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maternal & child health

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IMCI saves children's lives in Tanzania

The Integrated Management of Childhood Illness (IMCI) strategy has been applied in most developing countries in an attempt to reduce the number of deaths amongst children under five. Before scaling-up their efforts, governments need to know how effective this strategy is when compared with routine health care for children.

Most child deaths can be attributed to a small number of diseases for which interventions are available, such as pneumonia, diarrhoea, measles, malaria and undernutrition. In response to this evidence, the Integrated Management of Childhood Illness strategy was developed in the late 1990s by the WHO and UNICEF.

IMCI sets clinical guidelines for the case management of each sick child treated at primary health facilities. These involve a set of tasks for health workers, including a comprehensive assessment of the child, classifying their condition and deciding on treatment, and explaining to carers how to administer medicine. In order to improve child survival strategies, health ministries need to know what effect IMCI has on quality of care, what it costs and how efficient it is when compared with the more conventional and vertical approach of training in specific diseases.

The Multi-Country Evaluation of IMCI Effectiveness, Cost and Impact (MCI), co-ordinated by the WHO's Department of Child and Adolescent Health and Development, assessed whether IMCI improved quality of care in five countries. This study focuses on research in Tanzania, in which two rural districts with IMCI were compared with two districts where IMCI had not yet been introduced. The researchers reported the following findings:

- In the two year period after IMCI was introduced in the two districts, child deaths were 13 percent lower than in the two comparison districts.
- The proportion of correctly managed child visits to primary care facilities increased four-fold with IMCI training, compared with routine care in comparison districts.
- Overall, families of children visiting facilities with IMCI reported significantly lower out-of-pocket expenses than those visiting non-IMCI facilities.
- IMCI training improved efficiency as it led to improvements in the quality of child health care without increasing costs.

The researchers developed a single index for the quality of child case management in primary care facilities, for use when analysing costs linked to quality of care outcomes. This is useful when assessing child health strategies for efficiency gains and losses. The study notes that in Tanzania, district health management was strengthened at the same time that good quality IMCI training was being implemented. It found that:

- IMCI is very efficient where high quality training is coupled with good district level management capacity.
- In the above context, improved service quality measured by the proportion of correctly managed child visits is a good way to define impact on child deaths.
- As IMCI improves efficiency in child health care, it allows governments to make the most of scarce public health resources.

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BCG revaccination shows no benefit in Brazil

Many countries routinely vaccinate babies with BCG to prevent tuberculosis (TB). Does a second BCG vaccination give extra protection? Research by Brazil's Universidade Federal da Bahia in the cities of Salvador and Manaus, shows no added benefit from revaccination of school children aged seven to fourteen years.

Neonatal BCG vaccination provides 80 percent protection against TB meningitis but very variable protection against TB disease in the lungs. Revaccination is routine in several countries, mostly in eastern Europe and Asia, and in some municipalities in Brazil, although World Health Organization (WHO) global programmes on TB and vaccines do not recommend this. In the past decade, some countries have decided to stop BCG revaccination, but for economic, not public health, reasons.

The researchers assessed the impact of BCG revaccination on 103,718 children in 386 schools, compared with 97,087 children in 375 schools who received no extra vaccine (control group). After five years of follow-up they found that:

- There were 279 cases of TB in the study – 144 in the revaccination and 135 in the control group.
- The crude incidence of TB in the revaccination group was 29.3 per 100,000 person years and in the control group was 30.2 per 100,000 person years.
- The efficacy of BCG revaccination is nine percent (range -16 to 29 percent).
- The numbers of TB cases involving the lungs versus other organs were similar in both groups.

In summary, revaccination given to children aged seven to fourteen in this setting does not provide additional protection of public health importance and should not be recommended. The researchers will continue to follow-up the groups to find out whether:

- revaccination protection increases with time since vaccination
- it varies by age at vaccination
- the first dose of BCG vaccination at school is protective
- the effect of BCG is the same in cities with low and high levels of environmental mycobacteria, related to the agent that causes TB.

They also recommend that trials of new TB vaccines should be planned with regard to issues raised by this study, including duration of vaccine efficacy, potential variation by age and time since vaccination, and success of passive follow-up of cases. The results and recommendations from this study led the Brazilian government to stop its revaccination policy in May 2006.

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Midwives' attitudes to women in labour in Ghana

Less than half of all women in Ghana give birth in hospital attended by a trained midwife. Some of these women fear being treated badly by the staff. Training health workers to better understand and respond to the needs of pregnant mothers is essential if women are to seek safe and effective maternal care.

More than half a million women die and one million children lose their mothers each year due to pregnancy and childbirth in developing countries. For every woman who dies, another 20 develop a life-long health problem. Two-thirds are caused by complications which can be dealt with. However, health programmes which aim to tackle these problems have not always been successful.

While many women do not have access to good quality health services, there are factors which influence a woman's decision to seek care. The University of Aberdeen, UK, together with the Ghana Health Service, looked at how midwives' behaviour affects pregnant women's choice of health care. The study was part of a project on health care for women in pregnancy and delivery in developing countries called SAFE (Skilled Attendance for Everyone).

Interviews and focus group discussions were conducted in the suburbs of Ghana's capital city, Accra. The women interviewed were between the ages of 18 and 38 and had between one and four children. Most of the mothers had basic education, were married and worked in trades such as hairdressing, dressmaking or petty trading.

Although some of the experiences the women shared in the interviews were positive, others described serious neglect and abuse. Health workers were angry when women did not to know about labour and delivery. They shouted, were rude, refused to offer assistance, and in some cases threatened women in labour.

Attitudes of health workers towards patients were a major influence on women's decisions about where to give birth.

- Women also took into account a previous birth experience, the cost of care, the distance they had to travel, personal recommendations, and being near to family and friends when they gave birth.
- Women expected kind, courteous and professional treatment.
- When women were treated badly they looked elsewhere the next time they were pregnant and would not recommend those health services to other women.

Women need to be looked after by trained professionals who can spot complications at an early stage. But for pregnant women to choose these services the health workers must learn to treat women with respect. One explanation for the health workers' negative behaviour may be the strong sense of social hierarchy found in many parts of sub-Saharan Africa. The study recommends that health workers:

- views on their work and what motivates them should be investigated
- receive training to improve their interpersonal skills, for example, in counselling women, learning to communicate well and being sensitive to different cultures
- are properly supervised by trained managers
- need to work in an environment which has a reliable supply of drugs, equipment and transport.

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Factors influencing infant immunisation coverage in Guinea

Immunisation is a highly cost-effective public health intervention. But immunisation rates are stagnant or falling in most sub-Saharan African countries. The standard approaches of health education and improved vaccine supply may not stop this decline. What other factors shape immunisation delivery and acceptance?

Coverage depends on how vaccine supply and delivery interact with demand for these services. A working paper from the Institute of Development Studies, UK takes an anthropological approach to consider influences on vaccine demand, supply and coverage in the Republic of Guinea. The researchers carried out 1,550 detailed narrative interviews and child health biographies, plus a review of documents, participant observations, group discussions and interviews with health care workers and users in urban and rural settings in Kissidougou and Dinguiraye prefectures.

Immunisation coverage has declined overall since peaking in the mid-1990s. Health centre staff and mobile teams give routine vaccinations. National Vaccination Days deliver polio vaccine. Children who have missed vaccinations may 'catch up' when they visit health workers for treatment or through home visits by health workers.

The authors report that:

- Vaccination is formally free. But inflation, falling revenues and competition from the private sector have cut the capacity of health centres to deliver vaccinations. Unofficial charges are common.
- The majority of parents value vaccination highly. Many mothers believe that vaccines help health in a general rather than a disease-specific way and that they protect against multiple illnesses, including some for which there is no vaccine.
- Missing or delaying vaccination is less linked to socio-economic characteristics and more due to practical problems, such as geography, transport, workload or family demands, or social relations and gender roles that affect decision-making.
- The economic downturn also plays a role. Willingness aside, some parents cannot pay or fear overcharging or fines for previous default.
- Vaccine delivery problems relating to the organisation and financing of multiple service providers can lead to difficult interactions between mothers and health workers which can discourage even those who really want vaccination.
- Several forms of community organisation support vaccination. But social pressures can also inhibit attendance.

The authors make several recommendations for policymakers:

- develop more dialogue-based approaches to health promotion, which work with and build on local concepts of health
- revise communication strategies to help mothers understand vaccination schedules
- improve communication between health providers and communities so that health workers better understand parents' demand for vaccination plus the factors that can lead to non-attendance
- develop more transparent and accountable governance mechanisms which enable frontline health workers to highlight and solve funding difficulties
- improve integration between National Vaccination Days and routine immunisations, to enhance public understanding of their links
- discuss the potential role of the private sector in partnerships to deliver vaccination.

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Keywords: integrated management of childhood illness (IMCI), BCG revaccination, tuberculosis, maternity services, midwives, childbirth, infant immunisation