

## Public Health at the Crossroads

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... The results achieved during the past fifty years by a public health campaign based on the threefold program of environmental sanitation, control of communicable disease by bacteriological and serological methods and education in personal hygiene, constitute without exaggeration one of the most startling and revolutionary events in the whole history of the human race. The death rate from all causes in New York City (according to Dr. D. B. Armstrong) was 31 per 1,000 in 1824, 41 per 1,000 in 1851, and still 29 per 1,000 in 1875. Then began the fall, from 29 in 1875, to 12 in 1925, a reduction of three-fifths in a period of fifty years.

As Professor Willcox has recently pointed out, "the statement that in 1879-80 the crude death rate or average number of persons dying annually in each 1,000 of the population of New York-Brooklyn was 22, while in 1919-20 it was 13, does not convey much meaning to the average citizen. But when the same change is expressed in the statement that in 1879-80 the average length of a human life in New York-Brooklyn was 36 years, but in the present New York City in 1919-20 it was 53 years, showing an increase of 17 years, or 47 per cent, within that 40-year period, then the statement gains greatly in significance and carrying power." That in two generations the average length of human life should have been increased by almost one-half must arouse in us a sense of reverent wonder at what God hath wrought for mankind through the applications of modern science.

Our progress in the control of preventable diseases has, however, been by no means uniform. To chart wisely our future line of attack it is important to see just where we have attained or nearly attained our goal and where we have fallen short of such attainment; and for this purpose I propose to use some figures kindly furnished to me by my friend Dr. Haven Emerson in the form of a differential analysis of mortality by causes in New York City for the past fifty years. These data cover the period 1873-75 for Manhattan and the Bronx and the period 1923-24 for Greater New York, and although the areas are not the same they will serve well enough to indicate the general trend of events. I have prepared the table presented herewith on the basis of these figures.

Time does not permit a discussion of the extent to which the changes indicated are

**Mortality from Certain Specified Causes and from All Causes per 100 000 Population**

	Manhattan and Bronx 1873-75	Greater New York 1923-25	Per cent change
Scarlet fever	80	1	-99
Diphtheria and croup	235	11	-95
Diarrhea under 5 years	335	22	-93
Diseases of the nervous system	252	39	-85
Pulmonary tuberculosis	404	84	-79
All other causes not listed	874	316	-64
Acute respiratory diseases	352	164	-53
All causes	2,890	1,220	-42
Bright's disease and nephritis	100	69	-31
Violence	120	85	-27
Cancer	41	113	+176
Heart disease	89	255	+187
Diseases of the arteries	8	61	+650

due to improvements in diagnosis and alteration in the age distribution and racial composition of the population. All these factors are of real importance but they do not affect the primary fact that the major problems of public health have fundamentally changed in fifty years. In 1875 the outstanding causes of death were pulmonary tuberculosis, acute respiratory diseases, infant diarrhea and diphtheria and croup in the order named. During the half century that has passed the communicable and environmental diseases have been so substantially reduced that the problems of the future are heart disease, the acute respiratory diseases and cancer. We face a new situation and we must adopt new methods if we are to meet it with any measure of success.

### Organic Heart Disease

The problem of the diseases of the arterio-renal complex is of course no simple one. In the early years organic heart disease is largely a result of acute communicable diseases and focal infections, and in middle life of venereal disease; while in old age the factors of true senile degeneration play a major role. There is no sharp division, however, between these factors, and a man may no doubt die of heart disease at 70 years of age because of organic lesions due to infection from a neglected tooth at 12. The control of streptococcus and pneumococcus infections of every sort will therefore play a real part in the reduction of organic heart disease. It is in the main, however, to personal hygiene and preventive medical care that we must look for the immediate control of this major factor in the death rate. Food, fresh air, exercise and rest, the clearance of the bowels and the avoidance of drugs and

industrial poisons—it is these elements in daily healthy living which must form our first direct line of defense against the onset of degenerative disease. Above all, however, it is to the early detection by the physician of incipient organic lesions that we must look for the application of the particular rules of personal hygiene which the specific individual needs to observe if the results of an initial weakness are to be avoided or postponed. We are here brought face to face with the central problem of future preventive medicine, the application of medical knowledge to the individual patient at a time when that knowledge can really exert a maximum effect.

*Submissions to Voices From the Past may be selected from scientific papers, essays, speeches, editorials, unpublished correspondence, or diaries. The selection must have been written at least 50 years ago. Submissions may be edited for length and will be published with a brief biography of the author. The combined length of the selection and the biographical sketch should not exceed 2500 words. Submissions should be typed double-spaced and should be accompanied by a photocopy of the original item so that the accuracy of the transcription can be confirmed; any references for the biographical note should follow Journal style. Five copies of the manuscript should be sent to Elizabeth Fee, PhD, Editor, Public Health Then and Now, AJPH, 1015 15th St NW, Washington, DC 20005. Submissions accepted for publication will be published under the name of the original author; the contributor of the selection and the author of the biographical sketch will be acknowledged.*

## Cancer

A consideration of the third major factor in the death rate, cancer, brings us of course to the same practical conclusion. For the present we must rely upon the surgeon for the control of cancer; and, although the extent of non-recognizable or non-operable cancer is now known to be greater than was thought ten years ago, there is still ample margin for the saving of life by early surgical treatment. If such savings are to be made, however, we are again faced by the urgent and imperative need for social machinery which will facilitate prompt diagnosis and prompt treatment, machinery which will bring to bear the resources of medical science before the time has passed for their effective use.

## Mental Hygiene

It is impossible to consider, even in the briefest summary, the future program of the public health movement without at least some reference to the vast and fertile fields of mental hygiene. Today, the attention devoted to this problem by municipal health departments is so slight that it has not even been included in our Appraisal Form for city health work; but in the not-distant future I am inclined to believe that the care of mental health will occupy a share of our energies perhaps as large as that devoted to the whole range of other disorders affecting other organs of the body. . . .

## Education of the Individual

In this great field, as in the control of the degenerative diseases, the fundamental problem involved is essentially the same. In both instances education of the individual in the principles of healthy living is the desideratum. It must, however, be no vague preaching of abstract principles but a definite and specific application of such principles to a given individual. Such application must of course rest on a sound medical diagnosis. In every one of those fields of public health which promise a maximum of return during the half-century that lies before us, the preventive application of the resources of medical science to the individual case is the crux upon which success or failure must depend.

## Public Health at the Crossroads

It is in connection with this fundamental problem that the public health movement



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(Courtesy of National Library of Medicine)

of the present day stands at the crossroads. Our achievements between 1876 and 1901 were almost wholly based on the organized application of the sciences of sanitary engineering and bacteriology. During the first quarter of the present century the doctor and the nurse have come into the picture, and so far as nursing is concerned, the principle of social organization has been generally accepted so that we may look forward with some confidence to the day when the bulk of nursing care will be rendered either in institutions or by organized visiting nurse associations. So far as the application of medical service is concerned we have recognized with some fullness the responsibility for medical care of communicable diseases and for the hygiene of the infant and the school child. We must soon come to a decision as to the point at which social responsibility for the care of individual health shall cease, if such a point exists.

## Prevention and Cure

In the past this difficulty has been commonly met by the plausible attempt to draw a line between prevention and cure, by assuming that prevention is the task of the state and

that treatment should be left to the private physician. This is a good phrase and as a people we Americans love to govern our affairs by phrases. . . .

When medical treatment consisted chiefly in the administration of drugs it was perhaps possible to draw a line in practice if not in theory, between prevention and cure. Nowadays, however, the hygienic advisor finds it increasingly difficult to make any sharp distinction between the normal and the abnormal and the medical practitioner places his chief reliance upon the hygienic regimen of "preventive" medicine. The attempt to fix the boundaries of the public health program by establishing a distinction between prevention and cure must then in practice lead only to confusion and incertitude.

## The Health Officer's Responsibility

We may, if you like, say that the health officer should concern himself only with communicable disease. That is a logical position, though a narrow one. Or we may combine this etiological criterion with another based on age and say that the field of the health department includes all the health problems of the infant

and child plus the communicable diseases of the adult. This is a second clear and defensible position and one which approximates present-day practice. Or we may take a still wider view and say that the health program must envisage the whole field of the prevention of disease and the promotion of physical and mental health and efficiency.

A reading of the constitutions and charters under which our state and city health departments operate suggests that the latter conception of their functions is also an admissible one, for these grants of power and responsibility contain no limitations as to the age of the individual or the etiology of the disease to be controlled. If, however, we accept for the moment such a comprehensive conception of the duty of the health officer, we must obviously face the whole issue of the place in the public health program of the practitioner of medicine, since it is only through the effective application of the medical art that the constitutional diseases can be brought under control. In considering this vital problem, it will perhaps help us, if we recall how the relations of other professions to the public health program have been dealt with in the past.

It was quite obvious forty years ago that the individual sanitary engineer could not apply his resources effectively to the prevention of disease; and the same thing became clear thirty years ago as to the individual bacteriologist, and twenty years ago as to the individual public health nurse. Sanitary engineering and bacteriology and nursing have therefore been brought within the purview of the health program in such a way that their resources are available to every individual in any well-organized community. They have not been "socialized" in any arbitrary sense. There are still, and there always will be, sanitary engineers and bacteriologists and nurses, functioning in their private capacity; but we no longer rely chiefly on private expert service for the protection of water supplies, the laboratory diagnosis of disease or even for the nursing care of the sick in the home.

The major problem of health conservation, today, is the application on a scale of similar effectiveness of the resources of the science of medicine. It is on such an application that the control of heart disease and cancer depends and the issue is of such moment that in some fashion or other the desired end must surely be attained. Can it be reached in the normal course of events by the initiative of individual practicing physicians? Or must society through its official and voluntary agencies again take a hand and provide social machinery for facilitating its attainment?

## *Organized Medical Service*

. . . In Germany and England, National Health Insurance has been adopted as an official program and . . . a recent visit to England has convinced me that, thanks to the increasing supervision of the Ministry of Health, the plan is working better in that country than its unsympathetic critics (of whom I have been one) would have believed possible five years ago. The same movement is spreading with astonishing rapidity throughout Central Europe, though in certain countries, such as Jugo-Slavia against the violent oppositions of the medical profession. In Berlin a strike of physicians against the terms of the panel program has led to still more radical developments in the shape of a complete system of public clinics or "ambulatoria" staffed by salaried physicians paid from the insurance funds.

Finally, there is a movement which in the United States seems to many of us to be the most important and most promising of all those here reviewed. I will call it, if I may, the Health Center Movement, meaning by that term the development with official funds, or with those contributed through voluntary agencies, of free public services for the examination of well persons or of persons who suspect the presence of disease, for their hygienic instruction and for the administration of preventive medical treatment or reference to private physicians or to institutions where such treatment can be secured. Prenatal clinics, infant welfare stations, school medical services, tuberculosis clinics, venereal disease clinics, mental hygiene clinics, heart clinics, cancer clinics are all undertakings of this class. They are rapidly on the increase and it is in regard to your attitude as health workers toward developments of this kind that a clear and convinced policy is of most immediate moment.

## *Criticisms and Catchwords*

I am fully conscious of the criticisms which have been, and will be, made in regard to most and perhaps all of the projects for organizing medical service which have been outlined above. Some of these criticisms are sound and significant, others merely superficial and frivolous. The habit of condemning any attempt at intelligent community action by labeling it as "socialistic" and "bureaucratic" is for example unworthy of serious-minded men. Some things are better done by the individual, some better by the state; and catchwords will not help us to determine to which class a given activity belongs. . . .

Nor do I believe that a more organized system of medical service will operate unfavorably upon the average income of the medical profession. It has not so operated in England and the profession in that country is now well satisfied with this particular aspect of the health insurance act.

On the other hand there are very real and very serious dangers in almost all plans for the better organization of medical service, which must be considered with the greatest care if we are really to attain the ideal results at which we aim. Even group practice by the medical profession itself is not without possibilities of commercialism. Industrial medicine may be twisted from its legitimate purpose and converted into a mere instrument for fighting compensation claims. The sale of salaried medical service to the public by non-medical profit-making organizations is in my judgement generally unsound. The administration of insurance plans and of health centers must be safeguarded with meticulous care if we are to avoid inadequate compensation for physicians, lowered standards of service, loss of independent initiative and the deadly blight of institutionalism. It will take the maximum of broad-minded statesmanship on the part of both health officials and the medical profession, if the good results of organized medicine are to be obtained without their possible attendant evils.

## *Tendency Toward Organization*

Whether we like it or not, however, the tendency of the times makes it clear that some form, or forms, of organized community medical service are coming, as surely as the sun will rise tomorrow. While we hesitate and consider, the thing is happening all about us. If we place our heads in the sand like the ostrich, or if we emulate King Canute and order back the tides the inevitable will still occur; but its form and direction we can govern if we will. It is only through the leadership of the health officer as an agent of the public, solemnly charged with the duty of preventing disease and promoting health in every form, and through the thoughtful and broad-minded cooperation of the medical profession, that the legitimate demand for an organized preventive medical service can be wisely met. □

## **Charles-Edward Avery Winslow**

Charles-Edward Avery Winslow was born in 1877. He studied biology under William

Thompson Sedgwick at Massachusetts Institute of Technology (MIT) and in 1902 became an instructor in sanitary bacteriology. He was promoted to assistant professor, biologist in charge of sanitary research, and head of the MIT sewage experiment station for the investigation and purification of Boston sewage. In 1910, Winslow became an associate professor of natural history at City College of New York and the curator of public health at New York's Museum of Natural History. He gave public lectures, wrote newspaper columns, and served as director of publicity for the New York State Department of Public Health. In 1915, he was appointed professor of public health and chair of the new department of public health at Yale University, where he created a doctoral program and a certificate (master's) program in public health and helped establish the Yale School of Nursing. He also focused considerable attention on the education of undergraduate medical students in an effort to infuse them with the "spirit of prevention."<sup>1</sup>

During his long tenure as chair of public health at Yale, Winslow was extremely active on the national and international stage. He continued as editor of the *Journal of Bacteriology* from 1916 to 1944, when he stepped down to become editor of the *American Journal of Public Health*, a post he held for 10 years. In 1921, Winslow was appointed director of the League of Red Cross Societies in Geneva, Switzerland, and from 1927 to 1930, he served on the League of Nations' National Health Care Committee. In 1927 he helped organize the Committee on the Costs of Medical Care (CCMC). He served for 5 years as chair of the CCMC's executive committee and became a national spokesman for the CCMC, defending its carefully crafted recommendations in such publications as the *New England Journal of Medicine and Science*. Later he aggressively advocated a program of national health insurance, and in 1945 he helped draft President Truman's National Health Message.<sup>2</sup> Among other activities, he served as chair of APHA's committees on administrative prac-

tice and hygiene of housing and, in 1939, of the New Haven Housing Authority.<sup>3</sup> □

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