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## **Building back: nutrition as a foundation for healthy, prosperous and resilient societies**

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We have read and understood BMJ policy on declaration of interests and declare that we have no competing interests.

### **Contributions**

HEM and SAU wrote the first draft of the manuscript. All authors (HEM, GDC, CP, SAU) contributed to the final manuscript.

## **A silent pandemic**

Public health has come to the fore in 2020 like no time in recent history; yet well before COVID-19, the world was already witnessing a much quieter pandemic: malnutrition.

The number of people affected by malnutrition is startling. An estimated 149 million children are stunted (chronically undernourished) and 50 million are wasted<sup>1</sup> (acutely undernourished) with undernutrition a direct or underlying cause in 45% of all child deaths.<sup>2</sup> In addition, 40 million children under 5 years are overweight and 678 million adults are obese.<sup>1</sup>

In the shadow of COVID-19, other serious public health challenges are easily overlooked, yet far from reducing the significance of malnutrition, COVID-19 has compounded the issue. Restriction on the movement of goods and people threaten supply chain disruption and price volatility in already fragile food systems; while reductions of household income directly impact people's ability to purchase food and other essential items.<sup>3</sup> The prevalence of moderate and severe wasting could increase by 14% due to COVID-19. Coupled with reductions in the coverage of nutrition and health services, this may result in over 128,000 additional children under five years dying in 2020 alone.<sup>4</sup>

## **Nutrition, infectious disease and immunity**

Research increasingly points to the role of nutritional status in resilience to infection, and as a mediator of its impacts.<sup>5 6</sup> Adequate intakes of energy, macro- and micro-nutrients are critical for immune functioning.<sup>7</sup> Undernutrition can lead to immune dysfunction and increased susceptibility to infectious diseases. In turn, immune responses to infectious diseases enhance nutrient requirements, reduce appetite and impede nutrient absorption; creating and perpetuating a vicious cycle.<sup>8</sup>

Overweight and obesity, and their comorbid conditions, including diabetes and heart disease, are known risk factors for COVID-19, increasing the risk of contracting the disease and developing severe complications.<sup>9</sup> Obesity is also significantly associated with the need for critical care management in children admitted to hospital with COVID-19.<sup>10</sup> The chronic, low-grade inflammation linked to obesity is known to compromise innate and adaptive immune responses, emerging evidence suggests this is also the case for COVID-19.<sup>11</sup>

## **The double helix of inequality**

Despite political platitudes that we are all in this together, the direct and indirect effects of COVID-19 have disproportionately impacted vulnerable groups.<sup>12</sup>

There are well-documented links between socioeconomic measures of poverty and childhood undernutrition.<sup>1 13</sup> Without intervention an estimated 140 million additional people will be living in extreme poverty due to COVID-19.<sup>4</sup> The number of people in low- and middle-income countries facing acute food insecurity is also estimated to double to 265 million by the end of 2020.<sup>4</sup> In many high- and middle-income countries obesity shows a social gradient, disproportionately impacting the poor, due partly to the affordability and availability of low-quality food in areas of high vulnerability.<sup>14</sup> Low-income ethnic minorities are also experiencing an unequal burden of COVID-19 infections, hospitalisations and mortality,<sup>12</sup> highlighting and compounding existing inequalities.

## **Nutrition as a foundation for building prosperous, resilient societies**

There have been calls for creating a new type of “herd immunity” that comes from redesigning social and economic systems to address the root causes of health inequities.<sup>15</sup> We believe that ending malnutrition in all forms is fundamental to this approach, and critical to tackling the worlds’ biggest health challenges, from non-communicable diseases and infections to antimicrobial resistance.<sup>16</sup>

There are no simple solutions, but we know a great deal about how to end malnutrition in all forms,<sup>17 18</sup> and how to promote good nutrition during the ongoing pandemic.<sup>19</sup> Yet underlying all forms of malnutrition are economic and social models which promote profit over social prosperity and do little to address the needs of the most vulnerable. Only when a healthy nutritious diet is seen as a basic right and people as citizens rather than consumers, will we truly be in a position to end malnutrition in all forms.

As an issue of social justice addressing malnutrition will require social, political and economic transformation. This transformation will only come from acknowledging that the current global situation of malnutrition is morally inexcusable and politically and economically unsustainable. In line with this, we support the call from 180 experts for international guidelines on human rights, healthy diets, and sustainable food systems as a critical step forward.<sup>20</sup>

The Nutrition for Growth Summit and the UN Food Systems Summit, both set to take place in 2021, are opportunities to deliver bold change. We urge those leading these summits to engage broadly and to create space for affected populations, youths and civil society to lead this change.

### **A call to action**

Echoing calls to 'build back better', we urge Governments around the world to commit to ending malnutrition in all forms as a path to building healthy, prosperous and resilient societies. With COVID-19 continuing to impact most countries worldwide, the time to act is now.

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### **Competing interests**

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