FOOD for Thought

Addressing the Double Burden of Malnutrition as both Crisis and Opportunity

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Approximately 2 billion people in the world are micronutrient-deficient, while more than 2 billion are overweight or obese

Amidst rapid economic growth, cultural globalization, urbanization and the homogenization and commodification of food systems, human diets are dramatically changing. The result? Contrasting and multiple forms of simultaneous malnutrition have become our new normal in the age of the Anthropocene. The intersection of undernutrition with overweight, obesity and diet-related noncommunicable diseases (NCDs) has become known as the double burden of malnutrition.

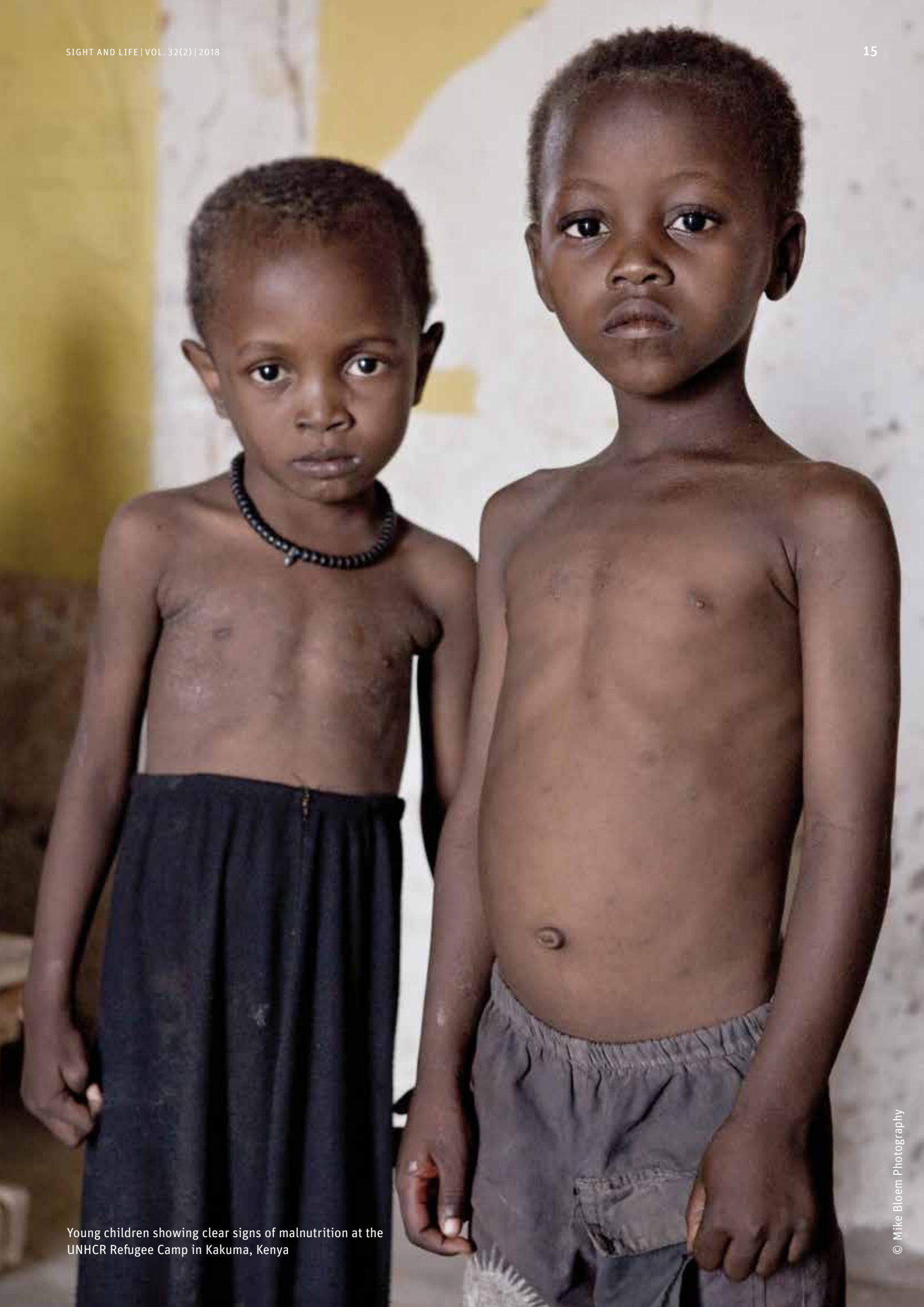
Today, no country is immune from this complex coexistence of malnutrition. An estimated half of the global population are malnourished: 815 million adults go hungry each day, and approximately 2 billion are micronutrient-deficient; at the same time, more than 2 billion are overweight or obese.[1] Among the most sobering consequences of malnutrition is that almost one in four of the world's children under five years continue to be permanently stunted, thus limiting their lifelong health, social and economic potential.[2]

> "Contrasting and multiple forms of simultaneous malnutrition have become our new normal"

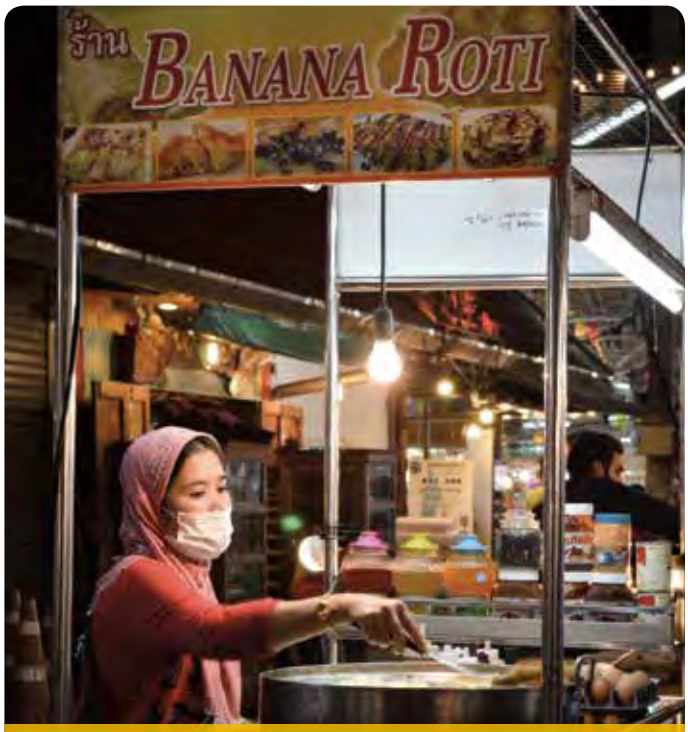
Understanding the double burden and its drivers

The relationships between undernutrition and overweight, obesity and NCDs are complex. Manifesting at three different scales of population and two temporal dimensions, multiple forms of malnutrition may occur simultaneously or at different stages over the life course of individuals, in households and across populations. For an individual, the double burden may take the form of a micronutrient deficiency alongside obesity or type 2 diabetes, or overweight in a once-stunted adolescent. For a household or community, it may appear as nutritional anemia in a mother with a wasted child or an overweight grandparent.[3] Stubborn levels of undernutrition persist in communities, regions and nations even as overweight and obesity, with their associated NCDs, continue to skyrocket. Countries and regions undergoing unprecedentedly rapid transitions in nutrition are often hit hardest. South East Asia, for example, is home to nearly half of the global double burden of stunting and overweight.[4] Meanwhile, nations such as Mexico endure stubborn declines in stunting while overweight and obesity already affect more than 70% of the adult population.[5]

The contradictions of the double burden originate in the complexity and rapid change that characterize today's world. As our global society becomes more interconnected as well as more



Young children showing clear signs of malnutrition at the UNHCR Refugee Camp in Kakuma, Kenya



The nutrition transition has led to a total rewriting of global epidemiology and the rise to dominance of diet-driven NCDs

urban, there have been profound changes to dietary patterns, consumption behaviors and energy expenditure. These shifts in both the quantity and quality of diets over just the past century have seen a total rewriting of global epidemiology and the rise to dominance of diet-driven NCDs.

From the pattern of infectious and undernutrition-related diseases that prevailed earlier, NCDs have become the main burden in almost every nation. At the same time, we are in the midst of a linked and unprecedented demographic change as high fertility, high mortality and relatively large proportions of young people give way to populations characterized by reduced fertility rates, longer lifespans and increasing proportions of elderly. Yet even this does not encompass the full extent of the metamorphoses now reshaping our world. These transformations occur in the context of shifting food systems that now drive and are in turn threatened by changing climates, ecosystem destruction and natural resource depletion. This is all linked to, and is also shaping, human nutrition outcomes.

In high-income countries, much of this change occurred over the past 200 years in a gradual, near-linear fashion, leading to incremental and controlled increases in both human height and lifespan. In low- and middle-income countries, this has happened suddenly, in a matter of decades rather than centuries. The compressed timespan of these processes has led to intra-generational divergence and contrasting yet simultaneous forms of malnutrition, reflecting the effect of altered food environments, diets and behaviors. But while the drivers of the double burden of malnutrition are varied and often insidious, their effects present a clear case for urgent action.

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Assessing the double burden's true cost

What is the economic impact of the double burden on individuals, communities and entire populations? By increasing the costs of healthcare, reducing productivity and slowing economic growth globally, the double burden creates barriers to socioeconomic development and perpetuates cycles of poverty and ill health. And as the burden of malnutrition is only projected to increase, the direct and indirect macro- and microeconomic costs become unsustainable.

The current losses already incurred by national, regional and global economies are astounding. Obesity costs the global economy US$2 trillion per annum, while undernutrition and micronutrient deficiencies account for an additional US$2.1 trillion.[6] In the United States alone, US$190 billion was spent on obesity-related healthcare in 2005,[7] and obesity accounted for national productivity losses amounting to US$8 billion.[8] In Malawi, child undernutrition drained the country of US$597 million, where losses in productivity accounted for 90% of the sum.[9] At the microeconomic level, individuals and households also incur high personal costs as a result of the double burden. Obese individuals spend an average of US$2,741 more than their normal-weight counterparts on medical care in the United States.[7] In Rwanda, stunted children's average schooling achievements are 1.1 years lower.[9] By 2030, the costs of NCDs are projected to exceed US$30 trillion or 48% of the global GDP in 2010.[10]

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Seizing the opportunity for an integrated response

The double burden undoubtedly amounts to a major global challenge. At the same time, it also represents a chance to reshape our approach to malnutrition. The intersection of confounding forms of malnutrition calls for renewed focus and intervention, especially for integrated policies and programs as well as a framework for solutions to end malnutrition in all its forms. This

is the time to build on the work already done in order to achieve a new development agenda. As we continue to transition from an emphasis on undernutrition under the auspices of the Millennium Development Goals towards a broader focus on nutrition guided by the Sustainable Development Goals (SDGs), we must harness the double burden to link well-established initiatives with emerging innovations. Emphasizing common or 'double-duty' actions that address the rising burden of overweight, obesity and NCDs without losing momentum on undernutrition will be key to achieving the SDGs, leaving no one behind.

> "The ongoing UN Decade of Action on Nutrition mandates an integrated response to undernutrition, overweight, obesity and diet-related NCDs"

Planning for success with new tools

Such approaches give us tools to address malnutrition in all the forms it appears today. The ongoing UN Decade of Action on Nutrition, for example, mandates an integrated response to undernutrition, overweight, obesity and diet-related NCDs. In January 2019, the EAT-Lancet Commission's report will for the first time define clear scientific targets for reference diets that are healthy and sustainable – for people and planet. These will in turn serve as guidance for science-based policies aimed at global food systems transformation. Likewise, the upcoming Lancet Series on the Double Burden of Malnutrition will present the best available evidence on progress and areas for improvement. Finally, in April 2019, UNICEF's latest State of the World's Children report will present insights on healthy diets based on sustainable food systems that can tackle malnutrition early on in children. Taken together, all of these initiatives can amplify our efforts to combat the global scourge of malnutrition.

Conclusion

Moving towards healthier and more sustainable diets is essential for breaking intergenerational cycles of poverty, ill health and poor nutrition, while also addressing concomitant and compounding environmental threats.[11] No country today is immune from malnutrition. The double burden of malnutrition poses a significant public health challenge that is also a timely and important opportunity for integrated action. As a cross-cutting determinant for health, environmental and development challenges alike, nutrition holds the powerful potential to accelerate the collective achievement of key global goals and targets. These include the SDGs, the commitments of the Rome Declaration on Nutrition, the Global Nutrition Targets 2025, the Paris Climate Agreement, the Global Action Plan for the Prevention and Control of NCDs, and critical improvements in maternal, infant and young child health more generally. Unless we solve the global malnutrition crisis, we will fail to achieve these collective ambitions. It is high time we fully commit ourselves to addressing and ending this crisis, once and for all.

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