



Communicable diseases other than AIDS

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Should communicable diseases be a key area?

Superficially, the case against communicable diseases other than AIDS and HIV infection being a key area of great concern in the United Kingdom for targeting action is quite strong. Most infectious diseases are mild; even influenza A virus, the last great organism until HIV capable of causing a pandemic, has been fairly quiescent for 15 or so years; and mass immunisation and sanitation have kept many of the former scourges in check. In *The Health of the Nation*, however, communicable diseases are chosen as a key area but not because they are considered to cause substantial mortality or substantial ill health or to have scope for improvement. Instead, they are included in the group "where there is great potential for harm."¹ This implies either that they are not serious at present but may become so or that many of the most serious conditions are under control at present but may revert if control is relaxed. This underestimates the contribution of communicable disease to general ill health.

The first criterion for the choice of a key area is that the disease should be a major cause of premature death or avoidable ill health in the general population or in specific groups of people. With the possible exception of influenza—and the length of time since a major epidemic leaves no room for complacency—communicable diseases are not major causes of premature death. Nevertheless, by their very diversity and frequency they are certainly major causes of ill health; many of them are avoidable, at least in the sense that we know what causes them and how they are transmitted. The sexually transmitted diseases not only cause an acute self limiting illness but also give rise to sequelae, including pelvic inflammatory disease, ectopic pregnancy, infertility, and carcinoma (of the penis, cervix, and anus), as well as congenital abnormalities and neonatal illness. Some communicable diseases recur or become chronic, and the lesions in sexually transmitted disease may facilitate the transmission of HIV and probably hepatitis B. Infectious diarrhoea and respiratory and urinary tract infections are further examples of major causes of ill health, though how much is avoidable is debatable and difficult to estimate.

The second criterion for a key area is that effective intervention is possible. Apart from sanitation and immunisation, what other effective interventions are there against communicable disease? High up on this list I would place effective surveillance and control of outbreaks: the early recognition of outbreaks through effective surveillance is undoubtedly an important form of secondary prevention. Antibiotics are useful in preventing the sequelae of and death from many communicable diseases, but they are generally disappointing in preventing the disease and may even induce complacency.

Targets for communicable disease

The third criterion for a key area is the ability to set objectives and targets and to monitor progress. Targets can be set in communicable disease, but apart from detailing the obvious one of immunisation rates *The Health of the Nation* is curiously negative about possible targets (box). Sexually transmitted diseases are mentioned briefly in a paragraph appended to the section on HIV and AIDS and no targets are set.

Possible targets for communicable diseases

- 95% rates of immunisation against diphtheria, tetanus, polio, measles, mumps, rubella, and whooping cough
- 90% reduction on 1989 values of notifications of measles by 1995
- Audit of hospital acquired infections in individual units to set realistic targets for reduction

Targets for hospital acquired infection "could be set on the basis of what can be achieved through good practice," and for microbiological food poisoning we need to wait for the results of studies by the Department of Health and "analysis of activities of enforcement officers" because "there is currently no sound basis for determining targets for reductions in incidence of foodborne diseases."¹

Are these realistic approaches to communicable disease targets? If not, what should the targets be? The Faculty of Public Health Medicine in its report *UK Levels of Health*, which appeared at the same time as *The Health of the Nation*, is less conservative in its approach,² and I will consider some of its recommendations with those of the government.

Immunisation—Targets are straightforward when a disease has a vaccine. Most such diseases have so low an incidence that they are no longer a public health problem (the definition of containment), and they may quite reasonably be classified as "areas where there is great potential for harm." For all of these diseases except one the target is the rate of immunisation rather than the prevalence of the disease. The exception is measles, for which the target is to reduce the notification rate to 10% of its 1989 rate—that is, less than 3000 cases a year in England and Wales by 1995. This sets a further challenge to health authorities, most of which have already achieved the WHO target of a 90% reduction in measles from the rates recorded before immunisation began in 1968. *UK Levels of Health* sets targets for measles of 5000 cases a year by 1995 (including Scotland) and 1000 by the year 2000. It sets even lower targets for pertussis, mumps, and rubella and suggests that there should be no cases of the congenital rubella syndrome (without mention of abortions for rubella), polio, or diphtheria by the year 2000.²

Sexually transmitted diseases—*The Health of the Nation* acknowledges sexually transmitted diseases to be important and disabling but no targets are discussed or set. Although there are no absolute data on incidences, returns from clinics to the Department of Health are reasonable indicators of trends. *UK Levels of Health* does set targets but does not state how they are arrived at (table).²

Hospital acquired infection—It is undoubtedly difficult to set targets for hospital acquired infection. As different hospitals may vary in their infection rates national standards are not warranted. A useful approach, however, could be for each hospital to establish a hospital infection surveillance and control structure,³ which is in itself a target; determine its infection rate in different categories (wound infections,

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Rates in 1988, based on clinic returns to Department of Health, and target rates for year 2000 of sexually transmitted diseases (per 100 000 population aged 15-64)¹

Disease	1988	2000
Gonorrhoea	64.0	30.0
Syphilis	15	3
Congenital syphilis	3	0
<i>Chlamydia trachomatis</i> infection	120	75
Genital herpes	56.2	40.0

urinary tract infections, etc); and then set its own targets.

Foodborne illness—Targets are also difficult to set for foodborne illness. Unlike those for sexually transmitted diseases, routine statistics for food poisoning are not detailed enough. Nevertheless, as for hospital acquired infection, targets could be set on good practices; it is surprising that the recommendations, of which there were more than 100, of the Committee on the Microbiological Safety of Food are not mentioned.⁴ Better knowledge of simple hygiene measures, such as keeping cooked food either very hot or very cold and preventing cross contamination from raw to cooked food among both catering staff and household cooks would go a long way towards reducing microbiological food hazards. Good manufacturing practice in industry, including the endorsement of the hazard analysis and critical control point system (HACCP) used by most food manufacturers, could also be a target.

Strategy

The strategy chosen in *The Health of the Nation* to achieve the targets for communicable disease include immunisation, effective surveillance and control of outbreaks, early diagnosis, and health education for immunisation. Only immunisation is developed any further and control of outbreaks is directed at the human rather than the environmental source of outbreaks. Early diagnosis is to allow appropriate treatment and is presumably targeted at bacterial meningitis. Late diagnosis of meningitis is reported from time to time, but it is probably not a common problem. Health education for immunisation should be targeted at health care workers as much as at the public.

Sexually transmitted diseases—In *The Health of the Nation* "health education and other preventive activities are the key" to reducing sexually transmitted diseases. The opportunity could perhaps be seized to be more specific about these worrying diseases that are difficult to control. Teaching on safe sexual practices and family planning in all middle and secondary schools should be part of a general programme of health education aimed at children. *UK Levels of Health* also adds effective contact tracing and appropriate training for all physicians in counselling on the prevention of sexually transmitted diseases.²

Hospital acquired infection is undoubtedly an important area for control (as recognised in *The Health of the Nation* but not in *UK Levels of Health*), but targets and strategy for control are least well developed. As I mentioned earlier possible effective strategy for control includes an effective hospital infection surveillance and control structure in all hospitals, with a responsible hospital infection control nurse or officer.³

Food poisoning—A detailed list of reduced risk factors in food poisoning is included in *UK Levels of Health*, but a strategy for the control of food poisoning needs careful thought. It should nevertheless be possible. As recommended by the Richmond committee,⁴ two government committees have been established and will need to be consulted.

Local authorities—The responsibilities of several

central government departments are detailed in chapter 4 of *The Health of the Nation*. Local authorities, particularly environmental health departments, are mentioned only briefly. Their role in the strategy for control of communicable diseases, especially food poisoning, needs to be acknowledged more positively.

Problems in achieving targets

Any additional resources to achieve the targets in *The Health of the Nation* will probably not be available. For example, the phrase "Teaching on safe sexual practices and family planning in all middle and secondary schools" picked almost at random from the strategy section conceals an enormous amount of work, continuous motivation, organisation, and funding.

To achieve targets good information is needed, and obtaining good information is likely to be the biggest problem. Moreover, the surveillance needs for each key area are different: some have yet to be developed and others improved. To achieve immunisation targets requires not only efficient computers but also staff to key in the data and a rapid information retrieval system. In addition, the special payments to general practitioners to achieve the targets in their practices may have a negative effect in that general practitioners who believe that they cannot achieve the minimum level of 70% for payment may not try to increase a low level of uptake or halt a declining uptake.

Omissions

Here is a personal selection of omissions from *The Health of the Nation*. Though effective sanitation is taken for granted, the faecal-oral cycle is still completed with unacceptable regularity. Scares about the supply of tap water occur from time to time. Studies on the safety of British bathing beaches are in progress, but the high risk of gastroenteritis after eating raw oysters already provides clear evidence of sewage pollution of the sea.⁵

More than 5000 cases of tuberculosis are notified in England and Wales each and every year. This disease, although preventable, is therefore still a problem in many districts, and an effective strategy to reduce its incidence is needed. Legionnaires' disease is also preventable: guidelines are available for hygienic maintenance of hot water systems and cooling towers. There is evidence that even sporadic cases of legionnaires' disease are associated with cooling towers,⁶ and the BBC and Stafford outbreaks showed clearly how vulnerable large numbers of people may be in densely populated areas.^{7,8} Finally, it seems absurd that we are trying to develop complex targets for health while the sale of unpasteurised milk, if only in England and Wales, is still permitted.

1 Secretary of State for Health. *The Health of the Nation*. London: HMSO, 1991.

2 Faculty of Public Health Medicine of the Royal College of Physicians. *UK levels of health. First report*. London: Faculty of Public Health Medicine, 1991. (Chairman: Professor W W Holland.)

3 Department of Health and Social Security. *Hospital infection control: guidance on the control of infection in hospitals prepared by the joint DHSS/PHLS Hospital Infection Working Group*. London: DHSS, 1988. (Chairman: Professor F M Cooke.)

4 Committee on the Microbiological Safety of Food. *The microbiological safety of food*. London: HMSO, 1990. (Chairman: Sir Mark Richmond.)

5 Heller D, Gill ON, Raynam E, Kirkland T, Zadick PM, Stanwell-Smith R. An outbreak of gastrointestinal illness associated with consumption of raw depurated oysters. *BMJ* 1986;292:1726-7.

6 Bhopal RS, Fallon RJ, Buist EC, Black RJ, Urquhart JD. Proximity of the home to a cooling tower and risk of non-outbreak legionnaires' disease. *BMJ* 1991;302:378-83.

7 Westminster Action Committee. *Broadcasting House legionnaires' disease: report of the Westminster Action Committee convened to co-ordinate the investigation and control of the outbreak of legionnaires' disease associated with Portland Place, London W1, in April/May 1988*. London: City of Westminster, 1988. (Chairman: Dr D Cunningham.)

8 O'Mahony MC, Stanwell-Smith RE, Tillett HE, Harper D, Hutchison JGP, Farrell ID, et al. The Stafford outbreak of legionnaires' disease. *Epidemiol Infect* 1990;104:361-80.