



## Viewpoint

# Global child health: What we have achieved and what needs to be done

Venkatraman Radhakrishnan

Department of Medical Oncology, Cancer Institute (WIA), Chennai, Tamil Nadu, India.



### \*Corresponding author:

Venkatraman Radhakrishnan,  
Department of Medical  
Oncology, Cancer Institute  
(WIA), Chennai, Tamil Nadu,  
India.

[venkyumd@gmail.com](mailto:venkyumd@gmail.com)

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## ABSTRACT

Global child health has cemented itself as an important branch of global health. It is said that the development of a nation is gauged by its infant and under-5 mortality rates. Coordinated efforts by organizations such as the United Nations, the World Health Organization, and Governments are essential to maintain the momentum of improving the health of children across the world. Special focus needs to be put on areas such as Sub-Saharan Africa and conflict-prone regions where the initial positive gains are being erased. As we achieve success in controlling malaria, pneumonia, and diarrhea in many countries, we need to start focusing on areas such as cancer, accidents, climate change, and child abuse which will soon become important health problems in children in low- and middle-income countries.

**Keywords:** Global health, Child health, Low-income and middle-income countries

The late Danny Thomas, founder of the St Jude Children's Research Hospital said that "No child should die in the dawn of life." Unfortunately, 7.6 million children under 5 years across the world do die every year in the dawn of their life, imagine the population of a country like Austria being wiped out of this planet every year.<sup>[1]</sup>

A child's place of birth should not determine its destiny, but the contrary is the bitter truth at present. More than 99% of the 7.6 million childhood deaths in 2010 occurred in low-income and middle-income countries (LMICs) and countries in sub-Saharan Africa accounted for half of these deaths.<sup>[1]</sup> This highlights the disparity and inequity in access to health-care across the world and even within regions and people of a country.<sup>[2,3]</sup>

Great strides have been made over the past century by mankind in conquering diseases and prolonging lives. An average human being now lives for 72 years on this planet compared to 48 years in 1950.<sup>[4,5]</sup> This improved survival is not only because the elderly are getting better healthcare but also because a lesser number of children are dying today compared to half a century back.<sup>[4]</sup> If humanity wants to progress and lead a healthy life, then tackling preventable causes of death in children across the world should be a priority.

Significant improvement in outcomes has been achieved in a decade since the 5-part Lancet series on the global burden of childhood deaths was published in 2003.<sup>[6-10]</sup> The under-5 deaths have reduced from 10.8 million in 2000 to 7.6 million in 2010.<sup>[1,7]</sup> If the 2000 trends had persisted, the expected deaths in 2010 would have been 11.6 million.<sup>[1]</sup> However, certain pockets of the world especially the Sahel belt in sub-Saharan Africa continue to have the highest burden of childhood

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mortality and have had the slowest improvement in health indicators and the reasons for this have been multi-factorial including war, political instability, drought, migration, gender disparity, and illiteracy.<sup>[2]</sup>

The reduction in mortality has been achieved through defining the problem, collecting and analyzing data, identifying the major causes of mortality, designing strategies to reduce mortality, and then reassessing the impact thereby closing the loop.<sup>[1,4-10]</sup> Neonatal deaths, diarrhea, and pneumonia account for one quarter each for all under-5 deaths, the rest 25% being due to malaria, measles, HIV, and other causes.<sup>[3,4,7]</sup>

A significant portion of the reduction in mortality in children has been due to the improvement in sanitation and immunization against common infections. We need to practice the mantra that simple things are effective and complex solutions do not always provide answers. Jones *et al.* observed that 63% of under-5 deaths can be prevented using available interventions.<sup>[9]</sup> Some of these interventions are simple and cost-effective such as breastfeeding, oral rehydration solution, home-based care for children with diarrhea and malnutrition, and educating mothers.

Prevention is the key in many areas as treatment is not an option as it is expensive or not available locally. The 8-point millennium development goals (MDG) proposed in 2000 with targets to be achieved by 2015 has been replaced by the 17-point sustainable developmental goals (SDG) in 2015 with targets to be achieved by 2030. The targets of MDG and SDG are ambitious. The MDG point 4 targeted reduction in under-5 mortality by 2/3<sup>rd</sup> between 1990 and 2015.<sup>[11]</sup> Most countries except war-torn Somalia were able to achieve progress in a reduction in under-5 mortality rate (U5MR) but only a few met the MDG4 target.<sup>[1]</sup> However, the MDG and SDG provide the framework and platform to achieve improvement in healthcare including global child health.

India is in a unique position to address disparities in global child health. It is the world's largest democratic nation, with 16% of the global population. India has the highest number of under-5 deaths in the world, with a total of 1.08 million deaths in 2016 and contributes to 19% of all under-5 deaths and 24% of all neonatal deaths.<sup>[12]</sup> Despite the gloomy numbers given above India has achieved rapid strides in reducing its infant mortality rate (IMR) and U5MR. The IMR in India has improved from 151/1000 live births in 1960 to 29/1000 live birth in 2020.<sup>[13]</sup> However, we are still behind our neighbors such as Bangladesh, Bhutan, and Sri Lanka which have an IMR of 24, 22, and 7/1000 live birth, respectively.<sup>[13]</sup> There are regional disparities in IMR within India as seen from the data obtained from the four national family health surveys conducted between 1992 and 2015.<sup>[12,14,15]</sup> Larger and highly populated states such as Uttar Pradesh, Bihar, and Madhya Pradesh contribute to 50% of IMR and U5MR in

India and the rate of decline in mortality rates in these states have been slower than other states.<sup>[14,15]</sup>

It is not only important to eradicate health-care inequalities between developing and developed nations but also crucial to remove inequalities within various regions or states of developing countries. An example of this would be the wide disparities in access to healthcare and healthcare indicators among various states in India. Kerala state had the lowest U5MR of 11/1000 live births in 2016 compared to Madhya Pradesh which had the highest U5MR in India of 55/1000 live births in 2016.<sup>[15]</sup> The U5MR for India in 2016 was 39/1000 live births.<sup>[15]</sup> Only the States of Kerala, Tamil Nadu, Maharashtra, and Punjab had achieved the SDG target on U5MR of <25 deaths per 1000 live births.<sup>[15]</sup> Kerala state has been able to achieve results comparable to developed countries due to high female literacy, a strong primary health care (PHC) system, public-private partnership programs, institutional deliveries of all pregnant women, and early referral of complex neonatal and infant problems to tertiary hospitals.<sup>[16]</sup>

A road map for reducing IMR in India should focus first on reducing neonatal mortality (deaths within 28 days from birth) as these contribute to 45% of all infant deaths and malnutrition which is a major contributor to U5MR.<sup>[17]</sup> The components of the roadmap should include institutional delivery for all women to reduce child mortality, setting up of facilities for treating sick newborns in all districts, capacity-building of health-care providers for early diagnosis and case management of common ailments of children, and care of the pregnant women and establishing nutritional rehabilitation centers.<sup>[17]</sup>

Not all public health challenges are technical; many are adaptive and require a change in beliefs and behaviors of the population. Some examples include female genital mutilation, denying colostrum to newborns, irrational fear of vaccination, and gender disparity. "You educate a man you educate an individual, you educate a woman you educate generations to come." Therefore, literacy especially female literacy should be a top priority for changing harmful beliefs and behaviors in the population.<sup>[10]</sup>

The causes of childhood mortality are not mutually exclusive; usually, multiple factors such as malnutrition, anemia, diarrhea, and pneumonia are operating in the same individual and exponentially increase the risk of death.

Health is a basic human right and universal health care is based on this principle that every individual has equal access to economic and equitable healthcare. To this end, the World Health Organization proposed the concept of PHC in the Alma Atta declaration of 1978.<sup>[18]</sup> PHC is the cornerstone for effective delivery of interventions to reduce childhood mortality.

### What are the challenges in the future?

We need to be prepared to face challenges in the future for children that include obesity, metabolic syndrome, bioterrorism, alcohol, tobacco and substance abuse, climate change, and pollution.<sup>[3,19]</sup> As infections and malnutrition are being tackled, the above problems will come into the limelight. There are many unaddressed and hidden issues such as child labor, child abuse including physical, emotional, and sexual, child trafficking, and child soldiers that also need to be tackled.<sup>[3]</sup>

The rich countries cannot relax and shrug their responsibility that the problem of childhood mortality does not concern them as <1 in 1000 children in these countries dies before their 5<sup>th</sup> birthday. The fight is truly global. The re-emergence of vaccine-preventable diseases such as measles and diphtheria in the developed world due to misinformation about the harmful effects of vaccines, trans-border spread of infections such as Zika, Dengue, and Ebola, and natural calamities pose equal dangers to children in rich and poor countries.<sup>[20]</sup>

There is inequity even among addressing deaths in children. Childhood cancers do not even get a mention in the policy statement published by Lancet on the problem of childhood mortality. Eighty percent of childhood cancers occur in LMICs and 50–70% of children with cancer in LMIC will die each year, this is about 50,000–80,000 children a year.<sup>[21,22]</sup> A recent publication showed that pediatric cancers are associated with the maximum disability-adjusted life-years among all cancers and this is most pronounced in LMICs.<sup>[23]</sup> The invisible children with cancer deserve better from all the stakeholders.

Greta Thunberg, the teenage climate activist in her recent address to the UN on the catastrophic problem of climate change spoke on behalf of the children of this world and asked the adults, “You have let us down, how dare you rob us of our future?” Let us not rob millions of children of their future and dreams due to preventable causes, let us all take a pledge “They shall always have a tomorrow.”

### Declaration of patient consent

Patient's consent not required as there are no patients in this study.

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