

# Childhood vaccination in Africa and Asia: the effects of parents' knowledge and attitudes

Mandip Jheeta<sup>a</sup> & James Newell<sup>a</sup>

Childhood immunization – inducing immunity by applying a vaccine – almost guarantees protection from many major diseases. Childhood vaccination prevents 2 million deaths per year worldwide and is widely considered to be ‘overwhelmingly good’ by the scientific community.<sup>1,2</sup> However, 2.5 million deaths a year continue to be caused by vaccine-preventable diseases, mainly in Africa and Asia among children less than 5 years old.<sup>1</sup> Vaccination coverage has now reached a plateau in many developing countries, and even where good coverage has been attained, reaching children not yet vaccinated has proved difficult.<sup>3</sup> Thus, there is an urgent need to find ways to increase vaccination coverage and particularly to encourage parents to have their children vaccinated.

The dynamics of vaccination uptake remain unclear. To what extent is vaccination passively accepted by the public in response to recommendations and pressure from health workers and community leaders? To what extent is it actively demanded by an informed public that is aware of its benefits and importance? A multiregional study from Bangladesh, Ethiopia, India, Malawi and the Philippines concluded there was a “very sizeable social demand” for better quality of vaccination services<sup>4</sup> and that “serious damage” was being done to the Expanded Programme on Immunization (EPI) by poor interaction between staff and clients.<sup>3</sup> Other studies<sup>5–7</sup> suggest that vaccination demand and acceptance depend on factors that are far more numerous and complex. Supply- (or provider-) related factors are clearly important, particularly the relationship between health-care workers and mothers<sup>3,8</sup> (including attitudes of vaccinators towards mothers, as well as their perceived motives and technical competence).<sup>3,5,8,9</sup> The opportunity costs (such as lost earnings or time) incurred by parents may also have an important impact on uptake. Suppliers

may not be fully aware of these costs or may fail to address them through convenient locations and timing of services. Demand-related factors, such as parents' knowledge about vaccination and immunization and their attitudes towards them, are also likely to influence uptake. What remains unclear, however, is whether people's attitudes are more strongly influenced by the perceived benefits of vaccination or by the perceived risks of not being vaccinated. According to one school of thought,<sup>5</sup> the demand for vaccination is triggered by a general perception that vaccines are good for infants and/or a strong feeling of vulnerability to serious illness. A contrasting viewpoint<sup>4</sup> is that the greatest determinant of vaccination uptake is the perceived quality of vaccination services. The situation is likely to differ depending on the context.

Parents' knowledge about vaccinations is poor, and the knowledge they do have is often wrong.<sup>5,9</sup> It appears that there is no association between parents' knowledge and vaccination coverage rates,<sup>5,7,9</sup> and the public accept vaccination despite limited knowledge about it.<sup>3,5</sup> One thing is clear, however: when parents resist vaccination, it is because they want to protect their children from harm.<sup>5,10</sup> In 2003, political and religious leaders in three Nigerian states boycotted a WHO polio vaccination campaign, claiming that the vaccine caused sterility and AIDS.<sup>11</sup> Similarly, certain Hindu and Muslim groups in India have long held the belief that vaccination is a covert method of family planning, primarily targeting Muslims.<sup>5</sup> The greater acceptance of vaccination found among Javanese transmigrants as opposed to Acehnese villagers in the same area has been attributed to the former's more positive cultural attitudes towards health. Both groups were found to have an equally poor understanding of vaccination and health in general.<sup>7</sup> Similarly, followers of the Aga Khan in Pakistan were found to be receptive to ‘biomed-

ical’ or ‘western’ medicine and reasoning despite the fact that as a group they were largely illiterate and understood little about vaccination. Cultural receptivity to perceived modernity and education, as well as trust in health workers, were considered to be the most important factors influencing attitudes.<sup>6</sup> In short, knowing little about vaccination does not necessarily translate into negative attitudes towards it;<sup>5–7</sup> factors such as trust (e.g. in health-care providers or ‘western’ medicine) and culture may be more influential.<sup>6,7</sup> The impact of high levels of knowledge on subsequent attitudes towards vaccination is unknown.

The fundamental question is whether or not resources should be invested in improving parents' knowledge of and attitudes towards vaccination. Although the evidence is unclear, it is commonly believed,<sup>3,9</sup> though some disagree,<sup>2</sup> that strengthening advocacy, communication and social mobilization will enhance informed and willing participation in vaccination programmes and that vaccination strategies are likely to be more successful if they are based on an understanding of sociocultural behaviour.<sup>3,9,12</sup> Yet these approaches are not routinely incorporated into vaccination policy. Since factors influencing demand vary greatly by region and context, findings from one population cannot always be extrapolated to another. Thus, simple operational research into local knowledge and attitudes should become an essential part of every vaccination campaign. Current research into parents' knowledge and attitudes towards childhood vaccination is disproportionately low considering the enormous scale and relevance of this issue. In order for such efforts to be successful, parents must be empowered to freely and clearly express their attitudes towards childhood vaccination. ■

## References

Available at: <http://www.who.int/bulletin/volumes/86/6/07-047159/en/index.html>

<sup>a</sup> Nuffield Centre for International Health and Development, Leeds Institute of Health Sciences, University of Leeds, 101 Clarendon Road, Leeds LS2 9LJ, England.

Correspondence to Mandip Jheeta (e-mail: [mandipjheeta@gmail.com](mailto:mandipjheeta@gmail.com)).

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