

## Public health

# The District Immunisation Coordinator

Childhood immunisation is one of the most cost effective activities undertaken by health professionals and it has been an important part of the health services in most developed countries for about 200 years.<sup>1</sup> From the beginning it has been a complicated programme to deliver, not least because the success of any immunisation programme, as evidenced by a reduction in infectious disease, can lead to complacency on the part of both health professionals and the public. Since the advent of immunisation there have been myths and misconceptions about the safety and value of particular vaccines.<sup>2</sup> Unlike most aspects of health care, immunisation programmes are targeted at whole populations, most of whom are perfectly healthy. Because it is important to ensure that as many people as possible receive the service, it is not just a question of passively waiting for parents to avail themselves of it. Immunisation services have to be proactive.

Initially many vaccines have largely sold themselves. For example, the effective introduction of a polio vaccination programme in the 1950s no doubt owed part of its acceptance to the fact that it coincided with a large epidemic.<sup>3</sup> Improved media technology in the form of television and photographic coverage of the resultant mortality and morbidity from the disease undoubtedly helped raise public awareness and ensured good uptake of the vaccination, and this has led to the effective demise of acute poliomyelitis. Similarly in 1988, MMR (measles, mumps, and rubella vaccine) was welcomed largely because of the introduction of the mumps component, which was mistakenly believed to have been included because of the link between mumps, orchitis, and the development of sterility in male adults. This myth has been used and misinterpreted by the antivaccination lobby as one reason why MMR is unnecessary,<sup>4</sup> rather than giving due prominence to the risks of meningoencephalitis and deafness after mumps, which are the real spurs to immunisation against the disease. Even the overnight withdrawal of two brands of MMR, because of the link between the Urabe mumps vaccine strain and meningoencephalitis, in 1992 did little to dent its popularity.<sup>5</sup> Similarly the introduction of Hib in 1992 was overwhelmingly accepted because of the link with meningitis.<sup>6</sup>

However, the inevitable result of any successful vaccination programme is complacency on the part of health professionals and parents who no longer have first hand experience of the seriousness of the diseases they aim to prevent. With only a few cases and the virtual elimination of the associated mortality and morbidity, the spectre of supposed adverse events moves to the fore and people begin to doubt the value of an immunisation programme.<sup>7</sup> Adverse media publicity fuels this agenda and the task of ensuring a good uptake becomes increasingly challenging.<sup>8</sup>

Because of the enormous variety of professionals involved in the delivery of any immunisation programme (doctors, health visitors, practice nurses, school nurses, pharmacists, health promotion staff, and information technologists), it is necessary to have a mechanism for ensuring that all these elements work together to provide an efficient service. In 1985, the Department of Health and Social Services highlighted the poor uptake of immunisation in some areas and advised all health authorities to appoint a

District Immunisation Coordinator (DIC).<sup>9</sup> At the time the childhood immunisation schedule had not changed since the introduction of measles vaccine in 1968, and while the uptake of the vaccine had never been very high, it had greatly reduced the incidence, mortality, and morbidity of the disease. There had been a loss of confidence in the pertussis vaccine following the scare of the early 1970s, with a subsequent dramatic drop from 80% uptake in 1973 to 30% in 1975 followed by the predictable increase in cases, morbidity, and mortality. Despite the overwhelming body of research supporting the safety and efficacy of pertussis, health professionals seemed to be largely swayed by the popular press and many actively advised parents not to have their babies protected.<sup>10</sup> There were major epidemics in 1977/79 and 1981/83, with children suffering and dying unnecessarily.<sup>7</sup> This, along with new research confirming the safety of the vaccine, contributed to the gradual return of public confidence. It took about 16 years for pertussis vaccine coverage to return to its precontroversy levels and another two years for it to reach over 90% overall.

In 1988<sup>11</sup> the suggested tasks of the DIC were set out. These were to:

- Coordinate the work of all those involved with immunisation
- Establish a commitment, with all concerned, to immunisation
- Provide training and updating of all staff involved in immunisation
- Maintain an up to date register of all children in the district
- Give feedback and follow up poor results
- Establish an advisory service
- Take specific action to deal with "difficult families"
- Mount local campaigns
- Ensure immunisation is readily available.

The recommendation to appoint DICs with their clearly defined functions did much to put immunisation firmly onto the preventive health agenda. In addition, in 1989 research was published by the Action Research for the Crippled Child in which it was asked why the national uptake rates were so poor given that 95% of parents consented to their children being immunised.<sup>10</sup> The study showed that parents were being given wrong advice, in particular by general practitioners (GPs). This research gave credence to the role of the DIC, and highlighted the importance of immunisation training and awareness of current policies. Health visitors and the new breed of practice nurses seized the opportunity to take this training, and have successfully ensured that immunisation is a nursing issue. In 1990 the Department of Health recommended target payments for GPs, payable at two levels to encourage the uptake of immunisation. While controversial, in that it laid GPs open to the charge of being more interested in reaching targets than in allowing fully informed choice, it has helped improve uptake rates. The other supposed conflict that has been suggested is that immunisation programmes may be seen as sacrificing the needs of the individual to those of society. The broad experience of outbreaks of disease in unimmunised communities within industrialised societies highlights the weakness in this argument.<sup>12-15</sup>

DICs are the pivotal figures when it comes to immunisation. Since their inception in 1985, they have ensured the smooth transition of changes in the timing of the childhood immunisation schedule and the introduction of important new vaccines. In 1988 MMR was introduced<sup>11</sup>; the change in timing of the primary schedule to the accelerated course of two, three, and four months followed in 1990.<sup>16</sup> Not long after, in 1992, two brands of MMR vaccine were withdrawn overnight because of a small, but unacceptable risk of vaccine related meningoencephalitis.<sup>17</sup> At almost exactly the same time, the Hib vaccine was introduced<sup>18</sup>; with this, babies required two injections for their primary course, which caused great distress to health professionals, but little concern to parents.<sup>19</sup> In a mass campaign, measles/rubella vaccines were offered to all schoolchildren in November 1994.<sup>20</sup> In 1996, a second dose of MMR was introduced.<sup>21</sup> More recently, in early 1998, a paper published in the *Lancet* was reported by the media as linking MMR vaccine with Crohn's disease and autism, thus resulting in public concern.<sup>22</sup> Finally, introduction of conjugate meningococcal C vaccination for all children and young people aged 0–17 years of age is taking place.<sup>23</sup>

It is the present meningococcal vaccine campaign, which once again highlights the importance of this role. With three different dose schedules, two distinct types of vaccine, and at least three phases to the programme there is real potential for confusion/chaos. The responsibility for making sure things run smoothly locally has been placed with the DIC.

How can the DICs satisfactorily undertake this onerous task? They cannot do it alone. As noted above, numerous professionals are involved in the immunisation programme and it is only by bringing them together and establishing a common sense of purpose, that the programme can reach the maximum number of children. Most districts have District Immunisation Promotion Teams, or their equivalent, comprising representatives of most, if not all, the following professional groups: community and hospital based paediatricians, GPs, health visitors, practice nurses, school nurses, health promotion personnel, information technology staff, pharmacists, and public health doctors. This group provides the forum for airing issues and providing solutions to problems. Most would have been hastily reconvened in the summer of 1999, soon after the announcement of the current campaign was made.

The responsibilities are a mixture of clinical, administrative, and managerial tasks. So what are the qualities required of a DIC? The basic sine qua non is an in depth understanding of the current immunisation programme and the organisation of the health service. Coupled with this has to be an ability to work as part of a team and to persuade others to do so. It is possible to be a good DIC without any clinical knowledge or ongoing involvement in clinical practice, by delegating such things as the advisory service to more appropriate professionals. However, a clinical background is bound to lead to a more profound understanding of the programme, an ability to anticipate problems, and to produce solutions to them. In the past, most effort has been directed towards the childhood vaccination programme and so it would seem logical that DICs should be drawn from a child health background. In fact, most are consultants in either paediatrics (community or hospital based), Communicable Disease Control, and at least one each of a health visitor and a pharmacist.

While there is little hard evidence of the effectiveness of the DIC, a number of authors have commented on their value.<sup>10 24 25</sup> Crittenden and Rao<sup>26</sup> described how in one district an initiative by the DIC increased uptake by intensive follow up of defaulters. In a recent study,<sup>27</sup> it was noted that both health visitors and practice nurses in the

two districts surveyed found the DIC to be the most useful source of information. It would seem therefore that the DIC is a valued resource.

The DIC is not only a local resource. Because of the combination of awareness of basic issues and a district overview, the DIC is in an ideal position to advise the Department of Health and to provide a conduit between the workers at the coalface and the centre. DICs are also a rich source of expertise who should have a much higher profile in the media. Immunisation is not a field where health professionals should be neutral. They should get out in the streets, stick their heads above the parapet, and work hard for the health of children. Those that are clinicians, such as paediatricians and nurses, are in an ideal position to do this. The argument that they are not interested in the individual cannot be levelled at them because they are involved with delivering care to "real" individuals as well as to "anonymous" populations. In the current climate of health scares, a number of which are related to immunisation, it is important that those professionals with expert knowledge of vaccination, ensure that the public are aware of all the facts and and so parents can make a carefully considered decision.

The successful model of the District Immunisation Coordinator could usefully be applied to other universal services that cross disciplines and take place on a district wide basis. It has been suggested that neonatal screening for biochemical disorders<sup>28</sup> and child health surveillance should have a District Coordinator. As many of the issues involved are common to all the programmes, in some areas the DIC could add these to their remit.

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### Commentary

After clean water and effective sewage disposal, immunisation is probably the greatest medical success story of all time, and the concept of the District Immunisation Coordinator is an excellent example of what can be achieved by a combination of a population wide perspective with clinical excellence.

The paper by Elliman and Morton omits a few points that will need consideration by Directors of Public Health and chief executives of Trusts. Perhaps the most important is the need to define how much time this job takes. There is a tendency seriously to underestimate the time needed to tackle public health tasks properly. The commitment can be virtually fulltime when there is major press coverage of

a real or imagined scare, or a new programme such as meningococcal vaccine is launched; in between times, when all is working smoothly, the duties could easily be managed in one session a week or even less.

The second omission from the paper is the issue of the extent to which the District Immunisation Coordinator is responsible for various other infectious disease programmes—uptake and quality of hepatitis B prevention, flu immunisation campaigns which are mainly targeted at adults, advice on foreign travel, oversight of TB control including contact tracing as well as BCG, and immunisation of College students as a target group. It is most unlikely that there would ever be uniformity of the job plan for the District Immunisation Coordinator between districts, but it is important that all these tasks be allocated.

The model of the District Immunisation Coordinator can also be applied to other tasks—for example, neonatal hearing screening, PKU screening, childcare and so on. The principle of asking one individual to take on a defined task, set goals and report progress should be used more widely in community child health.

Lastly, there are obvious implications for the drafting of job descriptions, including a clear statement of accountability both for job plans and for the training needs of registrars and consultants who are asked to take on this role.

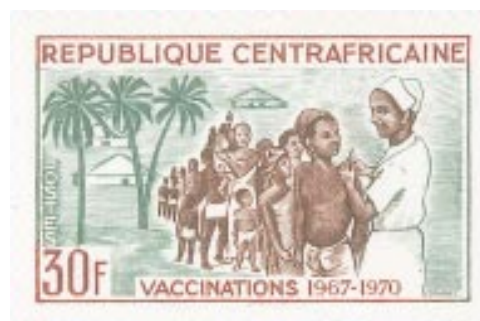
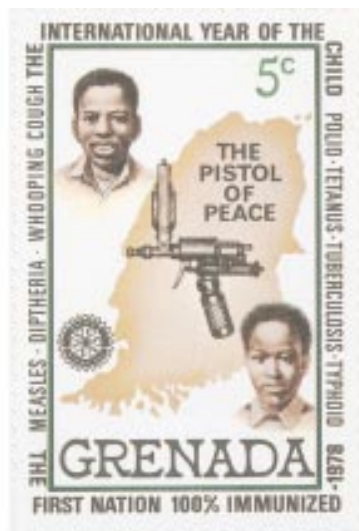
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## STAMPS IN PAEDIATRICS

### Immunisation

Immunisation has been one of the major themes promoted on health stamps relating to paediatrics. Individual diseases—such as smallpox and polio, have been the focus occasionally although usually the general principles of immunisation



have been featured. These general principles are illustrated on these three stamps. The 1979 Transkei stamp was issued to promote child health and emphasises immunisation. The mass vaccination programme is highlighted and publicised on the Central African Republic stamp from 1967. The Grenada 1979 stamp commemorating the International Year of the Child celebrates the first nation to be 100% immunised and shows a vaccination gun and map of Grenada, together with the logo of the Rotary organisation. The individual diseases depicted are measles, diphtheria, whooping cough, polio, tetanus, tuberculosis, and typhoid.

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