The challenge of the next decade is to reduce child mortality in poor countries, writes **Andrew Tomkins**

Better Health for the World's Children

Childhood illness was common and healing and compassion were an important part of the ministry of Jesus Christ 2000 years ago. Just two hundred years ago, under five mortality rates were over 300 per 1000 live births in the UK and probably even higher among children in poor countries. In the last 50 years child survival has improved considerably. Dedicated work by doctors, nurses, nutritionists and other health professionals, using professional skills and new technologies, improved nutrition, water and sanitation, hygiene, education, living standards and childcare have all been crucial.

However, there are still many millions of children throughout the world who do not have these provisions and over ten million children die every year, the vast majority in poor countries. Many of the survivors do not reach their potential because of illness, malnutrition or adverse social environments. The challenge for the next decade is to reduce child mortality rates even further, especially in the poorest countries, and to improve the health, nutrition and development of those, increasingly the majority, who survive. It is definitely possible.

Medical services.

In many of the world's poorest countries, medical services overseas were initially established by doctors working for the UK government service and by medical missionaries who set up services in more remote areas with considerable personal danger. Seven out of 10 missionaries called by God to serve in the Methodist church in the Gambia died there.

The remarkable biographies of the many hundreds of Christian doctors serving in Africa since the seventeenth century described in Heroes of Health Care in Africa (Schram) are a testimony to their response to God's call and his enabling in very challenging circumstances. Nearly all of them, whether they were trained in paediatrics or not, had to look after many children with malaria, pneumonia, diarrhoea, measles, tetanus, protein energy deficiency, vitamin A deficiency and meningitis. Christian doctors worked in government, university and church related hospitals or tropical medicine research organisations.

Some built their own hospitals, others set up training schools for medical assistants and nurses. High standards of care have continued in many of these hospitals because of the maintenance of the Christian ethos and witness with which the medical work was conducted.

Initial Advances

There have been major medical advances in the last 50 years. Descriptions of kwashiorkor in Ghana (Williams) were followed by the development, in Jamaica, of effective regimes for treatment of severely malnourished children (Waterlow). The devastating effects of measles on child mortality and nutrition were highlighted in Nigeria (Morley) and the importance of immune factors in the development of meningitis, malaria and leishmaniasis were described in Nigeria and the Gambia (Bryceson, Greenwood and Whittle) and leprosy worldwide (Brown). The development of effective oral rehydration regimes in India and Bangladesh (Cutting) saved many thousands of lives. These new technologies were taught in the new medical schools, many of them being set up by Christians with energetic, visionary leadership such as those in Nigeria and Ghana (Parry).

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Overseas service

Many Christian paediatricians worked for short or long periods in government, university and church hospitals. While funding was never in excess there were many schemes - UK government, research councils, and UK based Missionary societies - for UK doctors to serve overseas. They made many contributions to the health services in poor countries but success depended on the immense hard work of dedicated paediatric nurses, physiotherapists, occupational therapists and nutritionists. Particularly impressive was the work among children with disability from polio, contractures following burns and many orthopaedic conditions where skill, patience and compassion are crucial in helping a child get through a series of painful procedures. Much of the work was done in partnership with the local church whose visitors and prayers enhanced the medical care.

Recent Advances

The last few decades have seen considerably improved treatment of sick children using better regimes of antibiotics, antimalarials, oral rehydration and micronutrient supplements. The Integrated Management of Childhood Illness(IMCI) programme of WHO and UNICEF, supported by research groups in the UK and elsewhere (Tulloch), trains health workers in the recognition of basic clinical signs without dependence on microbiology, biochemistry or radiology. These regimes have improved the management of pneumonia, malaria, diarrhoea, meningitis and convulsions but an important proportion of children do not respond to first line drugs and there is now an urgent need for surveillance of antibiotic resistance and development of realistic second line regimes.

A high proportion of infant mortality is due to death in the neonatal period. Hypoglycaemia, hypothermia, birth asphyxia, septicaemia and pneumonia can be managed by encouragement of early and exclusive breast-feeding, maintaining body heat, clearing the airways and recognising and treating infection. Low birthweight and premature infants are vulnerable but can be managed using the kangaroo method where incubators are unavailable. Many perinatal illnesses are due to poor health and malnutrition in the mother; much greater attention is now paid to Safer Motherhood initiatives - seeking to reduce maternal mortality rates (sometimes over 1000 deaths per 100,000 deliveries) and pregnancy complications.

Malnutrition contributes to over 50% of child deaths globally. New management regimes including early treatment of infections and micronutrient supplements have reduced mortality considerably. Tragically food shortage from civil unrest and climatic stress still leads to epidemics of severe malnutrition but many lives have been saved as a result of health professionals, many of them Christians, who leave their relatively secure jobs in the UK to serve in relief teams often in dangerous situations. UK based organisations working with local national churches, such as Tearfund, have been particularly effective in recent years.

Micronutrient malnutrition is dangerous. Vitamin A deficiency reduces immunity seriously and regular administration of oral supplements - just 3 times per year - reduces mortality among Under 5s by nearly 30%. Iodine deficiency causes reduced IQ; iodisation of salt or administration of capsules of iodised poppy seed oil to pregnant women can eliminate this tragedy. Cheap short course supplements of Zinc reduce the severity of diarrhoea and, when given prophylactically, reduce the prevalence of several childhood infections. Intestinal helminths cause deficiency of iron leading to decreased cognition and poor educational achievement; a single dose anthelminthic given to school age children at the beginning of each term has nutritional and cognitive benefits. While the health of the citizens of many countries is jeopardised by the enormous population pressure and overcrowding, there is at present, just about enough food being produced for the 6 billion world citizens of planet Earth. There are enormous challenges to researchers and some exciting technical possibilities, such as high vitamin A containing strains of rice. Health programmes will need to support the combination of improved diet, food fortification and micronutrient supplements if children are to develop to their potential.

Malaria can be prevented by sleeping under mosquito nets, especially if they are impregnated with permethrin (ITNs). Primigravidae may be protected against malaria in pregnancy if they are given single doses of sulphamethoxazole/ pyrimethamine in the second and third trimesters. Trachoma can be reduced by combination of personal hygiene, fly control, primary eye care, antibiotics and health education. Diarrhoeal morbidity has been reduced through improved water supplies, sanitation, better disease management at home, including oral rehydration therapy, and improved nutrition especially promotion of breast feeding and micronutrient supplements. However none of these approaches is enough and the development and application of new knowledge is urgently needed.

Child mortality has declined during the last decade from diarrhoea (now < 2 million deaths per year) and respiratory infection (now < 2.5 million deaths annually). Deaths from measles, tetanus, pertussis and diphtheria are much less common. These impressive results have only been achieved because of major commitment by immunisation programmes, better treatment regimes and improved knowledge and practice by child carers at the household level. A look at the 'State of the Worlds Children' published by UNICEF each year shows many exciting achievements. Unfortunately the rates of improvement have slowed and even relapsed in some countries over the last five years. There are several reasons; HIV, civil disruption and deterioration in the quality of health services. In some sub Saharan countries, over 30% of pregnant women are HIV +ve and a third of them transmit the virus to their infants with devastating effects on their susceptibility to infection and mortality. While there are new approaches using short courses of anti-retrovirals and there is new data suggesting that exclusive breast feeding is more protective against post - partum transmission of HIV than mixed feeding, there are enormous challenges to produce and apply new knowledge if health workers are to prevent HIV undoing all the benefits of child health programmes in the last few decades.

Health Care services

Hitherto, health services for children and mothers were largely given free or at least at very subsidised costs. With the recent health sector reforms in many poor countries, sometimes imposed on governments by international agencies and sometimes chosen by themselves, there is a move towards 'cost sharing'. In practice this means that parents have to pay more for the treatment than they used to. The lack of resources for health professionals and, in certain cases, poor management of staff and programmes has resulted in a marked lowering of staff morale. A key challenge for doctors and health managers is to restore a sense of enjoyment, pride in a 'job well done' and enjoyment to the work of health care. This needs, more than ever, a sensitive, sometimes incisive but always caring and compassionate spirit by leaders of health programmes. Many staff now prefer to work in the Christian hospitals than government or private sectors. The challenge is for Christan doctors to have a greater impact in all sectors. Parents worldwide desire a high quality of interaction with health professionals as much as effective therapy and health workers, inspired and strengthened by their Christian faith can make a major impact. Organisations will need to provide a basic, affordable service to poor people, using innovative 'insurance' and 'hardship' schemes combined with higher quality private patient care for those who can afford are desperately needed.

'INTERNATIONAL HEALTH' DOES NOT RESPECT CLIMATIC, POLITICAL OR GEOGRAPHICAL BOUNDARIES.

Community services

'Outreach' clinics of vaccinators and other nurses who screen and treat at community sites have been very effective. The use of the 'Road to Health Charts', developed by the Methodist Church In Nigeria for growth monitoring (Morley), immunisation and early treatment of illness are al important. Sadly outreach has become more difficult recently in many countries as a result of government cutbacks and immunisation coverage rates are dropping. High levels of poverty and international debt repayment 'strangle' health services as they wish to expand. Ironically, there is now more opportunity for UK doctors to serve in Christian hospitals than ever before. They require staff at all levels of seniority; their clinical and administrative skills and experience enhance the reputation and capability of the hospital and its services. More patients come, income increases and essential outreach services can be paid for.

Community Based Health Promotion

The importance of better diet, environment , personal lifestyle and childcare cannot be over-emphasised.. The most effective programmes involve an integrated approach in which committed individuals and groups within a community agree to work together on a programme of activities that they have agreed on themselves rather than had imposed on them from government or external agency. These groups develop a clear understanding of what they can achieve by themselves and become effective advocates in their interaction with different government and NGO groups. This approach - the 'social development approach' - takes a long term view, relying on what can be developed and sustained using local, national and external resources. Successful programmes enthuse a wide range of people with different skills, such as agriculture, water supplies, small business enterprises, farmers, mothers groups, Child to Child groups and schoolchildren. The most effective programmes occur where there is personal and spiritual transformation in the lives of the staff; the potential for inputs from the local Church is enormous. Such partnerships of health professionals and local groups play a major role in health promotion including improved diet for children, heightened awareness and health care seeking behaviour for sick children among parents and the promotion of sexual behaviour which prevents the spread of HIV or the support of families affected by HIV/AIDS. UK health professionals can play key roles in these new church-based multi-disciplinary teams.

Children at Risk

Many children are exposed to a variety of risks which maim them physically or emotionally. The problems facing children on the streets or those who are abused, exposed to violence and even taking part in it themselves, addicted to drugs or solvents, or growing up without parents are enormous. Again Christian health professionals can work effectively with child development workers, social workers, church outreach workers and others who seek to ensure that children, who are the greatest gift and asset that any society has, grow up to experience a life full of meaning and purpose - one in which they are at peace with themselves, their environment and their Creator.

Opportunities

Poor countries now have more hospitals, clinics and training institutions than they had even 20 years ago. They have staff with skills, motivation, vision and experience but millions of children get sick each year and millions more never reach their developmental potential. The challenge is to recognise that 'international health' does not respect climatic, political or geographical boundaries. Christian doctors can contribute to the health of children globally. This can be within their present discipline - whether as a clinician, in public health or as a researcher – and Calman requirements now allow for overseas work. Doctors may also become active in new areas such as advocacy and social development. Whatever the route, the fact that there are far more jobs than applicants suggests that the doors are still wide open.

Andrew Tomkins is Professor of Paediatrics, Centre for International Child Health, University College London

FURTHER READING -

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