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CONTENTS

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AMERICAN ACHIEVEMENTS AND AMERICAN FAILURES IN PUBLIC HEALTH WORK[1]

PUBLIC health work in America began early in the eighteenth century with the introduction into New England of the Oriental inoculation for small-pox by Boylston, and has achieved world-wide renown early in the twentieth century with the scientific sanitation of the tropical Isthmus of Panama by Gorgas. The educating, organizing and equipping with sanitary machinery of a swiftly growing population, at first sparse but later sometimes intensely congested, and always fluid and unstable under the pressure of migrations and immigrations such as the world has never seen, is in itself a great achievement. And when that population is, like ours, compounded of all the races of mankind, lodged in a new environment and subjected to an unfamiliar and quickly changeable climate, public health work becomes exceptionally difficult. Nevertheless, under leaders like Boylston and Waterhouse, Shattuck, Walcott and Billings, and Reed, Lazear and Gorgas—to whom we may now proudly add the name of Strong—sanitary information has been gathered and spread abroad and applied; vital statistics have been collected and studied; sanitary libraries have been formed; boards of health have been organized and directed; public health laboratories have been established; and epidemiology and other branches of sanitary science enriched and extended.

[1] Address of the President, American Public Health Association, Rochester, N. Y., September 7, 1915.

To these achievements various arms of the federal government have materially contributed, *e. g.*, the U. S. Public Health Service, the Department of Agriculture, the medical corps of the navy, and, especially, the army medical corps which through the splendid and eminently scientific labors of Reed, Lazear and Carroll and Carter and Gorgas have solved the deepest mysteries, and overcome the worst difficulties, of tropical sanitation. Drs. Blue and White and their associates of the U. S. Public Health Service have likewise earned the honor and gratitude of mankind by their proof that under proper administrative measures the bubonic plague of the Orient and the yellow fever of the Occident may alike be held in check in our own country, while, as we are meeting to-day, Strong, formerly a government official, but now in Serbia and Montenegro, representing various more private foundations, is winning fresh laurels for American public health measures. Thus the bold and brilliant epidemiological work of Boylston and Waterhouse which marked the beginning of experimental preventive medicine in the early eighteenth and early nineteenth centuries, has been continued and extended in the late nineteenth and early twentieth by their still more scientific successors. Some of our state and city boards of health and some of our private institutions and laboratories have likewise lent invaluable assistance, as for example the Massachusetts State Board of Health, the New York City Board, the Rockefeller Institute, and many others. Meantime, less original but not less enthusiastic and faithful work has been done by various associations for the promotion of the public health, such as the American Public Health Association, and the now happily numerous anti-tuberculosis societies, the organizations for the promotion of school hygiene, for the prevention of infant mortality, and the like. We have also, at last, in addition to a small but increasing number of creditable state, town and city boards of health, what is virtually a national board of health, namely, the U. S. Public Health Service—a highly scientific and efficient arm of the federal government, well organized, well equipped, and provided with a staff of able and devoted investigators.

Up to 1886, *preventive medicine* chiefly in the form of vaccination was the principal weapon for the promotion of the public health, and a long step forward was taken when in that year with a reorganization of the State Board of Health of Massachusetts, sanitary engineering became a recognized and indispensable branch of public health science and public health service. Since that time *preventive sanitation,* and particularly the sanitation of towns and cities in respect to water supplies, milk supplies, ice supplies, sewerage, garbage disposal, street cleaning, the heating and ventilating of public buildings, the smoke nuisance, and other environmental factors of public health or ill-health, has come to receive close attention and treatment. In the further development of preventive medicine and preventive sanitation, public health laboratories for the quick detection of dangerous infections have rapidly been installed almost everywhere in the more progressive American cities and towns. We have begun the medical and sanitary supervision of schools and school buildings. We have invented and put within the reach of all but the very poor, the most complete, convenient and salubrious heating and ventilating appliances in the world, for houses, theaters, halls, hotels and workshops. We have made ice, once a luxury for kings and emperors, a universal solace for all classes in hot weather. We have perfected and extended enormously the

preservation of foods by cold and by canning, so that seasonal food scarcity is almost unknown. We have invented and cheapened rubber clothing, and especially rubber overshoes, as a protection against our almost tropical rains. We have applied machinery to the manufacture of abundant and better and cheaper shoes and clothing. We have proved by experiment with a national spitting nuisance the possibility of sometimes controlling unsanitary habits by education and reasonable sanitary ordinances.

And yet—on the other hand—we have thus far failed to achieve many much needed sanitary improvements. Our water supplies are to a large extent either in good condition or on the way to improvement, but our sewage disposal systems are still in many cases far from satisfactory. In this respect the parallel between the individual and the community is close, for while many intelligent persons attend carefully to the water they drink, most are comparatively careless about their excretions, regarding as negligible that frequent and regular and complete output of the body wastes which is no less necessary for the conservation of health than is the intake of wholesome food and drink. The most flagrant failure in American sanitation to-day is the almost universal lack of public convenience or comfort stations in American cities and towns. The stranger within the gates of most American communities seeks in vain for any public sanitary conveniences. If he is well-dressed, he must be referred to hotels or other semi-public buildings or, if poorly dressed, to saloons or railway stations or other semi-private or public-service places. Some three months ago the leading newspaper of one of the proudest and most progressive cities of New England, which has since rejoiced to find itself "in the hundred thousand class," announced that its

> first public sanitary . . . was opened Saturday morning, and will be open daily hereafter from 6 A.M. until midnight. The opening . . . marked the end of ten years of effort to get such a comfort station built.

Failure like this to provide proper public toilet facilities for our towns and cities is to fail in one of the very elements of public health.

We have also failed to reduce typhoid fever as far as we should have done in America. Of late much progress has been made in the right direction but we need to remember that it is the last step that arrives, and we have always failed to attend closely enough to the single, as well as to the seemingly final, case. Like nature we are often "so careless of the single life, so careful of the race." We have failed likewise to reduce as far as we should have done American infant mortality. Here undoubtedly our hot weather works against us, but so also do our milk supply, which can be and ought to be rendered safe by pasteurizing, and our parental ignorance and incompetence, which can and should be lessened by education and the aid of public health nurses. We have as yet, and in spite of ample knowledge, failed to make our American milk supplies what they should be. This is partly because we have been too timid to insist that good milk not only costs more to make but is worth more for food, and must therefore be paid for, and partly because we have not yet taught the public as we should that the only safe milk is cooked milk, and for infants, milk that is pasteurized—preferably in the final container. I have myself lived through the last years of the period—now happily remote—when no milk was pasteurized by anybody; through the next in which only pioneers like Nathan Straus preached or practised pasteurization, while many if

not most, physicians, deprecated the practise; through the one following, in which the scales began to turn in favor of pasteurization; and into the present when almost no one fully informed on the subject actively opposes pasteurization. And yet, even to-day, some physicians are short-sighted enough to tolerate if not to recommend the general use of raw milk, which still constitutes the great bulk of the milk used by infants and adults all over the land. Such use of raw milk we must count as long as it lasts one of our worst public health failures.

We have also failed thus far to pay proper attention to our American climate, which has been well described by a popular writer as "polar-tropic." Placed as we of the United States are on the latitude of southern Europe, Persia, and the northern parts of Africa and Arabia, we are exposed alike to the stimulating and dangerous sunburn of the south and the cold dry winds driving down upon us from the continental area of Canada and the high north. In this fact perhaps we shall some day find one of the principal causes of that eager, strenuous, often nervous and sometimes excited, condition which we may call "Americanitis."

Another conspicuous failure is our rural and industrial hygiene and sanitation. With vast regions given over to rural life, and with other regions called industrial, small in area but teeming with life and noise, we have as yet only touched the surface of the public health problems involved. The same is even more true of the problems of alcoholism and venereal disease. Here we shall probably learn by comparison with the spitting evil that it is easier to overcome habit than to conquer appetite, and we must be prepared for delays and disappointments yet without giving up hope.

Some streets of most American cities are often disgracefully dirty and untidy. Horse-dung and other dirt, dust, papers, fruit skins, old hats, abandoned umbrellas, discarded shoes and the like are too often seen lying about our streets. Yet these same streets are the principal playgrounds of the poor, and ought for every reason to be kept scrupulously clean. We have devised excellent apparatus for heating and ventilating halls and houses in our polar winters but have neglected the almost equally important problem of cooling habitations and public buildings in our tropical summers. We have not done all we might do for the prevention of blindness, of tuberculosis or of cancer. Our vital statistics are not yet either complete or trustworthy; our health boards are too often loaded up with political refugees, political doctors, and ignorant or incompetent laymen. Our health officers are frequently untrained, ill-paid, or only part-time employees of a no-time board.

But above all I must put our almost complete neglect of *preventive personal hygiene*. From 1720 to 1886 we had little to show in public health work beyond vaccination for small-pox—the fundamental procedure of *preventive medicine*. To this, which has since expanded immensely in various directions, we have added *preventive sanitation*, by which I mean the purification of water and sewage and milk, the control of mosquitoes to guard against malaria and yellow fever, improved housing, and many other fundamentals of a sanitary environment. But we have not yet even begun to demand that study and care of the *individual* which is the most fundamental of all public health problems. We have paid little or no attention to the prevention of overeating, overworking, overdrinking, deficient exercise and deficient sleeping, to family hygiene, and the hygiene of

special organs such as eyes, ears, bowels, teeth, nose and feet—all of which I propose to group together under the term *preventive hygiene*. We have achieved much in preventive medicine and preventive sanitation, but we have as yet failed for the most part in preventive hygiene, which is very likely the most important of all. Here, therefore, we may reasonably expect the greatest progress in the nearest future. Rightly studied, preventive hygiene will include personal, domestic, family and social hygiene. It will deal with celibacy and marriage, with sanitary house-keeping, with the high cost of living, with food economy, with domestic service, with child hygiene, and with the proper conduct of mature and elderly life, as well as with the manifold aspects of strictly personal hygiene. It will in the future play perhaps the principal part in solving many of the problems of American life, health, prosperity and happiness.

Our whole teaching of hygiene and sanitation has been grossly neglected, and our teaching of physiology on both the higher levels and the lower has never emphasized as much as it should have done its practical hygienic applications to the conduct of life. Even our best medical schools have paid but scant attention to these subjects, while the instruction given in the public schools has hitherto suffered from uninformed school committees and half-informed teachers. The best teaching of today is to be found, not in the text-books or the schools, but in the leaflets issued and distributed by certain leading boards of health and life insurance companies. Surely this is a scholastic reproach which should not be allowed to stand.

In conclusion I desire to express my appreciation of the honor conferred upon me by the gift of the office which I hold. The American Public Health Association is today a splendid force in the land. Its *Journal*, under the able editorship of our devoted and faithful secretary, Professor Gunn, is worthy of the great and truly international body which it represents. It is your duty and mine to strengthen Professor Gunn's hands, to increase our membership and help on the good work which is being done. If the Association continues to grow in numbers and in influence along the broad paths already marked out, remaining always democratic rather than bureaucratic, it will be worthy of the great name—"American"—which it bears. Two of our component members, the Dominion of Canada and the Republic of Mexico, are bearing the heavy burdens of war—the one foreign, the other civil. Both have the liveliest sympathy of their confreres in this association. It may seem to some as if, under the shadow of a war characterized as never before by the destruction of life, efforts for its conservation through hygiene and sanitation must be of little moment. But it is not so. "After the clouds the sun": and we believe that after the present bloody conflicts are ended—and may that time quickly come—the races of mankind will turn, as never before, and with new longing, to the nobler pursuits of life, liberty, health and happiness. When that better day dawns the eternal principles underlying the conservation and promotion of normal life and health will once more move and quicken the nations as sunshine warms and quickens the earth after storm. Meantime, we must make ready for active and intelligent dealing with the thousand new and pressing problems which the present conflicts are certain to bring before us. And to this task we turn with cheerful courage.

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