training of a bedside nurse, but as many of them now assume responsibility for the promotion of the entire school health program, it is evident that they need special training.

The education committee of the National Organization for Public Health Nursing published in December, 1928, the outline of a course for school nurses which covers four summer terms with winter extension work. It was prepared by Beatrice Short, assistant director of the organization, and Anna L. Stanley, chairman of the school nurses' section. The program is as follows:

First Summer

1. Principles of public health nursing: Present objectives, scope of work, organization and methods in school nursing. Two points.
2. Family social work: The effects of social disabilities on the family; case method of handling problems; discussion of living standards. Two points.
3. Child health: Standards for normal health and development including habit formation. Discussion of communicable diseases, health hazards and nutrition problems, or educational psychology. Two points.

Suggestions for additional courses for summer or extension work in winter.
 Practice work in school nursing under educative supervision. Two points.
 English composition. Two points. Public speaking. Two points.

Second Summer

1. Methods of health education in the elementary schools. Adaptation of subject matter and methods to health education. Consideration of various devices used in health teaching. Two points.
2. Educational psychology: Elementary psychology with special emphasis on professional situations. Two points.
3. Nutrition in health education: Includes essentials of adequate diet and food needs for different ages. The nutritive value of food materials with regard to application of such knowledge to health education, or mental hygiene. Two points.

Suggestions for additional courses for summer or for winter work.

Practice in family social work. Four points.

(This would require a full month's work under educative supervision.)

History of education: Introduction to educational problems in a democratic state with special reference to our own national situation. The increased responsibility of the State for education. Two points.

Third Summer

1. Mental hygiene. Development of personality: deviations in personality and behavior disorders of childhood with reference to prevention and adjustment. Two points.
2. Child psychology. Two points.
3. Educational sociology: Social and human origins as backgrounds for consideration of problems of modern society and the sociological method of approach to them. Two points.

Suggestions for additional courses for summer or winter extension work.

Practice work on staff of visiting nurse association under educative supervision (2 months). Four points.

Practice work in health education under educative supervision. Two points.

Physical education: Folk dances, stunts, team games. Two points.

Additional course in English. Two points.

Fourth Summer

1. Public health nursing: This course should give a broad understanding of the many phases of public health nursing, their relation to each other and to educational and social improvement. The organization of public health nursing under official and nonofficial agencies. The advantages, plan of organization and work in a completely generalized or partially generalized service. Two points.
2. Personal hygiene or biology. Two points.
3. Organization and supervision of health education: Principles governing health education in relation to the rest of the educational program. Criteria for selecting materials and activities. Departmental correlation, or teaching of home nursing and child care classes. Two points.

Suggestions for additional courses for summer or for winter extension work.

Public health administration and preventable disease. Two points.

TEACHER TRAINING

There has been steady progress in the improvement in the training of regular teachers for health and physical education work in schools. The physical fitness of the applicant for training is more seriously considered and better medical and sanitary supervision is offered by many schools.

The opportunities for preparation for special work in this field have increased. Whereas a half century ago one might need to travel half across the continent to secure such training, there are now, besides the 14 special schools, 50 public colleges and universities, as many private institutions of this nature, and 40 teachers' colleges and normal schools offering major courses leading to a degree.

Most of the special schools have reached a 3-year basis and some of them now have 4-year courses.

The Harvard University School of Public Health has been added to the institutions of this kind giving special courses for school health workers.

PARENT-TEACHERS

Parent-teacher organizations have been busy in furthering the health work of the schools. The most spectacular of their endeavors has been the promotion of physical examinations of children just before their entrance to school—the "Summer Round-up." In 1925, 102 local associations in 22 States responded to this movement, while in 1927, 2,120 communities in 44 States were active.

THE HEALTH OF THE TEACHER

Considerable interest has been displayed of late in the health of the teacher. Since the bureau's publication on this subject, which was issued in 1926, a committee of the School Health Bureau of the Metropolitan Life Insurance Co. has added some information as regards city schools. Forty-eight superintendents answered its questionnaire and 62 per cent of these reported some kind of health supervision for teachers. "Included in the methods of supervision were health examinations for certification and employment of teacher-applicants, periodic health examinations for certification and employment of teacher-applicants, periodic health examinations and some care for sick teachers."

A questionnaire investigation as to medical supervision in teacher-training institutions, made by Dr. A. O. De Weese, physician and health officer of the State Normal College, Kent, Ohio, would seem

to indicate that more of these schools are giving attention to the physical fitness of persons admitted for training. Ability to manage pupils with ease has more to do with the health of the teacher than any other condition and it would seem of the utmost importance that pupils in these schools should be taken on probation and be given, as early as possible, such experience in actual teaching as will make it evident to them and to others whether the mental wear and tear entailed will warrant further training for such work.

The wide variation in the granting of sick leave was shown in an article in *SCHOOL LIFE* for October, 1927. The subject is, of course, closely connected with the selection of teachers for training and the health supervision of teachers employed. As a group, teachers show comparatively little absence on account of illness, yet by better selection and supervision this absenteeism can be further reduced. Having made its selection and provided for health supervision, the school should be liberal in its allowance for absence on account of illness, for teachers are often at work when they would better be in bed and they should not be made to lose salary because of unavoidable illness. The granting of leave by the cumulative method, more commonly adopted in England, seems to be gaining favor in this country.

LEGISLATION AND STATE SUPERVISION

In the past biennium, two States, Florida and Arizona, were added to the list of those which have laws making provisions for physical education in public schools. There are now 35 States in which physical education is virtually a required subject. In most of these States the law applies to teacher-training institutions. The teaching of hygiene is usually included with physical education.

The following States now have a director of health or physical education or of both in the State departments of education: Alabama, California, Connecticut, Delaware, Florida, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Virginia, and West Virginia.

In the following States one or more assistants to the State directors are employed: California, Connecticut, Florida, Massachusetts, Michigan, Missouri, New Jersey, New York, and Pennsylvania.

In at least seven of these States the expenditures for salaries and travel expense of such State officials exceed \$10,000. It is manifestly unfair, however, to make comparisons of expenditures along this line, as the school population would need to be taken into account and also whether subsidies to local schools are allowed, as is the case in Maine,

Nevada, New York, and Virginia. In Maine, for example, the expenditures for the promotion of physical education amounted in 1927 to \$34,500.

In New York State the expenditures are large not only for the direction of hygiene and physical education and for subsidies, but also for the supervision of medical inspection which, in this State, is taken care of by the department of public instruction. In a very few States public funds are spent on school health work through the department of health, as in North Carolina, where, in 1927, \$60,000 was used in the promotion of medical examinations and treatment. In a few States, such as Alabama, Indiana, and Kentucky, the State department of health is active in improving school sanitation, but in about half the States of the country the active promotion of school health work through either State department is meager or absent. In four States, where the physical education law includes provision for a State director, there are no funds for this purpose and no such official has been appointed.

The physical education service of the Playground and Recreation Association of America has been very active under the direction of James Edward Rogers, and much of the legislative action and other State activities in the past two years leading to better State supervision have been in large measure due to his efforts.

Statewise there has been little change in laws or in direction, or lack of direction, of medical inspection. The chaotic condition in this field has been described more in detail in "The Status of School Hygiene in the United States," a paper presented by the author before the American Public Health Association in 1927, and published by that organization.

In one State medical inspection is directed actively by an officer of the State department of education; in an adjoining State the same work is sponsored by the department of health, while in another neighboring Commonwealth there is supervision by neither State department. Specifications as to who may examine for defects, and what defects are to be examined for, are just as diverse.

Half of the school children of the country have never had a physical examination of any kind nor will they have until the teacher-training schools prepare their students for this work, and until some State department is made responsible for the promotion and supervision of school medical service.

Unsatisfactory as are many of our legal declarations and much of our practice as regards medical inspection, it must be recalled that there was no legislation on this subject a quarter of a century ago, and very little was done along this line even in our largest

cities until after the beginning of this century. There have already been some important revisions of the legal enactments on this subject, one of which in New York concerning the qualifications of medical inspectors has already been mentioned.

While physical education has had some recognition in this country for more than a century, few of the State laws making it an integral part of the school program are more than 10 years old. On the whole there has been rapid progress in public appreciation of school health work and we can go forward with improvement in the details of its practice.

