Making Vaccine Technologies Work for the Poor

Amid rapid scientific and technological advance, vaccines for children are attracting renewed attention as a key route to tackling the diseases that affect the poor. If this potential is to be realised, it is not only essential that innovation systems make appropriate vaccines available, but also that delivery systems suit cultural and political realities. This IDS Policy Briefing argues that policymakers and practitioners must pay close attention to local cultural understandings of vaccines, looking at how the dynamics of supply and demand interact in local settings, if they are to improve uptake, design appropriate health promotion approaches, and address so-called ‘anti-vaccination rumours’.

Global technologies, local needs
Childhood vaccination is currently central to national and international policy agendas to tackle ill-health and poverty, especially in Africa. Most countries have long-established immunisation programmes, which are credited with large reductions in childhood mortality. Recent scientific advances have made available vaccines for other diseases, such as pneumonia, and offer promise for others, including malaria. New funding initiatives, such as the Vaccine Fund of the Global Alliance on Vaccines and Immunisation (GAVI), offer important ways forward in enabling countries to access such vaccines.

However, these advances come at a time when routine immunisation rates are stagnant or falling in many sub-Saharan African countries. Redressing such declines, and ensuring that any proposed expansion of immunisation programmes is effective and sustainable, have thus become key issues of policy debate. The main focus is often immunisation supply, highlighting problems of primary healthcare infrastructure, financing and management. Yet there is a need for complementary understanding of vaccination access and demand.

Many social, economic and geographical factors influence people’s access to vaccination and other health services. Some people do not accept vaccination even when it is easily accessible and recent cases of resistance to vaccination programmes have reignited concern over ‘anti-vaccination rumours’. Policymakers and health professionals often assume that low demand or rumours reflect public ignorance or misinformation, which needs to be corrected through education.

But this overlooks how people themselves understand vaccines. Vaccination is an area where highly globalised technologies meet the deeply personal, social and cultural worlds of infant care, on the one hand and local health systems which have developed in particular political settings, on the other.

Key questions on vaccines

Focusing on research from West Africa, this briefing asks:

- How do parents consider the benefits and risks of vaccines, and what is the nature of vaccine demand?
- How and why do rumours emerge?
- How do the dynamics of vaccination supply and demand interact in contemporary health systems?
- How can vaccination uptake be improved sustainably and in ways that suit poor people’s own understandings and priorities around child health?
Vaccination in cultural context

Whether or not parents and carers seek vaccines for their children depends on how vaccination relates to existing knowledge and perceptions of child health and protection, diseases and their causes, and of medicines and their effects. Also significant is the context of vaccination provision and people's experiences of this, which can vary greatly according to social background, poverty and other factors.

It is important to distinguish between passive acceptance of, or compliance with, vaccination programmes, often under pressure from health workers, and active demand based on an appreciation of the benefits of vaccination. Today, it is common to find high levels of active demand for vaccination among parents in both rural and urban settings. Policymakers and health professionals often assume this reflects people's acquisition of 'modern' biomedical knowledge, and their understanding — gained through formal education in general or health promotion programmes in particular — of the benefits of vaccination in protecting children against specific diseases. Yet these assumptions can prove faulty, overlooking local concepts and practices that actually underlie 'culturally-grounded active demand' (see box 1).

Social or community demand for vaccination can also be important, where attendance becomes part of established social routines and networks. In many West African localities, for example, vaccination days are a kind of women's group outing, involving best dress for mother and baby, social networking, and sometimes singing and dancing. Yet some — including poorer, immigrant mothers and those with small, weak babies who fear other's moral comment (in local cultural understandings, weak babies can be a sign of everyday or moral misdemeanour) — feel excluded from this social dimension.

Where infants do not complete vaccination schedules, it is often the case that mothers are willing but unable to go. Heavy workloads can intervene, especially for poorer families. Sudden illness, family events, intra-household disputes or necessary travel can also arise, affecting anyone. In the diverse livelihood and social settings in which many poorer people live, it is often such day-to-day problems that cause missed or late vaccinations, more than the factors often assumed in policy debates — such as poor education or social variables such as ethnicity.

However, there are also cases where people refuse particular vaccines, based on perceived risks, uncertainties or concerns about safety. Commonly, such concerns are based on people's experiential knowledge and interpretations of vaccination having negative effects either on their own, or others', children. In Guinea and The Gambia, for example, some people avoid vaccination because they believe their particular child's constitution or a family trait makes them vulnerable to unusually severe reactions such as fever. People also worry about side effects if multiple vaccinations become due simultaneously, for example because of earlier missed appointments.

Broader rumours — for instance that vaccines cause sterility, render children violent, or cause paralysis — also surface from time to time and have sometimes been linked to mass vaccination refusal.

While policymakers often 'write-off' such rumours as based on ignorance and misinformation, social science analysis suggests that they take root in particular cultural and political circumstances. These include where (a) top-down, coercive campaign-type approaches are privileged; (b) where technological and
Local supply-demand dynamics

Where demand for routine immunisation is generally high, problems in vaccination coverage are more attributable to issues of supply and service delivery, but these in turn interact with vaccination demand. In many developing countries, weak state health systems face difficulties in ensuring regular supplies of all antigens to health centres, and maintaining outreach services, especially to more remote rural locations. These local supply and delivery problems in turn impact negatively on demand, as mothers who make the effort to attend vaccination assembly points but find no service or no vaccines, can be put off future attendance.

Health service decentralisation and cost-recovery policies in some cases exacerbate these difficulties. In Guinea, health centres aim to fund the fuel, transport and logistical aspects of their preventive services from treatment user fees. But problems with recovering these fees mean that they often impose informal charges for (notionally free) vaccination services. Most parents are prepared to pay these, but the poorest families are often unable to pay and are thus excluded from vaccination.

In contrast with routine vaccination delivery, vaccination campaigns and National Immunisation Days, such as for polio, are often experienced by parents as offering guaranteed supplies that are genuinely free. This can lead some parents to see them as a preferable substitute for all or part of the routine immunisation schedule. This is the case in both Guinea and Sierra Leone, where it sometimes leads to children missing parts of the routine vaccination schedule, or to parents thinking that their children are fully vaccinated (having ‘counted’ campaign injections as part of the five vaccination events they know their child should attend) when they are not.

In most developing countries, state health systems now intersect with a proliferation of private, non-governmental, community and traditional practitioners, both regulated and unregulated. Vaccination is usually restricted to state services, so while this pluralisation may not affect vaccination directly, it does have many indirect effects. By drawing clients away from government health centres for curative services, private providers further weaken their financing and hence capacity to maintain preventative services. If people do not attend state clinics for treatment, the strategy of using these visits to check and correct vaccination status is undermined.

People’s experiences of vaccination delivery are also strongly shaped by the attitudes and practices of nurses and other frontline health workers. Positioned between (often weak) healthcare supply systems and socially-differentiated populations, such workers face many challenges. In many West African localities, a common discourse among nurses labels immunisation ‘defaulters’ as a particular category of mothers, characterised by their ignorance, adherence to ‘tradition’, or misplaced priorities in travel or trade, rather than recognising the contingent reasons that more often lead to default. This legitimises intolerance of mothers who are late or miss appointments. Nurses often shout at them and embarrass them in front of other mothers, and this can put them off future attendance.

The Oral Polio Vaccine controversy in northern Nigeria

In 2003, the Global Polio Eradication Campaign was derailed when the populations of three states in northern Nigeria refused the Oral Polio Vaccine (OPV) on the grounds that the vaccines were allegedly contaminated with anti-fertility substances and the HIV virus.

A complex of factors contributed to this rejection and played into the ensuing 16-month controversy. Spearheading the boycott were Muslim leaders, including the chairman of the Supreme Council for Sharia in Nigeria, Dr Datti Ahmed, who claimed that OPV contamination was part of a plot by Western governments to reduce Muslim populations worldwide. These claims interplayed with international tensions around Islam and American imperialism post 9/11, as well as with longstanding tensions in Nigerian politics between the north and the south, and between federal and state government. Furthermore, the high resource levels and political attention devoted to the OPV campaign contrasted so starkly with the near-collapse of Nigeria’s routine immunisation and primary healthcare delivery that local communities suspected ‘other’ motivations for the campaign.

At a local level, anxieties about OPV also made sense in relation to past incidences of alleged malpractice by the international health community. In particular there was a 1996 case where families in Kano accused Pfizer, a US-based pharmaceutical company, of using an experimental meningitis drug on patients without fully informing them of the risks. In addition, experiences and understandings of polio among Hausa communities played into the controversy. People did not prioritise targeting polio over the many other diseases affecting their children, believing it to be caused by a spirit, Shan-inna, and thus not amenable to vaccination. A series of tests of the vaccine by federal and state government teams proved inconclusive and disputed. Only when vaccines were sourced from an Indonesian company, in a Muslim country, did Kano state agree to resume the campaign in mid-2004. But while this marked a symbolic end to the controversy, fear and suspicion and instances of OPV refusal continue within many northern communities.
Taking local cultural and political dynamics seriously

If the projected new wave of vaccine technologies is to achieve its potential in promoting child health and reducing disease burdens among the poor, then international finance and public-private partnerships in investment and innovation, however carefully targeted, can only go so far. Concerted attention to ensure the effectiveness and sustainability of vaccination delivery and uptake in local settings is also needed. This requires ongoing engagement with basic issues of health service delivery on the part of national and local government staff, donor agencies and NGOs. This is not the stuff of headline-grabbing stories of new global vaccine discoveries, but it is nonetheless important and to be effective, such engagement must pay serious attention to the interacting social, cultural and political dynamics of vaccination demand and supply.

Attention to the socio-cultural dimensions of vaccine demand could, for instance, inform more appropriate policy approaches to education and communication. Instead of simply delivering top-down disease specific messages, these could usefully develop more dialogue-based approaches which work with and build on the local cultural concepts through which people think about vaccination. Rather than assume that immunisation demand is best fostered if parents acquire ‘modern’ biomedical knowledge, approaches could more sensitively appreciate and build on the complementarities between vaccination and ‘traditional’ practices in parental perspectives.

Appreciating vaccination as a social event, positive for some but excluding and discriminatory for others, is also important if services are to reach the poor effectively. Policy and health worker approaches need to pay particular attention to including vulnerable mothers and to fostering integrative social routines. If parents and frontline health workers are to interact effectively, the latter need to become more aware of the actual reasons for vaccination default - whether they be day-to-day livelihood problems, social marginalisation, or culturally, politically or experientially-grounded anxieties about vaccine effects. This in turn carries implications for how nurses and other frontline health workers are trained and supervised.

Policy approaches to improving vaccine delivery need to be informed by understanding how different delivery styles are perceived and interpreted by parents in specific social and political settings. In particular, the potential for campaigns to stand out starkly amidst weak state services, and to contribute to the spread of anxieties and rumours on the one hand, and to be valued as a substitute for routine services, undermining schedule completion on the other, is striking. Better integration of campaign and routine activities, and greater public dialogue about their interrelationship will be critical if vaccine technologies are to be delivered effectively in the future. With growing pluralisation and privatisation in the health sector, policy dialogue about its implications for vaccination and strategies for achieving more effective relationships are also needed.

In short, poor vaccination uptake – from low-profile, stagnating coverage to high-profile controversy and refusal – should not be attributed to an ignorant, unenlightened, easily misled public. Rather, appreciating the diversity of ways that parents consider and reflect on vaccines, in ways that may not conform either with global policy assumptions or with biomedical models and yet are logical in their particular cultural and political contexts, needs to be central to policy debate if vaccination technologies are genuinely to work for the poor.

Further reading


See also reports by Clifford Kamara on Sierra Leone, and Ayodele Jegede on Nigeria, at www.ids.ac.uk/ids/KNOTS/Projects/vacc1.html

Credits

This IDS Policy Briefing was written by Melissa Leach and edited by Laura Turquet. It draws on two research projects co-led by James Fairhead, University of Sussex and involving research partners in The Gambia, Guinea, Nigeria and Sierra Leone called Childhood Vaccination: science and public engagement in international perspective (October 2002-September 2004, ESRC Science in Society Research Programme) and The Cultural and Political Dynamics of Technology Delivery: the case of infant immunisation in West Africa (January 2003-October 2005, DFID).

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