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Title page

Title: Post-COVID economic recovery: women and children first…or last?

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Post-COVID economic recovery: women and children first…or last?

21st century science underpinned the rapid global response to COVID-19, identifying the causal pathogen, sequencing the SARS-CoV-2 genome, developing vaccines and initiating clinical trials, within nine months of first appearance. Although in tackling the immediate consequences of the pandemic, countries responded to the science in different ways, every nation now grapples with the economic consequences and the question of where to focus investment. Here, we argue that insights from 21st century science can also lead the way to economic recovery. These indicate that a prime focus should healthy populations, resilient to unexpected challenges, and that this is to large extent dependent on maternal, neonatal and child health (MNCH). Recovery from COVID-19 offers unique opportunity to target investment on MNCH.

Post-COVID economic recovery will have to take place against the continuing backdrop of the growing population prevalence of chronic non-communicable diseases (NCD) that are progressively crippling health systems, societies, and economies. Thus, in 2019, the US witnessed a reversal of the rise in life expectancy and healthy longevity that characterised previous decades. Pre-COVID policies were unable to tackle these challenges hence restoring the *status quo* appears to be a doomed strategy. However, science shows clearly that MNCH is of pivotal importance to preventing and reducing the population prevalence of physical and mental NCD (1). For example, babies born preterm, growth restricted or to an under-nourished, overweight or diabetic mother represent a large and growing proportion of all births and are at substantially increased odds of developing hypertension, diabetes, renal impairment, heart disease and other chronic NCD in adult life (2). In high-income countries, around two-thirds of adults are now overweight or obese. Preterm births are rising, with an estimated global rate of 10.6% in 2014 (3). The prevalence of malnutrition among pregnant women in Africa is estimated at 23.5% (95%CI: 17.72–29.32) (4). Intergenerational transmission is worsening these problems, as a woman born preterm is more likely to deliver preterm, and the daughter of an obese mother to become obese herself. Approaches focused upon MNCH would benefit human potential through multiple determinant pathways that include education, empowerment, mental wellbeing and personal resilience in addition to health. Uniquely, investment today will amplify returns across successive generations.

The dominant view of economic recovery is that it must reverse the dramatic fall in Gross Domestic Product (GDP) caused by the response to the pandemic. However, GDP is a flawed biomarker of a country's wellbeing (5). GDP represents the monetary value of goods and

services produced over a period but as it does not take their impact on population health into account though this is crucial to economic stability. Thus, GDP includes the outputs of the tobacco and fast food industries but does not subtract the costs of their contributions to cancer and obesity. GDP does not incorporate the contributions to the economy of child bearing and child rearing though these are powerful determinants of physical and mental wellbeing, and adult productivity. Likewise, the manufacture of infant formula contributes to GDP, but breast-feeding, which has major, quantifiable benefits upon the health of mothers and babies, does not; perversely, women who stop work to breastfeed incur a financial penalty. A single metric incorporating the negative impacts of products and services on population health, and the positive impacts of healthy pregnancies and childcare, would be a better biomarker of a country's wellbeing than GDP, and a better metric upon which to base post-COVID recovery.

There are other pressing reasons for a focus on MNCH. The economic models of the late 19th and 20th C were at odds with the great social movements that arose in parallel, which included women's suffrage, and reproductive and child rights. The extractive economics implicit in these models perpetuated gender and age-based inequities, enabling some nations and a minority of the world's population, to accumulate enormous wealth, while many billions remain impoverished. This conflict continues, exemplified for example by the undermining of the World Health Organisation, the promotion of marketised healthcare, and the resistance to healthcare reform in the United States, conditions that amplify gender and age-based inequities. Initial responses to COVID-19 are widening them still further. Thus, in the UK, conventional economic thinking led to spending over £400m on stimulating consumption, reopening pubs and restaurants before schools and the US Census Bureau reports that working mothers have had to withstand the worst of COVID-19 restrictions. The realisation that many pre-COVID industries are unsustainable should be a trigger to rethink the value to societies of healthy women and children, and promote this through targeted investment.

Advocating for investment in MNCH is not new, but discourse to date has been limited on four principal counts. First, most suggested interventions centre upon medical constructs - clinic visits, screening, identification, and treatments - that ignore the wider environmental, attitudinal and socio-economic determinants of MNCH. Second, the justifications for investment in MNCH have focussed predominantly on short-term outcomes, such as infant mortality and morbidity, rather than the longer term and trans-generational benefits to population health and the economy. Third, as explained above, many activities that benefit

MNCH are unmeasured, and hence unrecognised and unvalued; for example the inclusion of unpaid household work alone - which sustains the remunerated industries - would increase GDP from between 15% to 70% depending on the country and method of calculation (6). Fourth, the science of the developmental origins of health and disease has advanced from epidemiological associations that provided a limited basis for policy to detailed understanding of causal pathways from exposures and experiences in early life to later health or disease. In 1855 Frederick Douglass, a former slave said, “It is easier to grow strong children than to repair broken men”, a prescient articulation of the scientific basis for focussing policies on MNCH. Yet, in what future generations will see as unimaginable folly, current economic thinking discounts and in many respects actively detracts from MNCH.

It is time to take stock and to take action to promote investment in MNCH at both individual and societal levels (7). Societies with the best chance of a strong future will be those with healthy populations that have resilience to future shocks. This means ascribing value to and investing in MNCH. There are many powerful policies to consider. Six months statutory paid leave on a “use it or lose it” basis for each parent in a child’s first year would improve breastfeeding, family cohesion and gender equity. Targeted parenting support and skills training would benefit children directly and reduce the substantial economic cost of maltreatment. Universal national health care systems would eliminate the hefty transactional costs and inherent inequities of marketised models that disproportionately disadvantage women and children. A global road map for universal education would empower billions, particularly girls, and reduce crippling personal and national dependencies. These proposals will appear unattainable to many and will be countered and fought, as was every great movement in history. Investing in MNCH, as a prime strategy for post-COVID recovery is not only the right thing to do; it also provides unique opportunity to reframe economic thinking for a sustainable future. We ask readers to call on their professional organisations and parent and family advocacy groups, to promote investments to policy-makers that target MNCH.

Competing interest statement

NM is immediate past-president of the UK Royal College of Paediatrics and Child Health and current president of the UK Medical Women’s Federation; the views expressed are her own.

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