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Review Article

Paediatric challenges in Sub-Saharan Africa

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ABSTRACT

The United Nations Millennium Development Goals (MDGs) project is coming to an end in 2015 and is being replaced by ambitious and aspirational Sustainable Development Goals (SDGs). Although the MDGs have been nearly achieved, this is not true in Sub-Saharan Africa where there is still unnecessarily high infant and childhood mortality and where there are many challenges to providing modern child health care. To achieve the SDGs in the next fifteen years, in low-income countries, national ministries of health and community health leaders will need to set reasonable goals and quality improvement projects. Attention needs to paid to economical, evidence-based effective health care; to education of children and youth and of health professional; health promotion and prevention of illness; a balance between expensive health care in large urban hospitals and community health projects; and most importantly to the social determinants of health. But the SDGs are achievable with coordinated and sustained national commitments and increased financial commitments from Western countries.

Keywords: Sub-Saharan Africa, child health, infant mortality, childhood mortality, quality improvement

INTRODUCTION

In 2000, leaders and experts in global health of 189 member states of the United Nations met at the Millennium Summit of the UN World Health Organisation and drafted a series of eight global health objectives, the Millennium Development Goals (MDGs).[1] Surprisingly by 2015, many of the goals have been achieved. The region having the most difficulty to achieve the MDGs was Sub-Saharan Africa. Now that it is 2015, the UN has followed this up with slightly different Sustainable Development Goals (SDGs). This study will review the MDGs and SDGs but also reflect on what is needed, not just in Sub-Saharan Africa but throughout the world.

MILLENNIUM DEVELOPMENT GOALS

The MDGs were ambitious and included eradicating poverty, achieving universal primary education, improving health and environmental sustainability and developing global partnerships for development. This wide-ranging set of goals were clear, specific, measurable and to be achieved by the year 2015. The MDGs reflected the consensus of the time that health and education were critical drivers of a country's progress. For health professionals, the most important were MDG number 4 to reduce childhood mortality by two-thirds between 1990 and 2015, MDG number 5 to reduce maternal mortality by 50% by 2015 and MDG number 6 to reduce the mortality from infectious diseases including HIV/AIDS and malaria. Over the following 15 years, there have been many reports showing the progress.[2-7] During the period from 1990 to 2013, the Global Burden of Disease study reported a 42% decrease in mortality among neonates and a 52% decrease in mortality among children aged 1 - 59 months.[8] The global under-five mortality rate has been cut nearly in half (47%) since 1990. However, during this same period, 216 million children are estimated to have died before their fifth birthday. Most of these deaths were from leading infectious diseases such as pneumonia, diarrhoea or malaria or were caused by preventable neonatal causes such

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Access this article online

Quick Response Code:

Website: www.thejhs.org

DOI: 10.4103/1658-600X.173846

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How to cite this article: Hilliard R. Paediatric challenges in Sub-Saharan Africa. J Health Spec 2016;4:12-6.

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as those related to intra-partum complications. The highest mortality rates in the world are observed in low-income countries in Sub-Saharan Africa. These improvements have not been uniform across countries or populations. For example, only 17 of 75 monitored countries were projected to achieve MDG number 4, and only nine countries are expected to achieve MDG number 5.[9] There are still many unnecessary and preventable childhood deaths. The reasons for this are many and varied including political instability, fragile states with little or no health system resilience, civil wars and population displacement, natural disasters, the Ebola outbreak in West Africa, lack of financial human resources and lack of key investments to promote education, empowerment and poverty alleviation.

The Millennium Development report, however in a large part, was very positive with most goals achieved throughout the world.[10] For example, with respect to MDG number 4, the global under-five mortality rate has declined by more than half, dropping from 90 to 43 deaths per 1000 live births between 1990 and 2015. However, in Sub-Saharan Africa, these numbers are 177 and 98, respectively. While the MDG era will end in 2015, there is still much to do. Reductions in neonatal death rates (age <1 month) lag behind those for post-neonates (age 1 - 59 months), and stillbirth rates (omitted from the MDGs) have been virtually unchanged. Hence, almost half of under-five deaths are new-borns, yet about 80% of these are preventable using cost-effective interventions. Although great advances have been made to reduce under-five mortality from 12·7 million deaths in 1990 to 6.3 million deaths in 2013 – mainly through improved management of pneumonia, diarrhoea and measles, substantially less progress has been made to reduce neonatal mortality.[11,12]

Although significant achievements have been made on many of the MDG targets worldwide, progress has been uneven across regions and countries, leaving significant gaps. Millions of people are being left behind, especially the poorest and those disadvantaged because of their sex, age, disability, ethnicity or geographic location. Targeted efforts will be needed to reach the most vulnerable people. Gender inequality still persists and there are big gaps existing between the poorest and the richest households and between rural and urban areas. Climate change and environmental degradation undermine progress achieved. Conflicts remain the biggest threat to human development and millions of poor people still live in poverty and hunger, without access to basic services.

SUSTAINABLE DEVELOPMENT GOALS

In 2015, 193 countries under the United Nations wrote a very expanded and ambitious set of 17 goals and 169 targets for the next 15 years, the SDGs. These included ambitious and aspirational goals to dramatically end poverty in all its forms everywhere, promote prosperity and well-being for all, reduce inequality within and among countries, protect the environment and address climate change, reduce child and maternal mortality, ensure universal access to sexual and reproductive health care services including family planning and eradicate epidemics of HIV/AIDS, malaria and tuberculosis, all by 2030.[13-20] Some of the goals are not as clear or specific and measurable as the MDGs, but, despite this, Zulfiqar Bhutta believes the SDG target of reducing neonatal mortality to at least as low as 12/1000 live births and under-five mortality to at least as low as 25/1000 live births by 2030, is doable with increased financial commitments from Western countries.[21]

WHAT THIS MEANS FOR HEALTH CARE IN SUB-SAHARAN AFRICA BUT ALSO THROUGHOUT THE WORLD

- It is important for nations (e.g., national ministries of health) but also hospitals, community health centres and even individual health professionals to review mortality and morbidity statistics and to set goals that are measurable and achievable.[22] Ministries of Health have the task of reviewing health statistics, but hospitals large and small and community health centres despite being very busy, must expend time and energy on quality assurance/improvement and morbidity/mortality reviews.[23-25] Programmes to achieve the MDGs have demonstrated the need for excellent data collection about morbidity, mortality and health care and the need to document quality improvement. In North America and Europe, physicians are trained to focus on quality improvement projects but this is not matched in most Sub-Saharan countries. Audits of clinical practice and morbidity and mortality/death reviews should become a regular practice at all health facilities. This should include deaths and complications but also delayed and inappropriate treatments and incomplete documentation
- Health care professionals in low-income countries learn what is written in the North American or European medical literature, but it is important to have medical care that is economical, evidence-based, effective and locally available: Excellent hygiene at new-born deliveries and in the

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neonatal nursery, qualified birth attendants trained in neonatal resuscitation, Kangaroo new-born care, insecticide-treated bed nets, guidelines for the appropriate use of antibiotics, evidence-based practice and improved hospital hygiene and sanitation facilities[19]
- It is important for nations not just to focus on treatment and medical care but to focus on health promotion, prevention of illness, injury prevention and early intervention for childhood malnutrition. Physicians are trained in the recognition and diagnosis of and management of diseases but often with very little focus on health promotion
- Vaccinations are widely recognised as a key to health promotion and are the most successful health programme throughout the continent. However, there are many challenges in low-income countries providing vaccines in rural areas, trained personnel to deliver these vaccines, the costs of vaccines and insufficient funding, lack of public recognition of their importance and occasionally opposition by influential leaders. Low-income countries also do not universally provide vaccinations available in high-income countries, for example, mumps, rubella, varicella, pneumococcus, meningococcus, rotavirus and human papillomavirus. In the past few years, some of these have been introduced. Vaccination programmes can be strengthened and expanded. Combining a vaccination programme with an under-five health promotion programme can be an excellent way of delivering cost-effective child survival interventions in a most sustainable manner[26]
- Governments need to make sure that there is a balance between expenditures for large hospitals in the major cities and community/primary care health projects. In many low- and middle-income countries, more of the health budget goes to the large university and teaching hospitals than to health care promotion and health care delivery in rural and smaller communities
- The MDGs and SDGs address the medical health problems such as malnutrition, pneumonia, gastroenteritis, malaria and HIV/AIDS which are in the MDGs and SDGs, but it is also important to address the major morbidities of developmental problems and mental health issues.[27,28] If the health care problems of children in low- and middle-income countries follow the history of child health in North America and Europe, there will be an increase in psychosocial problems related to child development, disabilities, school issues and mental health
- Education is a key and nations must promote strong education programmes both for primary and for secondary school education and for health professionals. SDG Goal 4 is to ensure inclusive and quality education for all and promote lifelong learning. A well-educated population will strengthen health promotion and health care programmes, the acceptance of vaccinations and life-saving interventions

There need to be effective programmes for community health workers, community nurses and trained birth attendants skilled in neonatal resuscitation. There needs to be adequate education and training programmes for health care workers to care for a greater numbers of acutely ill patients with the changing knowledge, attitudes and practice in today's world. With respect to health care professionals, it is important to value not only just physicians and nurses but also community health workers.

With respect to physicians and medical education, in too many countries, African medical schools which had been thriving and vibrant have had decreased funding with teaching hospitals and faculties struggling to survive. Well-trained physicians are leaving their countries particularly to Europe and North America where salaries may be higher with more job satisfaction.[29] Many young, talented health professionals are burnt out and despairing and leave for a better life in the North. Approximately 65,000 African-born physicians and 70,000 African-born professional nurses were working overseas in a developed country in the year 2000. This represents about one-fifth of African-born physicians in the world and about one-tenth of African-born professional nurses.[30] There needs to be attention to the job and career satisfaction and burnout of health care workers: Pride and self-efficacy, work-life balance, satisfaction with financial rewards and satisfaction with facility resources. These point to the importance of non-financial factors in the motivation and retention of health workers. National Ministries of Health must address the compensation, work-life balance and job satisfaction of physicians and nurses.[31-33] One-way of addressing job satisfaction and promoting the retention of African trained physicians has been to provide better postgraduate training and even subspecialised training that at present may only be found in Europe or North America.[34,35]

- National governments must also recognise the social determinants of health (poverty and income inequalities, health equity, human rights, gender equalities, food insecurity, universal education, disabilities and universal health coverage) and that these factors have a great influence on the health of the population, perhaps more than the work of doctors and nurses.[36-40] Globally, social determinants, including socioeconomic and deeply rooted gender inequalities,

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remain a key obstacle to child well-being.[41] Those children living in extreme poverty and those in rural areas are the children most in need but least likely to get either curative or preventive interventions. Action on the social determinants of health must involve the whole of government, civil society, local communities, business and international agencies. Policies and programmes must embrace all sectors of society, not just the health sector.

The MDGs for 2015 except for some nations in Sub-Saharan Africa have been achieved but now are replaced by even more ambitious and aspirational goals. Can these be achieved by 2030? Commitment, investment and intentional leadership from global and national stakeholders and community health care workers, including all healthcare professionals, can make these ambitious goals attainable.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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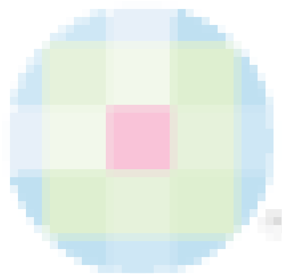

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