Health protection in the next millennium: from tactics to strategy?

Effective prevention and control of communicable diseases has, internationally, always been a central element of interventions to protect the public’s health.1

The need to prevent and control serious epidemics of disease such as smallpox, cholera and typhoid was instrumental in bringing about the establishment of the post of Medical Officer of Health for local authorities in England during the last century and the enactment of successive public health legislation.2 Infectious diseases subsequently figured prominently in the reports of the Medical Officer of Health in local authorities the length and breadth of the land. Local authority public health departments developed considerable expertise in the investigation, prevention and control of communicable diseases and their underlying causes. However, the post of Medical Officer of Health was abolished as part of the local government re-organisation of 1972 and the establishment of Area Health Authorities in 1974. Some Medical Officers of Health transferred to the new health authorities, but many retired and considerable experience and expertise in the field of communicable disease control was lost. The Review of the Public Health Function in 19883 linked this loss of expertise with two notable failures of public health services; the outbreak of salmonella at Stanley Royd Hospital, Yorkshire, in 19844 and the outbreak of Legionnaire’s disease at Stafford General Hospital in 19865. As a direct consequence of these incidents, the public health function was strengthened by the establishment of the role of Consultant in Communicable Disease Control with executive responsibility for this function on behalf of health authorities.6 The Consultant in Communicable Disease Control role has been successful in improving the prevention and control of communicable diseases despite being under-resourced and unsupported in some health authorities.7

Part of this success seems to have been attributable to the re-establishment of effective epidemiological expertise at district level supported by regional and national tiers; accompanied by high quality investigative and diagnostic microbiology services within National Health Service laboratories and the Public Health Laboratory Service. Arguably, however, the key to success of the Consultant in Communicable Disease Control role has been the explicit responsibility and authority to coordinate the activities of other disciplines and agencies within the framework of an outbreak committee.

These recent developments in the communicable disease control function in England and Wales have also been paralleled by an increasing recognition of the importance of zoonotic infections,8 controlling non-communicable environmental hazards and for the need for coordination of the health protection response.9 10

The end of the millennium is a natural time to reflect on the successes and failures of the past and on the challenges and opportunities for the future. Since the establishment of the Consultant in Communicable Disease Control post, there has been particular emphasis on achieving effective operational arrangements at local level to identify and control communicable disease outbreaks. Hence the pre-eminence of central surveillance initiatives11 12 and operational national guidelines for control.13 14 15 Tactical responses have their rightful place but not all communicable diseases can be controlled simply by better coordination and epidemiological investigation of outbreaks. The early success in the control of tuberculosis in the UK was largely attributable to the combination of effective tactical tuberculosis control services set within the context of a strategic public health policy of slum clearance and urban re-development to improve the quality of housing and remove transmission settings for infection. A strategic approach also underpinned the successful control of waterborne diseases during the latter part of the 19th century and early 20th century. These strategic successes were noted in Liverpool by Frazer,16 a successor to William Henry Duncan the first Medical Officer of Health in England, “...improved housing of the people, the greatly increased efficiency of local authorities, especially with regard to sanitation and water supplies, have practically banished from our midst the diseases which gave Duncan most anxiety”.

However, the recent proposals on a Health Strategy for the UK17 did not refer to targets for the prevention and control of infectious diseases and non-communicable environmental hazards. Perhaps the time is now right to move on from a focus on effective tactics and the control of “outbreaks” and to revisit a strategic approach to the prevention and control of communicable diseases. Present priorities for control are not difficult to recognise, nor is the importance of high quality surveillance to identify emerging communicable disease threats for the future.18 19 Elements of a strategy are beginning to be formulated from some initiatives20 21 which could be broadened further into a National Communicable Disease Control Strategy. Without strategy, the purpose and appropriateness of communicable disease control activities may become unclear and lack focus, cohesion and direction. What are the present control measures for Cryptosporidiosis, foodborne disease and meningococcal disease seeking to achieve? Could the effectiveness of existing control measures be improved if set within an explicit strategic framework with clearly stated aims and objectives and assigned roles and responsibilities? What is the evidence base for the effectiveness of existing control measures? Do other control measures need to be identified and implemented?

A more strategic response to non-communicable environmental hazards is also needed to build upon the tactical framework currently in place. Further work is needed to develop national surveillance of non-communicable hazards to quantify risks and health outcomes of adverse events. A similar mix of technical, tactical and strategic skills are required for the prevention and control of communicable diseases, as are required for tackling non-communicable environmental hazards and the health emergency response. Measures for the prevention and control of communicable diseases and non-communicable environmental hazards should be therefore integrated with health emergency planning to form a cohesive “health protection” strategy to protect the public’s health from biological, chemical, radiation and physical hazards in the environment.

The opportunity for public health to adopt a higher profile in a broader health protection agenda in the UK is now presenting as the pace of “civilisation” of emergency planning quickens and traditional roles are relinquished by the military planning authorities and the Fire and Civil Defence Authorities.
Surely only by identifying effective strategies for the prevention and control of communicable disease and non-communicable environmental hazards can we hope to gain control where, at present, this remains elusive. Such strategies will need to be both multi-disciplinary and multi-agency if they are to be truly successful. As strategies are developed in the UK, they may be of assistance to other countries considering similar approaches. Public health skills will be central to the development and implementation of effective strategies and to responding positively to the public’s accelerating tendency towards “zero tolerance” for communicable diseases and adverse effects of environmental hazards on health. Could this be public health’s first critical challenge for the new millennium?

MARTYN REGAN
Health Protection Team, Public Health Directorate, Liverpool Health Authority