The current implementation of vaccination programmes is a good example of our contemporary health problems, which are as much the result of our failure to apply existing knowledge as of our need for new medical discoveries. We also need measures of our performance in achieving child health standards using indices that quantify health as well as levels of childhood mortality and morbidity. The immunisation status of the childhood population is again a good example.

*Fit for the Future* (1976) illustrated the relationship between expenditure on community health services in the various regions of England and Wales compared with infant life wastage. It is informative to compare these figures with the current regional status of uptake of vaccination against diphtheria, tetanus and poliomyelitis (Table 1). There are notable examples, especially in the South East Thames and South Western Regions, where expenditure on community health services and also the socio-economic status of the population are above average but where the uptake of immunisation is extremely poor. The Northern Region, which has an average figure for infant life wastage, has a very poor record for immunisation. By contrast, areas with very low infant mortality rates, such as Oxford, Wessex, East Anglia and the South West Thames Regions, also have the highest uptake of vaccination. Wales is a law unto itself with an average figure for infant life wastage comparable with England as a whole but a really abysmal level of vaccination uptake. In England, the Mersey Region has the lowest level of vaccination in the country and one of the highest rates of infant life wastage.

The regional average and variations of vaccination uptake for pertussis and measles as well as diphtheria, tetanus and poliomyelitis reveal the wide differences that exist in different parts of England and in Wales.

For diphtheria, tetanus and poliomyelitis the range varies from 91 per cent uptake in Oxford to 64 per cent in Mersey and Wales, for pertussis from 61 per cent in Oxford to 31 per cent in the Northern Region and 22 per cent in Wales, while for measles Oxford has achieved a 75 per cent uptake compared with 32 per cent in the Mersey Region and 21 per cent in Wales.

The effect of adverse publicity (Table 2) on pertussis vaccination in England is evident from the decline from 79 per cent in 1973 to 38 per cent in 1976, while the levels in diphtheria, tetanus and poliomyelitis vaccination fell only from 81
Table 1. Vaccination and immunisation acceptance rates, children born 1974: vaccinated by 1976. (Regions of England and Principality of Wales.) (Rates are expressed as a percentage of live births in the Region during 1974 and therefore do not take into account any subsequent migration.)

| Regional Health authority | Measles | Diphtheria | Whooping cough | Tetanus | Polio |
|---------------------------|---------|------------|----------------|---------|-------|
| Northern                  | 47      | 69         | 31             | 69      | 69    |
| Yorkshire                 | 46      | 70         | 42             | 70      | 70    |
| Trent                     | 54      | 76         | 45             | 76      | 76    |
| East Anglia               | 59      | 81         | 48             | 82      | 81    |
| N W Thames                | 44      | 74         | 38             | 75      | 73    |
| N E Thames                | 42      | 83         | 41             | 84      | 84    |
| S E Thames                | 37      | 67         | 34             | 65      | 66    |
| S W Thames                | 49      | 81         | 40             | 81      | 79    |
| Wessex                    | 69      | 86         | 36             | 86      | 85    |
| Oxford                    | 75      | 91         | 58             | 91      | 91    |
| South Western             | 48      | 67         | 37             | 67      | 68    |
| West Midlands             | 39      | 75         | 33             | 75      | 73    |
| Mersey                    | 32      | 64         | 34             | 64      | 64    |
| North Western             | 35      | 68         | 30             | 68      | 68    |
| England                   | 47      | 75         | 38             | 75      | 74    |
| Wales                     | 21      | 64         | 22             | 63      | 67    |

Table 2. Immunisation acceptance rate: England

| Children born in | 1971 | 1972 | 1973 | 1974 |
|------------------|------|------|------|------|
| Percentage vacci- | 1973 | 1974 | 1975 | 1976 |
| nated by end     |      |      |      |      |
| Whooping cough    | 79   | 77   | 61   | 38   |
| Diphtheria        | 81   | 80   | 75   | 75   |
| Tetanus           | 81   | 80   | 75   | 75   |
| Poliomyelitis     | 80   | 79   | 75   | 74   |
| Measles           | 54   | 53   | 47   | 47   |

per cent to 75 per cent. Measles vaccination declined from a 54 per cent to 47 per cent uptake over the same period.

To achieve safe levels of immunisation of our child population (by which I mean 85-90 per cent uptake) we have to consider a short- and a long-term problem.

In the short term we have to make up for ground lost between 1973 and 1976 and to achieve rapid improvements in Wales and those regions of England
where current levels of immunisation are dangerously low. This short-term aim relates to children born in 1974-1976 who did not receive primary immunisation. For these children a special catch-up programme is necessary, requiring a major publicity campaign involving both the general public and the primary health care teams, urging them to accept and organise services that offer primary vaccination against diphtheria, tetanus, poliomyelitis and measles before entry to play group, nursery school or primary school for all those children who escaped primary immunisation in infancy. The aim is to establish, as a part of general social responsibility as citizens, the principle that children do not go to play group or school unimmunised. As is invariably the case, the need is greatest where socio-economic conditions are poor and where health care expenditure is currently lower than in less prosperous areas. This is a challenge for which the co-operation of the educational services and those in charge of nursery schools and play groups is critical. The challenge is formidable for the Health Service, which in its organisation of preventive child services is currently wallowing in the aftermath of the Court Report. It is for the Area Specialists in Child Health, advised by local Child Health Care Planning Teams, to see how this aim can best be accomplished in each local Health District and Area.

The long-term objective is to establish a code of child health care practice, of which primary immunisation is a part, that will be more effective than anything that has hitherto obtained in many parts of the country. Publicity of the right kind is essential to ensure that both parents and the primary health care teams accept primary immunisation as an integral part of optimal child health care in the first years of life. We have to make up for much of the damage that adverse publicity has caused since 1973.

But publicity alone is not enough. There is good evidence that computerised programmes have a helpful effect; currently they exist in only about half the regions of the country. The computer is a useful tool but one that will achieve little unless those who use it recognise it not as a substitute but as a useful addition to their methodology and organisation of services (Galloway, 1966; Saunders, 1970). Most of all there is the need to recreate enthusiasm for the promotion of immunisation among the members of primary health care teams—health visitors, general practitioners and child health medical officers. Dr John Warin did this in Oxford and set a magnificent example to others. The re-incorporation of a high level of uptake of immunisation as one of the hallmarks of a high standard of child health care, in which each district or medical practice can take pride, is the objective. There is a constructive role here for community health councils to work with their local health district service and local authority to ensure that those locally responsible for child health are given the assistance and facilities they need. The needs in each district, area and region vary. No blanket bureaucratic directive from London can take account of local variations. In the final analysis it is the enthusiasm and dedication of individuals in each local
community that will be decisive in promoting improved standards of child health in general and immunisation uptake in particular.

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References
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QUICK CHANGE FOR THE REGISTRAR

The proposals of the 1858 Medical Act were viewed with much misgiving by the College. Dr Francis Hawkins, the Registrar, sent out a printed letter to Fellows. 'I am directed by the Conference Committee to inform you that they have placed in the hands of Mr. Headlam Amendments of Mr. Cowper's Medical Bill calculated to correct the faults in it which appear to them most important and most injurious to the College of Physicians. . . . The Committee hope that you will exert your influence with your friends in the House of Commons to support the Amendments moved by Mr. Headlam.' The College also sent a humble petition to the House, objecting, among other things, to the composition of the proposed General Medical Council as being 'likely to keep the profession in an unsettled and agitated state . . . ' The first meeting of the GMC was held in the College, and its first Registrar was none other than Dr Hawkins.