The social dimension of risk factor surveillance

Prof. Dr. McQueen is associate director for Global Health Promotion at the Centers for Disease Control and Prevention in Atlanta

Public health in this century faces many challenges. Communicable diseases remain as a scourge for much of the world's population, while chronic diseases present increasing burden on populations, countries, and health care systems. The causes of all diseases, chronic and infectious, are now seen as complex. The simplistic notion that once ruled, for example that a germ caused a particular disease has now been expanded to include social determinants, risk behaviours, and other predisposing factors in a web of causality. For example, one posits that anomie, that is, the lack of purpose or ethical values in a person or society, may lead to injecting drug use that leads to viral spread that results in AIDS. Further, causation is often nonlinear and the direction of causality unclear. The contemplation of cause in chronic diseases leads to even more complexity and tangled causal relationships. The so-called outcome variable of disease is often itself complicated. For example, cardiovascular disease is systemic and the cause multi factorial. Public health surveillance must now contend with this complexity. Surveillance, as a critical methodology for public health, must capture the complexity of present day public health. Surveillance is distinctive from a simple collection or series of surveys; surveillance implies repetitiveness, consistency, timeliness, and constant vigilance; it does not plumb the same depths as a comprehensive, theory-driven, deeply analytic survey; it is built deeply into the infrastructure of public health; it requires a systematic approach, with continuous data collection, rapid analysis and appropriate dissemination and use of the results. Surveillance provides a sweeping view of the dynamic complexity of variable relationships over time.

The argument is often espoused that risk factor surveillance is expensive. However, once established, surveillance is productive and cost-efficient. It becomes part of the routine of effective public health practice. Thus, it establishes so-called public health infrastructure, creating public health jobs, framing policy, and in general providing the daily information needed to conduct the practice of public health. It is difficult to imagine a country with a well developed public health infrastructure that does not have a strong system of disease surveillance. By comparison, surveys, if they are done with care, are time consuming, expensive and at the end of the survey leave little or no residual infrastructure to carry on the public health mission.

What kind of surveillance is needed to assess the health-related factors operating in the complex world of today? In the web of causation of most non communicable diseases and many communicable diseases are basic human behaviours associated with nutrition, physical activity, substance use, reproduction and work. This type of surveillance is well established in some countries, with the American behavioural risk factor surveillance system (BRFSS) as one model of good practice. However, there are limitations of this model when it is it restricted to just behavioural risk factors. To truly address today's complexity, risk factors need to be collected with social context as a consideration. The surveillance of social and cultural factors should collect more than simple demographic data. To capture complexity in surveillance we need to track the social determinants and the complex causation we now postulate at the population level. For example, physical activity is not simply a regimen for the individual, it is highly embedded in the available social and physical environment, transportation possibilities and alternatives, as well as the physical urban infrastructure. This broad context is the whole sociocultural, behavioural milieu pertinent to risk factor surveillance for today.

At the beginning of a new century one can hope for the emergence of more complex social risk factor surveillance systems as well as more complex interpretation, analysis and use of the data from such systems. It is hoped that this journal will contribute to this emergence.

David V. McQueen

Soz.- Präventivmed. 46 (2001) 141–145