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# Recalling the Medical Officer of Health

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**Recalling the Medical Officer of Health, Writings by Sidney Chave (1987).** Edited by Michael Warren and Huw Francis. London, King Edward's Hospital Fund for London (ISBN 0-19-724643-5)

It may be a cliché, but Sidney Chave actually was a legend in his own lifetime. He was a man who could really make the history of public health come alive and inspire people at the outset of their careers.

I can clearly remember his introductory lectures to our class (studying for the Master's degree at the London School of Hygiene and Tropical Medicine) and feeling that I had come home, home to the social history that I had had to abandon when I chose the science path in the anachronistic British sixth form system.

It was in reconciling the dichotomy between the two cultures of humanities and science that Sidney was such a master. He himself began his working life as a laboratory boy in the Department of Chemistry at the London School of Hygiene, later becoming chief technician before taking an honours degree in psychology and carrying out research into the mental health of people living in Harlow New Town for his doctorate. His interests and expertise eventually spanned the amazing range from water supplies, the disposal of sewage and his love for public health history to lifestyles, behaviour and health education, ornithology, numismatology and heraldry. If anyone was a modern-day Renaissance person, it was he. What was more, he had a genuine and continued affectionate interest in his students, which stretched around the globe and through the decades.

Years after that first experience, at a planning group meeting for the World Health Organization Healthy Cities project, I was reminded of the centrality of a catholic approach to the new public health when Len Duhl pointed out that all the planning group members had at some time changed disciplines, and therefore had no immutable commitment to any single way of looking at the world.

Sadly, the book that Sidney was writing at the time of his death was not completed, but Michael Warren and Huw Francis have performed a very important task in bringing together Sidney's writings in this volume. They include many important insights that can inform our work as we move into a new era of public health. In reviewing the book I have tried to indicate the lessons that Sidney was so perceptive in identifying.

## THE FIRST MEDICAL OFFICER OF HEALTH

Duncan was the first Medical Officer of Health, and, in appointing him in 1847 under the terms of a special local act of Parliament, Liverpool Town Council took advantage of the case made out in Chadwick's 1842 *Report on the sanitary condition of the labouring population of Great Britain* (Flinn, 1964):

> That for the general means necessary to prevent disease it would be good economy to appoint a district medical officer, independent of private practice, with the securities of special qualifications and responsibilities to initiate sanitary measures and reclaim the execution of the Law.

"Why Liverpool? Why Duncan? Why indeed?" I can hear Sidney saying these words as if it were yesterday. In the first Duncan Memorial Lecture, he went on to recount how Duncan alone of his general practitioner peers in the Liverpool area—now notorious for the riots of 1981—became concerned about the squalid housing and environmental conditions of his patients at the Parliament Street Dispensary. Duncan was moved to survey the local environment and housing. Owing to his findings and subsequent activities, he was the natural person to appoint as Medical Officer of Health at a particularly bleak time in Liverpool's history: when, as gateway to the British Empire, it attracted the teeming hordes of displaced peasants from all over the north of England, Ireland and beyond. In 1840 Duncan appeared before the House of Commons Select Committee on the Health of Towns on its visit to Liverpool. Chave reported that he gave evidence on what he called "the bad pre-eminence of the worst population density in the land". Duncan reported that one third of the working class lived in Liverpool's typically narrow and airless courts and one eighth lived in underground cellars. The public lodging houses, of which there were hundreds, were packed to the doors, often with 30 people living in a cellar. Only 4 of the 20 miles of streets in the working-class areas had sewers. No wonder, he said, fevers were rampant.

Seven lessons for the new public health can be learned from Sidney Chave's account of the life of Duncan.

### An independent voice

When Duncan was appointed Medical Officer of Health to Liverpool Town Council at the age of 42, his salary was fixed at £300 a year with the right to continue with his private practice. This arrangement was incompatible with his official duties, however, and he would have found himself in an invidious position if he had had to take action against a landlord who was one of his patients. The contract actually went against Chadwick's recommendations, which argued against part-time appointments, and it was changed the following year to £750 per annum for a full-time post. The principle of independence was therefore established almost from the beginning.

### Appropriate research

Duncan's approach to medical information was very much what would nowadays be called appropriate research. He used the data he found to argue his case. Having carried out an analysis, he produced a pamphlet, which was extensively distributed. For example, he showed that the average age of death in the County of Wiltshire was 36.5 years, while in Liverpool it was only 19 years; that the annual death rate in Liverpool was 1 in 28 people, while in Birmingham the rate was 1 in 37. He knew nothing of standardization techniques for handling his data, but the figures he produced had a face validity that also made sense to the public. At the end of 1848 (the year in which Liverpool's population of 120 000 was totally swamped by 300 000 Irish refugees from the potato famine), he estimated that nearly 60 000 people had suffered from fever while a further 40 000 had contracted either diarrhoea or dysentery. He monitored the health of the population and produced statistics with political punch.

### Production of reports

When cholera arrived in Liverpool for the first time, in 1832, Duncan was struck by how much greater were the casualties of the epidemic among the poor and overcrowded than among the better off and better housed. He wrote a paper on the subject for his local journal, the *Liverpool medical gazette*. Later he marshalled a body of evidence concerning the unhealthiness of Liverpool, which he used to prepare two lectures called *The physical causes of the high rate of mortality in Liverpool*. The lectures were then published as a pamphlet that enjoyed wide circulation. His evidence to the Chadwick inquiry was influential in shaping its findings.

### Populism

Duncan did not talk only to his medical peers. His lectures were delivered not primarily to the Medical Society but to the Literary and Philosophical Society, and he made the facts he gleaned widely available. They were extensively reported around the town and created considerable interest.

### Advocacy

Chave reported that:

> The relationships between Duncan and his authorities were not always easy and, at times, he must have been glad of the measure of independence attaching to his post. The select vestry proved to be particularly difficult

. . . It was the select vestry, and not the borough council, which was responsible for the provision of hospital accommodation for the poor, as well as for the relief of destitution. The vestry continually resented being called upon to spend money to expand hospital provision by Duncan, who, as MOH, was not directly responsible to them.

The basic premise upon which Duncan worked was the sanitary idea, as proposed by Chadwick, which was to infuse the public health movement for the next 50 years: namely, that a drainage system backed up by a supply of running water to flush away the filth and disease—causing odours deriving from it, were prerequisites for public health. The logic of this led Duncan into advocacy. He was always writing letters to the Board of Health in London demanding action and generally being what has come to be called a troublemaker for health. In turn, he was able to influence health policy by his activism.

### Resourcefulness and pragmatism

Chave reported that, in 1851, Duncan replied to an inquiry about his staff, perhaps with a wry touch of humour: "The following list comprises the whole of the officer in my department paid by the Corporation—William Henry Duncan, MD, Medical Officer of Health.". His lack of resources did not prevent him from making a major contribution to public health in Liverpool, and he paid out of his own pocket for office assistance. In fact he worked very closely with the sanitary inspector, Mr Fresh, and between them they had a profound impact. The annual mortality rate in the city fell from 36 per 1000 in 1846 to 28 per 1000 in 1860 while the average age at death rose from 19 to 25.5 years in the same period. When Duncan began work in 1846, there were no precedents, no colleagues and no textbooks; he found out what to do as he went along. He had to be pragmatic.

### Legitimacy of working locally

According to Sidney Chave, Duncan was the local lad who made good: "But he made much good, for Liverpool was a much better place for its people to live in as a result of his 16 years of unremitting toil.". In contrast, he was overshadowed by his more famous contemporary John Simon, who moved from the local to the national stage.

People have become increasingly aware of the need to think globally but to act locally. Duncan seems to have recognized that the collective effect of local action becomes global. Five years after Duncan's death, Alexander Stewart carried out a sanitary survey of English towns and found that many large towns, including Manchester, Birmingham and Sheffield, had still to appoint a Medical Officer of Health. But when he came to Liverpool, Chave pointed out, he wrote: "There, the Officer of Health is not only a reality; he is a power in the Commonwealth.".

## MEN WHO DID HONOUR TO THEIR PROFESSION

The development of a public health movement in London was impeded by what would now be called a lack of coterminosity. Areas with different administrative functions did not coincide. Because of the complexity of the situation and the powerful vested interests involved, London had been excluded from the 1835 act establishing local government and the situation remained chaotic. There were over 300 local administrative bodies, including 172 vestries and boards of guardians, more than 100 paving, lighting and cleansing boards, and seven commissions for sewage: a warning, as decentralization becomes fashionable, not to forget the balance that needs to be struck between planning and strategy.

In 1855, however, a government bill was passed, dividing London into 46 districts, each of which elected by popular vote a vestry or district board that became the sole sanitary authority and was required to appoint a Medical Officer of Health to advise on the maintenance of health and the prevention of disease. When the bill went through Parliament, only one Member was on record as taking exception to the idea, on the grounds that: "manufacturers and others would be at the mercy of medical men—perhaps even troublesome ones".

In due course, all 46 districts appointed at least one Medical Officer of Health, usually on salaries much lower than Duncan's had been more than ten years previously. Sidney Chave concluded that these pioneers, who were described as men who did honour to their profession, shared some important characteristics and provided lessons for public health.

### Humanitarian motives and a strong moral tone

It is unlikely that the first medical officers of health entered their fields out of a desire to make

money. Some may have desired personal prestige, which was certainly won by a number of men who became prominent in public esteem as a result of their work. Others may have been attracted by the possibilities for academic research. All of them, however, seem to have shared a desire to alleviate the wretched conditions in which so many of the poor lived and died. Their references to poverty indicated that humanitarian feeling was a strong influence.

Although he might become famous, the Medical Officer of Health was never likely to become popular, because his work, if properly carried out, brought him into constant conflict with the interests of influential people.

The moral dimension and consequences of public health issues are underlined in the report of a Medical Officer of Health quoted by Huw Francis:

> Common humanity requires that the other aspect of this evil [overcrowding] should not be ignored. For where overcrowding exists in its sanitory sense, almost always it exists even more perniciously in certain moral senses. In its higher degree it almost necessarily involves such negation of all delicacy, such unclean confusion of bodies and bodily functions, such mutual exposure of animal and sexual nakedness, as is rather bestial than human. To be subject to these influences is a degradation which must become deeper and deeper for those on whom it continues to work. To children who are born under its curse it must often be a baptism into infamy.

### Cost-effectiveness of prevention

The Victorians clearly came to recognize the prudence of public health from the narrow standpoint of the financial consequences of not doing so. On this, Sidney Chave quotes Dr Liddle, the Medical Officer of Health for Whitechapel, who wrote:

> It cannot be too often impressed upon our minds that sickness among the poor is the great cause of pressure upon the rates . . . In the course of time the public will learn that sickness with its concomitant evils—loss of wages, calls upon clubs and friendly societies, the increased amount of charitable contributions, a heavier poor rate—entails more expense upon the community than would be required to carry out sanitory improvements in widening streets and in erecting more commodious houses for the poor.

This point of view was supported by Dr Barnes, the Medical Officer of Health for Shoreditch, who wrote in 1856 that: "To communities as well as individuals there is nothing so expensive, so fatal to prosperity as sickness. To a productive and labouring community, health is the chief estate.".

### Need for organization

The need for an organization to coordinate the views, aspirations and activities of public health practitioners was recognized early. In 1845, Duncan collaborated with the mayor of Liverpool to form a Health of Towns Association, and in 1856 the London medical officers of health formed themselves into an association "for the purpose of mutual assistance and the advancement of sanitory science". This association established four standing committees to address the major public health problems of the day:

- trade nuisances in relation to health and the means of obviating them;
- food adulteration;
- the causes of diseases—epidemic, endemic and contagious; and
- meteorology.

The association appears to have trodden a careful path through party political matters, and the material and career interests of members appear to have taken second place to the needs of public health.

## CHOLERA IN BROAD STREET

The story of John Snow and the Broad Street pump is part of the folklore of public health. Perhaps less well known are the parts played by Henry Whitehead, the curate of St Luke's Church in Berwick Street; a doctor from King's College Hospital; and a chemist from the local college of chemistry, along with that of Sidney Chave in tracking down the death certificate of the widow of Hampstead and persuading a local brewery to create the world's first public health theme public house in Broadwick Street. Chave's two 1958 papers on the topic contain at least five lessons for the new public health, as well as reinforcing several already mentioned.

### Shoe-leather epidemiology and social inquiry

Both John Snow and the Reverend Henry Whitehead took part in house-to-house investigations as part of the process of clarifying the nature and causes of the cholera epidemic in Soho. In doing so, Snow identified the exception that proved the

rule: the death from cholera of the widow of Hampstead. Whitehead discovered the probable cause of the initial contamination of the well from which the pump drew its water.

The widow turned out to be the relict of the owner of Eley's percussion cap factory in Broad Street, who was so fond of the sweet-tasting water from the Broad Street pump that she regularly had supplies brought to her. The reason for the taste was identified by Dr W. Allen Miller of King's College Hospital and Professor E. Frankland of the Royal College of Chemistry, who concluded that the water was so contaminated with organic matter as to be a danger to the whole area.

Whitehead, who carried out a painstaking field study of the cases of cholera in the 1854 epidemic, was forced to accept the waterborne nature of the epidemic against his better judgement, having until that time subscribed to the miasma theory. He discovered that a baby living at 40 Broad Street, the nearest house to the pump, had died from diarrhoea immediately before the outbreak of the epidemic, and that its faeces had been disposed of in a cesspool a mere three feet from the well. It was later shown that seepage had probably occurred.

The site of the well is now marked by the John Snow pub, which contains a history of these events and was the venue for the launching of this journal. The pub also inspired emulation, in the shape of Doctor Duncan's, in Seel Street, Liverpool.

### Need for persistence

Advocacy needs to be accompanied by the kind of persistence exemplified by John Snow. The notion that cholera was transmitted by a contaminated water supply was rejected by the General Board of Health in 1854. The pump itself was reopened after an interval, and was not finally closed until the 1866 cholera epidemic. The Board of Guardians of the Parish resisted the setting up of an inquiry into the 1854 epidemic for reasons of expense. It was only the persistence of Snow and the local advocates for public health that led to an investigation being carried out.

### Riding the wave of an epidemic

It is now clear that the cholera epidemic in Broad Street had already peaked some days before the handle was removed from the pump. This seems to hold a lesson with wide implications: work with a movement already underway is likely to result in a large return on effort and increased credibility for public health action.

### Need to focus on positive health

In his investigation, Whitehead did not restrict his attention to the households with cholera cases. He also took a special interest in those that escaped the disease altogether—islands of health in a sea of disease. He discovered that these accommodated considerably fewer than the average number of residents in the houses in the street, and were "the best regulated in respect of their water systems and therefore there was less need for the inmates to resort elsewhere for their water". Moreover, there were fewer children in these houses and therefore nobody to go to the pump for water for the elderly and infirm.

### Multidisciplinary approach and healthy public policy

Contrary to the myth, other people besides Snow were involved in the investigation and response to the epidemic. Indeed, much of the epidemiology was carried out by Whitehead, the curate. This would nowadays be seen as an example of intersectoral collaboration, leading eventually to the adoption of a healthy public policy: the removal of the handle from the pump and the carrying out of remedial work.

## A THOUSAND NEW MEN

Although the Chadwick report in 1842 paved the way for Duncan's appointment in Liverpool in 1847 and the appointment of medical officers of health in London after 1855, it was not until the Royal Sanitory Commission of 1870 and the subsequent Public Health Acts of 1872 and 1875 that it became a statutory responsibility for districts to appoint a Medical Officer of Health, resulting in over 1000 appointees.

In the course of this development a number of further essential issues were clarified and resolved.

### Public health the responsibility of a democratically accountable body

The question was whether the medical officers of the poor law boards should become the medical officers of health for their districts or whether the appointed person should be employed by the

locally elected district council. According to Chave:

> the chief object of the guardians was to deter people from seeking medical relief until driven to do so by serious illness or destitution. By contrast the Medical Officer of Health was engaged exclusively in prevention through measures of environmental sanitation and the control of infectious diseases in which his clinical skills were limited to diagnosis.

The issue at that time was resolved in favour of local authorities, and in the United Kingdom this situation endured until 1974, when the local government and health service reorganization resulted in the medical aspects of prevention and health education being moved from the local authorities to the health authorities. This left the statutory responsibilities in respect of infectious disease and noninfectious environmental health with local authorities. Under the proposals of the recent Acheson Committee report (*Public health in England*, 1988) the responsibilities for infectious disease would now also pass to the health authorities—the descendants of the poor law boards.

### Importance of an annual report

Simon began the practice of making an annual report in 1856, and this became common practice for public health officers throughout the country until 1974. It seems likely to be revived in the United Kingdom if the Acheson recommendations are implemented.

### Need for special skills and qualifications

By the 1870s the medical faculties had come to regard sanitary science as beyond the scope of the ordinary undergraduate curriculum; specialist courses of instruction were developed, beginning with that at Trinity College Dublin in 1871 for the Diploma in State Medicine.

### Need for full-time independent posts

The need for independent posts took some time to resolve, considering that Duncan's had been made full-time in 1848. Chave writes:

> At the outset the majority of medical officers of health were general practitioners who took on the local appointment for what was little more than a peppercorn fee . . . However, before long a new generation . . . arose who had taken their sanitory diplomas soon after qualifying . . . [and] the trend was towards a major and, later, full-time engagement in public health.

The question of security of tenure was also important. Given the often controversial nature of the work, some method of protecting medical officers of health was crucial to securing the services of good people. In Chave's words:

> Although any Medical Officer of Health appointed with the concurrence of the [Local Government] Board could not be dismissed without the Board's agreement, the Board never failed to consent to such a request from a local authority.

Such a course of action appears to have been not uncommon until ministerial protection against arbitrary dismissal was obtained in 1922. This lasted until the reorganization in 1974.

According to Chave, it was in fact:

> an uphill struggle before the Medical Officer of Health emerged as a Medical Officer in the local government service, holding a statutorily recognized qualification (1926), occupying a full-time post (1929) and secure from arbitrary dismissal . . . And only then was the prescription written long before by Chadwick finally fulfilled.

## RISE, FALL AND RESURGENCE

There is argument about what constituted the heyday of public health. Certainly the task changed as the more extreme problems of the great towns were brought under control, and, in succession, personal preventive measures and then personal treatment services were developed on a general basis, culminating in the creation of the welfare state and the National Health Service (NHS) after the Second World War.

Chave says that the Medical Officer of Health was "conceived by Chadwick, born in Liverpool and grew up and served his apprenticeship in London". In Huw Francis' view, "the years between 1945 and 1974 were the true 'golden age' of English Public Health, because the achievements in both the environmental and personal health services were considerable and general". What seems to be generally agreed is that, since the 1970s, there has been a crisis of confidence in public health practice in the United Kingdom. Paradoxically, it has coincided with a renaissance of interest in public health on a much wider scale.

Huw Francis states that:

> the status of public health declined in the medical profession, since public health doctors had been

switched to a branch line separated from the main lines of professional advancement through the NHS. It has to be asked if the elected local authorities which the Medical Officer of Health served would have served the hospitals better than the centralized control imposed in 1948 . . . It is however possible that the hospital service would have done at least as well under local government control, and in some respects better.

More generally, Francis points to the growth of professionalism as fragmenting and weakening the public health response, a shift of philosophy towards managerial concerns and the various reforms of administration within the NHS and local government as causes of the crisis. He also stresses the extent to which public health has become narrowly equated with epidemiology and the broader historic contributions of public health practitioners to policy and practice have been downgraded. In Francis's view, the breadth and richness of classical public health can be found in Sir John Simon's reflections in 1890 on his annual reports as Medical Officer of Health of the City of London from 1849 onward:

> After a lapse of so many years . . . I rejoice to remember that even in those years, I did my best to make clear to the commission, what sufferings and degradation were incurred by masses of the labouring population through the conditions under which they were so generally housed in the courts and alleys they inhabited: not only how unwholesome were those conditions, but how shamefully inconsistent with reasonable standards of civilization; and how vain it must be to expect good social fruit from human life running its course under such conditions.
>
> In referring to some of the existing evils, I of course found myself face to face with immensely difficult social questions which I could not pretend to discuss, questions as to wages and poverty and pauperism; in relation to which I could only observe as of medical common-sense, that, if given wages will not purchase such food and such lodgement as are necessary for health, the rate-payers who bury the labourer when starvation-disease or filth-disease has laid him low, are in effect paying the too-late arrears of wage which might have hindered the suffering and sorrow.

Despite the frustration and disillusionment in the recent past, there is a resurgent public health movement in the United Kingdom and elsewhere. The challenges now are different and to some extent unpredictable. AIDS has concentrated minds everywhere on the need for eternal vigilance against infectious disease. Humanity faces environmental problems on a huge scale and the careless way in which the planet is treated may well turn out to be the most important threat to public health in the years ahead, dwarfing the apparent primacy of poverty, heart disease and accidents. The Victorian's interest in meteorology begins to seem prescient.

In this context, the 87 years between Chadwick's report and the filling of his prescription in the United Kingdom appears far too long. Sidney Chave's legacy, made available by the able and timely assistance of Michael Warren and Huw Francis, may help people, for once, to learn the lessons of the past in time to take control of their future. This book should, like Duncan's pamphlet, be very widely available.

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