

how much evidence do we need that skilled home nursing available round the clock would be a good idea?

For commissioners of care making difficult decisions on resource allocation amid competing priorities will the results of the study we publish today help them decide how best to organise palliative care services? They may note the pointers toward improved outcomes when such a service is provided but also reflect on the difficulties inherent in providing the service on a time limited basis. They may wish to be careful that funding for improving home palliative care along these lines does not come from the same pot as that which pays for the home care services which will carry on if needed when the two weeks is up. But in balancing the benefit to be had from this possible

intervention compared with others they will have to fall back on wisdom, compassion, and a broad and inclusive conception of the role of health care services in reducing human suffering.

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- 1 McWhinney IR, Bass MJ, Donner A. Evaluation of a palliative care service: problems and pitfalls. *BMJ* 1994;309:1340-2.
- 2 McQuay H, Moore A. Need for rigorous assessment of palliative care. *BMJ* 1994;309:1315-6.
- 3 Smeenk FW, van Haagstregt JC, de Witte LP, Crebolder HF. Effectiveness of home care programmes for patients with incurable cancer on their quality of life and times spent in hospital: systematic review. *BMJ* 1998;316:1939-44.
- 4 Grande GE, Todd CJ, Barclay SIG, Farquhar MC. Does hospital at home for palliative care facilitate death at home? Randomised controlled trial. *BMJ* 1999;319:1472-5.

## Vaccination policies: individual rights *v* community health

*We can't afford to be half hearted about vaccination programmes*

The goal of a rubella vaccine programme is to reduce the occurrence of the congenital rubella syndrome. In this week's *BMJ*, Panagiotopoulos et al describe the history of the use of rubella vaccine in Greece and show that partial vaccine coverage led to a period in which susceptibility to rubella among childbearing women was actually increased (p 1462).<sup>1</sup> Therefore in 1993, an epidemic year for rubella in Greece, the incidence of rubella in childbearing women was higher than in previous epidemics, and the incidence of congenital rubella increased. What lessons can we learn from this failure?

Around the world the effectiveness of rubella vaccine programmes has varied. The rubella vaccine, which was first introduced in the United States in 1967, was very effective in reducing the annual number of babies with congenital rubella syndrome from an estimated 20 000 in 1964 to 7 in 1983.<sup>2</sup> The US had introduced the vaccine in a three step programme—that is, recommending vaccination of all infants at 12-15 months of age, screening women of child bearing age for rubella immunity, and vaccinating those susceptible to rubella. Initially in the United Kingdom the vaccine was recommended only for schoolgirls aged 10-12 years and susceptible women. This strategy had little impact on the incidence of congenital rubella syndrome. So in 1988 the British authorities changed to follow the US strategy. The incidence of congenital rubella syndrome remains low in the UK.<sup>3</sup> In Japan schoolgirls receive rubella vaccine, but this has had little impact on the incidence of congenital rubella syndrome.<sup>4</sup> Many developing countries have not used rubella vaccine routinely. In the English-speaking Caribbean, they are embarking on a one time mass campaign targeting males and females aged 5-39 years followed by routine use of measles, mumps, and rubella vaccine in early childhood.<sup>5</sup> The effectiveness of this programme remains to be determined.

The Greek programme failed because it was given only to children with no attempt to protect adolescents and young women and no attempt to obtain high coverage. Yet if the public in Greece becomes aware that the risk of congenital rubella syndrome increased after the start of an immunisation programme it may become more difficult to institute a more effective vaccination programme and convince the public that more immunisation is better.

Public opinion can significantly affect vaccine uptake and consequently disease prevention. This was demonstrated most clearly with pertussis vaccine in the UK.<sup>6</sup> In the early 1970s uptake of diphtheria, pertussis, and tetanus vaccine in the UK was 81% and the incidence of pertussis was low. After a report in 1974 ascribing neurological reactions to the pertussis vaccine the public lost confidence in the vaccine and uptake fell to 31%; pertussis epidemics followed.

In the developed world individual rights are given a high value, and antivaccine campaigners capitalise on the perspective of the individual, whereas public health perspective is based on the benefits for the community. If, because of a vaccine programme, the incidence of the disease has become low then the risk of disease for an individual is low but the risk of adverse effects from the vaccine is unchanged. Therefore for the individual, protection from disease by "herd immunity" may become the safest option because it avoids the risk from the vaccine. On the other hand, from the public health perspective, avoidance of vaccination is clearly not in the best interest of public because herd immunity diminishes as coverage falls. To persuade individuals to continue to be vaccinated when the vaccine programme has successfully reduced the incidence of disease requires that the vaccine have few adverse effects and that the individuals also value the community benefit.

Some of the concerns about the safety of the components of the measles, mumps, and rubella vaccine

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have been confirmed<sup>7</sup> and others are still speculation.<sup>8</sup> Reports of an association between vaccines and adverse outcomes get much public attention, and it often becomes difficult to determine whether the public is getting the appropriate information for an informed decision. Recently the possible association of measles vaccination with ileal lymphoid nodular hyperplasia and developmental disorders was reported.<sup>9</sup> In the flurry of correspondence criticising this paper, several wrote of the potential harm to public health vaccination programmes because of individuals becoming aware of this possible but unproved association. It was implied that individuals might now perceive the risk from measles to be outweighed by the risks of adverse effects from the vaccine. The recurring challenge for public health authorities is to find the best way to communicate with the public, so that they truly are informed on the relative risks and benefits of a vaccine programme.

Can the public and individual interests be served simultaneously? This can be achieved when a vaccine programme is started. At that point the disease incidence is high and the relative rate of vaccine adverse effects low. However as the vaccine programme becomes more successful in eradicating the disease, public and individual interests may diverge unless the vaccine has no adverse effects or the programme is so successful that the disease is eliminated and the vaccine programme can be discontinued. This was achieved for smallpox. However, in a voluntary programme it may always remain difficult to achieve a high enough uptake

to achieve elimination for congenital rubella syndrome because some individuals will perceive the risks of vaccination as outweighing the benefits and decline vaccination. But one lesson from the Greek experience is not to introduce vaccination programmes half heartedly—either in terms of the evidence underlying the policy or in systematically promoting it.

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- 1 Panagiotopoulos T, Antoniadou I, Valassi-Adam E. Increase in congenital rubella occurrence after immunization in Greece: retrospective survey and systematic review. *BMJ* 1999;319:1462-7.
- 2 Bart KJ, Orenstein WA, Aelblud DR, Hinman AR. Universal immunisation to prevent rubella. *Rev Infect Dis* 1985;7(suppl):177-84.
- 3 Miller E, Waight P, Gay N, Ramsay M, Vurdien J, Morgan-Capner P, et al. The epidemiology of rubella in England and Wales before and after the 1994 measles and rubella vaccination campaign: fourth joint report from the PHLS and the National Congenital Rubella Surveillance Programme. *CDR* 1997;7:R26-32.
- 4 Kadoya R, Uleda K, Miyazaki C, Hidaka Y, Tokugawa K. Incidence of congenital rubella syndrome and influence of the rubella vaccination program in Japan 1981-1989. *Am J Epidemiol* 1998;148:263-8.
- 5 Hinman AR, Hersh BS, de Quadros CA. Rational use of rubella vaccine for prevention of congenital rubella in the Americas. *Pan Am J Pub Health* 1998;4:156-60.
- 6 Gangarosa EJ, Galazka AM, Wolfe CR, Phillips LM, Gangarosa RE, Miller E, et al. Impact of anti-vaccine movements on pertussis control: the untold story. *Lancet* 1998;351:356-61.
- 7 Miller E, Goldacre M, Pugh S, Colville A, Farrington P, Flower A, et al. Risk of aseptic meningitis after measles, mumps, and rubella vaccine in UK children. *Lancet* 1993;341:979-82.
- 8 Howson CP, Katz M, Johnston RB, Fineberg HV. Chronic arthritis after rubella vaccination. *Clin Infect Dis* 1992;15:307-12.
- 9 Wakefield AJ, Murch SH, Anthony A, Linnell J, Casson DM, Malik M, et al. Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children. *Lancet* 1998;351:637-41.

## Learning from the NHS

*NHS continues to be an important test bed for reform in health care*

An advertisement for the conference "Learning from the NHS" appears on outside back cover (clinical research classified), facing p 1500 (general practice), and facing p 1447 (other editions). Contact Jane Lewis (jlewis@bma.org.uk) for more details.

The British National Health Service has been a great inspiration for other countries during the past 50 years. A central theme has been the role that the state can play in securing health care for its population. What can other countries learn from the latest reforms in the NHS and the new role of the government in health care?

Governments have become central to health policy, engaging in both the financing and the provision of a wide range of care. Most countries in the Organisation for Economic Cooperation and Development, for example, have achieved universal access to health care through a mix of public and private providers and sources of finance.<sup>1</sup> Proponents of public sector involvement in health care have rooted their arguments in both philosophical and technical grounds. In most societies care for the sick and disabled is considered an expression of humanitarian aspirations. But economic theory also provides ample justification for such an engagement to secure efficiency<sup>2</sup> and equity.<sup>3</sup> The past 100 years is rich with examples of how market forces have failed in health care.

In the past 50 years, prompted by the problems of market failure, many low and middle income countries established state funded healthcare systems with services provided by vertically integrated public

bureaucracies. During the 1980s and 1990s the pendulum swung in the other direction. In the Reagan and Thatcher era the world witnessed a growing willingness to experiment with market approaches in health, education, and social protection.<sup>4</sup> This was true even in countries which were bastions of the welfare state, such as the United Kingdom, New Zealand, and Australia.

As with the original rise in state involvement in health care, the recent enthusiasm for private solutions has both ideological and technical roots. Liberalisation in many former socialist states and the economic shocks in East Asia and Latin America certainly contributed to a global sense of urgency to reform inefficient bureaucracies and sharpen lines of accountability.<sup>5</sup> But it would be too easy to blame ideology and economic crises alone for exposing public services to competitive market forces and increasing private sector participation. In reality, the welfare state approach has not always met the health needs of populations.<sup>6</sup> Although state involvement is clearly needed, it has been dogged with the failure of the public sector to provide the services well.<sup>7</sup>

Two related themes dominate. The familiar one is, what can governments do to make the public sector more responsive to a rapidly changing environment? The newer one is not whether the market should