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maternal & child health

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IMCI training boosts health workers' performance

Antimicrobial drugs are an essential tool for child survival, treating major killers such as pneumonia, diarrhoea and malaria. But antibiotic misuse by health workers is adding to the rise in drug resistant disease. Training primary health workers in Integrated Management of Childhood Illnesses (IMCI) can improve the use of antimicrobials for children.

IMCI is a strategy developed by WHO and UNICEF to provide effective and affordable ways to reduce child mortality and improve child health and development. IMCI includes both prevention and treatment, and is designed to:

- develop the case management skills of health workers
- strengthen health system support for child health service delivery
- improve family and community practices relating to child health.

Health workers in more than 100 developing countries have received in-service or pre-service training in IMCI. The training guides the health worker through a process of assessing signs and symptoms, classifying the illness based on treatment needs and providing suitable treatment and education of the child's caregiver. But does it have an impact on antimicrobial use at the primary level?

Researchers from the World Health Organisation surveyed 75 health facilities in Tanzania, 80 in Uganda and 96 in north-eastern Brazil. They found that about one-third of children under five years visiting health facilities in Tanzania and Uganda are classified as needing antibiotics. Most of these have pneumonia; others have acute ear infections or dysentery. More than two-thirds of children in these countries are given anti-malarials. In Brazil, 10 percent of children require antibiotics – 28 percent of them for pneumonia, 18 percent for acute ear infection and 68 percent for other infections.

The surveys also showed that, compared with their colleagues, IMCI-trained health workers are more likely to:

- prescribe anti-malarials and antibiotics correctly
- communicate effectively to caregivers about how these drugs should be used
- provide the first dose of the drug at the health facility, ensuring that treatment begins promptly and caregivers see how to give it correctly
- promote rational use of these drugs, with fewer children receiving unnecessary antibiotics.

The researchers conclude that Ministries of Health and their partners, including WHO, should support IMCI training, not only to improve management of childhood illness but also to reduce the misuse of antimicrobials. They list some of the challenges involved for developing countries, including:

- increasing training coverage at primary level facilities, given the rapid turnover of staff in some settings
- incorporating IMCI guidelines into pre-service training of health workers
- improving care-seeking behaviour
- strengthening the roles of community-based health workers.

Eleanor Gouws
Social Mobilization and Information Department, UNAIDS, 20 Avenue Appia, 1211 Geneva 27
gouwse@unaids.org

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Protecting access to health services in rural China

In the transition to a market economy, China has passed many laws aimed at protecting public interests, especially those of poor people. One example is the Maternal and Infant Health Care (MIHC) Law. Further regulations and resources will be needed to strengthen the MIHC Law, however.

The MIHC law came into force in June 1995. Its 38 articles cover the period before women get married, antenatal and perinatal health and include guidelines on technical implementation, management and legal liability. Researchers from the Liverpool School of Tropical Medicine in the UK, and Peking University in China, explore the factors affecting the implementation and impact of the law in Yunyang and Zhongxian – two poor rural counties in Chongqing municipality. They ask:

- What access do people have to the essential health services guaranteed by the law and what factors affect this?
- What impact has the law had on inequities in access to and financing of these essential health services?
- What are the major factors influencing the law's implementation and access to health care in the two counties?
- What are the lessons for policy-makers aiming to improve access to basic health care services?

The research found positive changes in attention to MIHC services by leaders, the allocation of resources and quality of services as perceived by users. But it also identified barriers to the implementation of the law:

- The lack of financial support from government at all levels inhibits the ability and willingness of service providers to deliver MIHC services.
- The low levels of skills and qualifications of staff limit the quality of services provided and the capability of supervisors.
- The lack of regulatory power of the law, combined with low levels of government finance and weak regulators, severely reduces its influence on provider behaviour.
- There is low demand for MIHC services, particularly among poor people, due to low educational levels, lack of purchasing power and opportunity costs. This restricts the law in improving access to services.

Legislators have tried to provide a broad framework to cover China's variety of local situations. The development of local regulations, implementing plans, supervision and monitoring of the law is a political process, where health competes with other government priorities for scarce resources.

Further regulations are needed to accompany the law, stating the roles and responsibilities of different institutions and ways to discipline those who break the law. This will require more resources for MIHC services, subsidies for poor people and incentives for unqualified providers to follow the new rules.

Rachel Tolhurst
Liverpool School of Tropical Medicine, Pembroke Place, Liverpool L3 5QA, UK
r.j.tolhurst@liv.ac.uk

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The performance of paediatric care in Kenya

In developing countries, 1 child in 10 dies before its fifth birthday. District hospitals are essential for providing health care to children in these countries. Many district hospitals in sub-Saharan Africa remain under-resourced, with poorly trained staff, run-down equipment, and a lack of drugs and supplies.

The Kenya Medical Research Institute/Wellcome Trust Programme's Centre, in Kilifi, Kenya, assessed the quality and performance of inpatient paediatric care in 14 district hospitals in Kenya.

There was considerable differences between hospitals. Death caused by anaemia ranged from 3 to 46 percent while overall child mortality ranged between 4 and 15 percent. There were significant problems with the data. Data was either not standardised between hospitals, or missing. Despite 15 percent of adults being HIV positive, the children were rarely reported as having HIV. Clinicians reported some symptoms, such as pallor, but many were not recorded. The recording of a child's weight is crucial when calculating the drug dosage they will receive. However, in two thirds of cases the child's weight was not recorded. The study also found that:

- Hospitals had basic supplies such as oxygen, antibiotics, anti-malarials and vitamin A but lacked others, such as magnesium sulphate for eclampsia.
- Very sick children were rarely seen by doctors and never seen by paediatricians when they were admitted to the hospital.
- In cases of malaria, the child's records did not indicate the severity of the illness which can be identified through symptoms such as a child's level of consciousness or problems with breathing.
- Only three percent of children with malaria were given the correct dosage of quinine.
- No lumbar punctures were carried out on the 46 children with possible meningitis.
- Most children with malnutrition did not receive appropriate treatment.
- Up to 40 percent of blood transfusions for anaemia may have been unnecessary, wasting a valuable resource and exposing the children to a risk of infection.
- Antibiotics and intravenous fluids were poorly used in cases of diarrhoea.

Existing national and international guidelines for all these conditions were not followed. Members of staff need better training and guidelines to ensure they make accurate diagnoses and follow the correct procedures. The hospitals need more staff, drugs and equipment. The report recommends the following:

- Clinical officers in particular should receive training before they begin working in hospitals. They also need on-the-job training and supervision.
- Patients should be treated in order of urgency.
- Guidelines must be introduced on the correct methods for treating different illnesses.
- Medical records must be improved so that accurate information is available.

Tackling these problems might need local, national, or even international action. At an international level, vital mineral supplements for malnourished children must be made available from a reliable source. At a national level, the essential drugs list should be amended to include Vitamin K. Action can be taken at local level by using hospital income to buy food supplements.

Mike English
KEMRI-Wellcome Trust Collaborative Programme, PO Box 43640, 00100 GPO, Nairobi, Kenya
menglish@wtnairobi.mimcom.net

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Safer pregnancies in rural India

A mother's access to antenatal care, between conception and birth, is crucial to a healthy birth. In parts of India, many women are not using antenatal services despite government and NGO efforts to improve services. Extending the role of nurses and midwives, and providing more care within communities are key to increasing access and limiting pressure on local services.

Researchers from 'Opportunities and Choices' programme at the University of Southampton, UK, drew on data on 11,369 women of reproductive age from the Indian states of Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh in the 1998-99 National Family Health Survey. The researchers examined the factors associated with the use of antenatal care facilities in rural areas.

The study uses data on antenatal check-ups for women during their last pregnancy. The variables included were: education level, socio-economic status, demographic characteristics, including age and parity, and level of exposure to the media, such as regular television viewing. The researchers considered the following components of antenatal care: urine testing, taking of blood pressure, blood testing, abdomen examination, internal examination, tetanus vaccination and iron and folic acid supplements.

Research findings include:

- Overall, 3 out of every 5 women (62.8 percent) did not receive any antenatal check-up during their last pregnancy.
- Among those who did attend a clinic, the average number of visits was two.
- In Uttar Pradesh and Bihar more women were seen by a doctor than by a nurse or midwife. Overall 55 percent were seen by a doctor.
- The most commonly received services were tetanus vaccination and supplements. Women visited at home by health workers received fewer services.
- Women who had a higher standard of living and education levels were more likely to visit a health clinic and receive a more specific type of care.
- Women from poor and uneducated backgrounds with at least one child were least likely to receive antenatal care.

To overcome the barriers that prevent women in rural India accessing antenatal services, policy-makers could:

- take into account the diverse social conditions between states and between communities
- consider whether the uptake of services for second and subsequent pregnancies may be due to a reduced perception of need, or difficulties with caring for young children
- plan health policies that take into account that decisions to access antenatal care are based on perception of need, and the cost and quality of different health care providers
- provide training and supervision for health workers to ensure all the components of antenatal care are provided
- increase the role of nurses and midwives so that specialised clinical staff can treat those with complications
- expand the provision of iron or folic acid supplements in communities to reduce dependence on the health service for these simple interventions.

R William Stones
Princess Anne Hospital, Southampton SO16 5YA, UK
T +44 (0) 23 8079 6033 **F** +44 (0) 23 8078 6933
r.w.stones@soton.ac.uk

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id21
Institute of Development Studies
University of Sussex
Brighton, BN1 9RE UK

T +44 (0) 1273 678787
F +44 (0) 1273 877335
E id21@ids.ac.uk

IDS Institute of Development Studies Sussex

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