The Early American Public Health Movement*

RICHARD H. SHRYOCK, PH.D.
Professor of History, Duke University, Durham, N. C.

THERE has been some tendency, in recent years, to refer to the early public health movement as having been largely "a matter of pipes" or a campaign against smells. The subject seems literally as well as figuratively a trifle malodorous; and there is an inclination to pass over it hurriedly in order to consider the superiority of the public hygiene of our own day. All this would have seemed startling to those early public health leaders who, nearly a century ago, felt that they had already undertaken the great health reform of modern times. There was, for example, Wilson Jewell of the Philadelphia Board of Health who, before anyone had heard of Pasteur and Koch, believed that the new health epoch had arrived. As early as 1851, he planned a national public health association, and in 1857 he led in the actual establishment of such an organization. "Happily for the cause of humanity and the science of public health," he then declared, this body "has inaugurated a new era in the domain of science." 1

Now one may well raise the question: By what process does a program once viewed as "a new era in the domain of science" descend in our memories to a mere "matter of pipes" or a campaign against smells? By a simple process of forgetting, perhaps—a natural result of the continuous pressure of present interests and present obligations. Yet this is neither good history nor, presumably, is it good for our souls. It is neither fair to the pioneer sanitarians nor to ourselves; for there is always the danger that indifference to the past will promote complacency in the present. It is therefore the purpose here to recall briefly the chief characteristics of the early American public health movement. "Lest we forget . . ."

The story relates chiefly to the three or four decades preceding 1870, although it has a background reaching far into the preceding centuries. The early industrial revolution along the American seaboard, as in Western Europe, made the problems of public health more striking and more obvious

---

* To be read at a Special Session of the American Public Health Association at the Sixty-sixth Annual Meeting in New York, N. Y., October 6, 1937.
than they had ever been before. The city concentrated disease and misery, as the poorest rural areas could never do. Wherever one turned in the growing manufacturing and mercantile towns, there was the same picture. The American of 1840 read with horror of Scottish tenements, where whole families crowded into single rooms, were provided with no running water, and paid their rent by selling their own dung heaps accumulated in the courts below. Yet at home, in New York City, more than half the population lived in similarly overcrowded tenements, and some 25,000 people occupied the damp and dismal cellars of these same buildings. In Cherry Street, to be specific, a five story tenement occupying only two ordinary building lots, housed 120 families, which included more than 500 individuals. I say merely "individuals" for under such circumstances one can hardly speak of them as "human beings." Similar conditions obtained in the slums of other American cities, and if it were desirable these could be described *ad nauseum.*

As might be expected, such circumstances made disease problems more acute as well as more obvious. The tragic history of the major endemic diseases, typhus, typhoid, and tuberculosis, is familiar enough. So far as can be judged from the imperfect bills of mortality, urban death rates rose ominously during the first half of the 19th century. New York City, which was most inundated by poor immigrants and which grew most rapidly, again affords a striking example. In 1810, the crude death rate had been reported as about 21 per 1,000; by 1837 it had risen to around 37—an increase of almost 80 per cent within 50 years. Rates were lower in Philadelphia, but higher in New Orleans. What an increasing mortality implied in morbidity rates, to say nothing of "sub-clinical illness," is obvious enough.

Such conditions and such consequences cried to high heaven for reform. In both Europe and America, a few socially minded physicians had long demanded improvements, but for some time they were unheeded. The public was apathetic: and under the growing spell of a *laissez faire* philosophy, the upper classes were inclined to let the poor shift for themselves. The latter died by the thousands of unnecessary endemic diseases; and as long as their sufferings were not too obvious or did not threaten to spread to the better parts of towns, who cared?

What was evidently needed, in order to arouse the public conscience, was an epidemic which would dramatize disease and which would also threaten to spread it uptown. Tuberculosis, which was becoming the great plague of the age, was of little service here, since it killed slowly, and the fear it aroused was in no way proportionate to its fatality. Smallpox was more promising, and likewise yellow fever; but the disease which best filled all the specifications was cholera. It struck at both town and country in the most mysterious, sudden, and fatal manner. The upper classes were not entirely spared, nor could they always escape observing the sudden collapse of the less fortunate. After this disease had passed, there was usually a demand for action.

A single illustration will suffice to show why this was so. When cholera visited Bishop Polk's Louisiana plantation in 1849, there were 350 negroes there—shall we say "in residence"? Within 2 weeks, 220 contracted the disease, and no less than 70 died on this one place. The conditions obtaining during such a "visitation" can scarcely be imagined, but it is a safe assumption that the Bishop felt that something should be done about it.

What could be done was none too clear. The disease moved like a con-
tagion, but it struck hardest in slum areas or among the cabins of the poor. Those who maintained the 17th century emphasis upon contagion, demanded quarantine against cholera; but this signally failed to check its spread. On the other hand, the connection between the disease and bad living conditions was too obvious to be overlooked. Hence the experience with cholera weakened the hold of the contagion-quarantine doctrine and encouraged the revival of the classical thesis concerning airs, waters, and sanitary control. Those who feared cholera or other epidemic diseases, now combined with humanitarians to demand investigations and clean-ups on a scale never demanded before. In these circumstances is to be found the genesis of the modern public health movement.  

The first stage in this movement was one of extensive investigation. Individual physicians had already shown the way here; notably in the case of Villermés' studies of 1828, in which he had shown that disease was to a considerable extent a function of living conditions throughout France. Similar observations were made during the 40's by Arnot and Kay in London, by Griscom in New York City, and by Virchow in Silesia. Meanwhile, Chadwick carried out his famous national survey for the Poor Law Board in England.

Since there were no national or state medical offices in the United States, surveys here could be carried out only by towns or by private organizations. The National Institute in Washington called for a wide investigation, but could secure no help from governmental authorities. It then turned to the American Medical Association, when that body was formed in 1847, and persuaded it to report on the sanitary conditions of large American cities. In consequence of its findings, the American Medical Association recommended to state and local medical societies the two procedures which seemed indicated under the circumstances: (1) that the registration of vital statistics, hitherto restricted to large towns, be undertaken by all the states in order that a clear picture of disease trends could be obtained; and (2) that sanitary reform should be pushed at once in urban and even in rural areas. State medical societies thereupon began appealing to their respective legislatures for registration laws. The American Statistical Association, founded at Boston in 1839 in response to the development of that branch of mathematics, also supported this drive. Unfortunately, the extreme individualism and often the plain ignorance of democratic assemblies blocked such efforts in most American states—just at a time when progress was being made abroad. In Georgia, for instance, the legislature "fairly hooted" when a registration bill was introduced in 1849, and the whole matter was viewed as just another "trick of the doctors." Yet Massachusetts did provide for state registration in 1843, and thus set an example which could thereafter be used in other states. Incidentally, as is well known, it thus provided for the longest mortality record of state population now available in this country.

The second part of the program urged by the American Medical Association; namely, actual sanitary reform, also made some progress during the decades before the Civil War. The early fear of yellow fever and of malaria had prompted some action in seaboard towns, even before the cholera emphasized this need. When yellow fever had devastated Philadelphia in the epidemics of 1793 and ensuing years, for example, the physicians who ascribed it to local filth persuaded the city to establish a permanent board of health. They also persuaded the town
to clean up its streets, and to build one of the first free public water systems in the country. It should be noted that while Dr. Benjamin Rush and the others who insisted on the local origins of disease were partially wrong, their mistaken theories nevertheless had value in promoting urban improvements. It is also interesting to observe that, perhaps as a result of these developments, Philadelphia maintained a relatively low death rate and became known as "First in the cause of sanitary reform."  

Other cities followed this lead, between 1800 and 1850, in establishing boards of health. These boards were, to be sure, largely of an advisory nature and had no permanent health officers save for quarantine officials; but they provided the beginnings of a permanent organization which was expanded later when the need was finally recognized. For the time being, their most common functions were to advise during emergencies, and to inspect premises for nuisances. There was little state law on medical police save with relation to licensing and quarantines, but city ordinances were passed in the tradition of the English common law on nuisances.

Occasionally these boards were able to secure substantial sanitary improvements, which in turn were apparently successful in decreasing morbidity and mortality rates. A notable example is afforded in the case of Savannah. Here the death rate from "autumnal fevers"—chiefly malaria—was reported, early in the century, at the amazing average of 70 per 1,000. Assuming the airs and waters etiology, which for obvious reasons proved quite effective in this case, the city eliminated all wet culture of rice in the vicinity in 1818. The autumnal mortality thereupon fell to an average of 26 for the next 6 years, and declined even more during the ensuing period.

This, to be sure, was an exceptional case. Most American towns were still lagging in sanitary improvements during the 50's, and it is rather startling to recall that places as large as Providence and Milwaukee then had no public water systems. Faced by such inertia, and absorbed in difficult technical and professional problems, the American Medical Association apparently lost its first enthusiasm for sanitary reform. There seemed, in consequence, to be a need for some other organization to take up the leadership in health reform on a national scale. If the majority of physicians could not be interested in public hygiene, moreover, perhaps conscientious laymen could combine with socially minded doctors to set up a national health organization.

The answer to this need was found in the interesting national sanitary conventions that met from 1857 to 1860, and which began to function as the first association in America definitely devoted to the study of public health. Wilson Jewell, who was mentioned above, saw in the meeting of an international quarantine conference in Paris a suggestion for an analogous interstate meeting in this country. State quarantine regulations varied as much as did those of different nations, and merchants as well as medical men regretted the confusion involved. Jewell called the first meeting at Philadelphia in 1857, and municipal officials and doctors from the chief Atlantic and Gulf ports responded. Subsequent sessions were held in Baltimore, New York City, and Boston.

Although the conventions had ostensibly met to consider quarantine regulations, it was immediately apparent that the members were more concerned with "internal hygiene" (sanitation) than with the "external" form (quarantine). The advocates of the latter
procedure were on the defensive from the start. Contagion was never entirely denied, notably in the case of smallpox, but the majority felt that the medieval doctrine had been greatly overdone—to the serious discomfort of both passenger and mercantile interests. Dr. Arnold, the mayor of Savannah and a delegate to the fourth convention, ridiculed the few contagionists, by recalling an occasion when his “excellent old aunt had been quarantined at New York because she had the gout.” He concluded by thanking God that the conventions had “swept away one of the last relics of barbarism—the infernal restrictions of quarantine.”

The last stand of the contagionists was attempted during the discussions over yellow fever. Since physicians lacked as yet most laboratory technics, the empirical evidence on the causes and carriage of this disease was most confusing. Dramatic indeed were the yellow fever debates at the New York meeting, which subsequently filled more than 100 pages of the proceedings. Dr. Francis of New York, a gentleman of the old school, held to the early view that he had inherited from Dr. Hosack at the beginning of the century; namely, that “a contagious principle lurks in the fever now under discussion,” but the younger men overwhelmed him with evidence that it was never transmitted by contact—it was never a “man to man” affair. We can now see that both interpretations were right, and both wrong—a possibility that never seems to have occurred to either side in the controversy.

Having silenced the contagionists, the sanitarians next laid down their own program. This was somewhat broader than is now usually recalled, as it included not only model laws providing for state and local health boards, sanitary regulations, and modified quarantine laws, but also provided for experimental studies of sewage, ventilation, and disinfectants, and for the passage of pure food and drug laws. In a word, the delegates were concerned with research as well as with improved administration, and were as anxious to encourage the one as the other.

Last but not least, the members of the conventions were alive to the need of educating the public, although this is now often viewed as a “recent” function of health administration. To this end, they encouraged the formation of “sanitary associations” in large cities, similar to the “health of towns” societies in Great Britain. An apparently flourishing association of this sort, set up in New York City before 1860, was active in the drive which finally led to the reform of health administration in the metropolis.

In this connection, also, it should be recalled that the sanitarians were teaching the public a naturalistic as opposed to a theological or superstitious etiology. The concept of filth as a cause of disease was a bit vague, but it was actually more tangible than even the bacteria about which the public is now so generally informed. No wonder that sanitarians scoffed at superstitious fears, and that for prophylaxis they recommended clean-ups rather than fasts.

The efforts of the convention leaders to establish their association permanently seem rather pathetic, in view of the aftermath. Jewell wrote, in 1859, that he viewed the conventions as a permanent institution “destined to revolutionize the public mind and will.” The Boston meeting of June 1, 1860, heard a discussion of plans for permanent organization, and appointed a committee to submit such plans at Cincinnati in 1861. Enthusiasm was growing, and all looked forward to rapid progress in the immediate future.
It was true that sectional tension along the Mason and Dixon line was increasing, but medical leaders ignored the political hubbub in Baltimore and points South. Arnold, of Savannah, presided at the last sessions, and when he concluded with gracious praise of Boston hospitality, his New England hearers gave three cheers for Georgia! That was about the last time that Arnold saw any Northerners, until he surrendered his city to Sherman's army one December day 4 years later. Such contrasts almost make one wish that the country had been governed by the doctors rather than by the politicians.

The outbreak of the Civil War in April, 1861, preceded the proposed Cincinnati meeting, and so the first national association came to an untimely end. Space does not permit a discussion of the diversion of public health endeavors into military channels; although this story is in itself an interesting one. Broadly construed, it includes such phases as the expansion of the Federal and the Confederate Medical Corps, the establishment by Dorothea Dix of the first trained nursing service in the United States base hospitals, and, most important, the development of the U. S. Sanitary Commission. That the war presented problems of public health on a peculiar scale will be obvious, when it is recalled that during the first year, five-sixths of the deaths in the Union armies were due to illness having no connection with the battlefields.

The war also wrote other chapters in the history of disease and public hygiene which can be only mentioned here. There was the destruction of Southern economy and the consequent surging of ignorant rural negroes into towns, where they gave up the crude health insurance provided by the slave system and in exchange received freedom and complete neglect. Thereafter, they indulged unhindered in life, liberty, and the pursuit of the venereal diseases. Negro mortality rates rose rapidly above the white, after 1864; and it is hardly exaggeration to say that only within the most recent years have some of the resultant problems been seriously attacked by the American Government.

Incidentally, the war did some good—in spite of itself, one is tempted to say. Army medicine is state medicine by definition, and numbers of promising young men like John S. Billings and S. W. Abbott attained their early interest in public hygiene as a result of army experience. Older leaders also carried on in the same field; and after the war, picked up their sanitary reform program where they had dropped it in 1860. This was easier to do in the victorious North than it was in the devastated South. In 1869, Massachusetts finally provided for the State Board of Health which Shattuck had so well planned some 20 years before. And within 3 more years, a renewed call for a national body resulted in the formation of the present American Public Health Association. 

The somewhat jerky continuity of this story is illustrated by the fact that Dr. Elisha Harris of New York was one of the leaders in the early Sanitary Conventions, then served as an important member of the U. S. Sanitary Commission, and finally became the Secretary of the new American Public Health Association in 1872. Another illustration will be found in the case of Dr. Arnold, the presiding officer of the Boston convention already mentioned. During the war, he was in charge of a Confederate base hospital at Savannah; and then, in 1872, he accepted enthusiastically the invitation to join the revived public health association. As Arnold had also served as the first secretary of the American Medical Association, it is interesting to find him declaring—in
these later years—that he had long considered that organization a failure. He now pinned his hopes rather on the American Public Health Association.25

It is doubtful if many of those who organized this Association in 1872 could have had any realization of the great changes in public hygiene which lay just ahead of them. To their minds, they were picking up an old but promising movement for sanitary reform.20 Now, however, as we look back upon them, the founders of the Association seem to have been inaugurating the new era that was ushered in by the bacteriological revolution.

That this revolution profoundly changed the nature of public hygiene is obvious to all. How effectively this was done is well recorded in the essays published by this Association in 1921.27 Public hygiene entered a new and far more promising era in 1872. But for this very reason, the present generation can afford to be generous in recalling the labors and achievements of those ante bellum leaders who now appear to us as pioneers.

FOOTNOTES


8. Trans., A.M.A., I:305-310, 1848; IV, 517 ff., etc., 1851.
19. Proc., Fourth Nat. Quar. & Sanitary Convention, pp. 8, 13, 155. I am indebted to Dean Stanhope Bayne-Jones, of Yale University, for the proper emphasis upon the influences making for a naturalistic view of disease causation. In the paragraph above, however, I have projected his interpretation of the work of bacteriologists into the earlier efforts of the sanitarians as well.
24. See, e.g., Duncan, W., Tabulated Mortality Record of the City of Savannah (Savannah, 1870), p. 36.