Commentary: The discovery of hidden morbidity

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Over the past few decades there have been increasing links between primary care and public health. Indeed, many of the activities conducted within general practice—prevention, screening, risk management, etc—can be seen as part of the public health function. But it was not always so. There was a time, certainly in the first half of the 20th century, when general practitioners (GPs) could recognize their ‘communities’, particularly as they usually lived and worked within them, as contexts for their work, but they could not see them as ‘populations’, as a denominator for all their clinical activity. After the 1911 National Health Insurance Act, GPs came increasingly to rely on a registered list of patients for their capitation payments but even these ready-made populations were not seen as clinically relevant. Each consultation was an individual encounter, not viewed within the context of the population the GP served, nor indeed in terms of continuity of care as the brief or non-existent clinical records from the inter-war period indicate. This all changed in the second half of the 20th century, but there was an inter-war experiment with a distinctive population focus that, in retrospect, can be seen to herald these later developments.

In the 1920s an experimental health centre was established in Peckham in south London by a group of scientists interested in the distribution of biological traits within the local population. Patients were recruited to the Pioneer Health Centre where they could enjoy a number of social activities while being observed and studied by the scientists. All registered patients underwent a series of examinations and observations, both clinical and social, that were carefully recorded. One of the key findings was that, according to their criteria, only 8% of registered patients were truly healthy and 92% had some sort of abnormality. Although the Peckham Experiment lasted barely two decades it introduced a number of perspectives that would come to dominate post-war primary care. First, the Peckham Experiment used a denominator of its registered patients to provide statistics of illness. Second, in finding abnormalities in such a high proportion of its registered population, it also fore-shadowed the later identification of risk factors which found everyone to exist in a precarious state between health and disease.

After the creation of the NHS in 1948, general practice services (and capitation) were extended to cover...
all the population. The registered patients of each GP (and 90% were in solo practice) became both the major source of income and the major source of work. In the 1950s, GPs began to take an interest in the patterning of illness arriving in their surgeries and frequently used the ready-made denominator of the practice population. Indeed, the new College of General Practitioners tried to replicate the classification patterns of the ICD by conducting surveys in general practice to identify disease prevalence from consultation patterns with a denominator of registered patients.2

Consultations were then reframed: not as incidental or episodic events but as relating to illnesses emerging from a registered population. So why then did some illnesses emerge whereas others did not? Why did some patients decide to consult whereas others did not? Indeed, one contemporary study that interviewed families registered with a practice noted surprise at the discovery that not all illness was taken to the doctor.3 By 1962 therefore, when Last published his paper on the clinical iceberg in general practice,4 he was simply assembling the jigsaw pieces that had been formed during the previous decade. In the paper he acknowledged the support and encouragement of the epidemiologist, Jerry Morris, at the MRC Social Medicine Research Unit where he conducted his study, and it was largely epidemiological methods and perspectives that underpinned his analysis. Using a simple modelling technique, Last took data from other studies to predict the likely prevalence of conditions in a typical general practice population. And of course he found a considerable excess of undetected disease, particularly chronic, as was likely to exist in the typical GPs registered list. Nevertheless, the description of an iceberg of hidden morbidity in the community was a graphic way of linking the idea of a population perspective with the knowledge that many patients chose not to visit their GP for both symptomless and symptomatic illness.

It would be easy to ascribe the identification of a submerged iceberg of illness to the emergence of the NHS and its ready-made denominator of registered patients, but similar developments were underway in the USA. Even without clear community denominators, social scientists began exploring why some patients and not others chose to use health services.5–7 And it was from the USA that an important underpinning construct for the clinical iceberg first emerged a year or so before Last’s paper. An early publication from the Framingham Cohort study, established just after the war, reported in 1961 the aetiological significance of certain ‘factors of risk’.8 Last too identified risk factors in his iceberg and, as later explorations were to show, formed a crucial underpinning for the size of the hidden bulk of morbidity.

Although, within the context of research in the 1950s, Last’s 1962 study is not that original it is, perhaps, the metaphor of the iceberg that has given the paper such longevity. Of course, the prevalence rates of different conditions have changed over time—Last himself recognized that diseases such as diphtheria and rheumatic fever were already getting rare in the 1960s—but the idea that there is more disease undetected in the community compared with that under medical care has informed much subsequent analysis of disease patterns and the impact of health services.

As well as identifying the large amount of ‘hidden’ morbidity in general practice populations, Last also, through his estimations, demonstrated that some diseases were relatively unlikely to occur in a typical general practice list of then just under two and a half thousand patients. Other researchers developed this theme further observing that hospital-based medical education provided a distorted picture of disease prevalence in the community. Last himself commented on the often difficult relationship between the GP and the hospital, that was to be the focus of the GP Charter later in the decade.

And what of the iceberg today? For those areas of the health service that tend to manage episodic illness, such as much of hospital care, the hidden part of the iceberg is not of great direct concern. Yet for primary care, with its new public health focus, the metaphor of the iceberg has had great influence on its organizational and interventional strategies. Over the last 50 years there have been various attempts to detect that hidden disease, particularly through screening. Yet detection efforts have their own costs: not only are they often expensive for relatively low yield but also the increasingly recognized problem of detecting false-positive patients for whom little treatment can be offered has severely limited population detection (though opportunistic screening has proliferated). Further development of the concept of the risk factor, however, indicates there is now more than the hidden part of the iceberg as a potential target for medical intervention: if risk factors are everywhere and threatening everyone, then they constitute the very sea in which Last’s iceberg floats. The iceberg metaphor told medicine to look under the water, but it was study of the water itself that really transformed so much clinical and public health practice.

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References