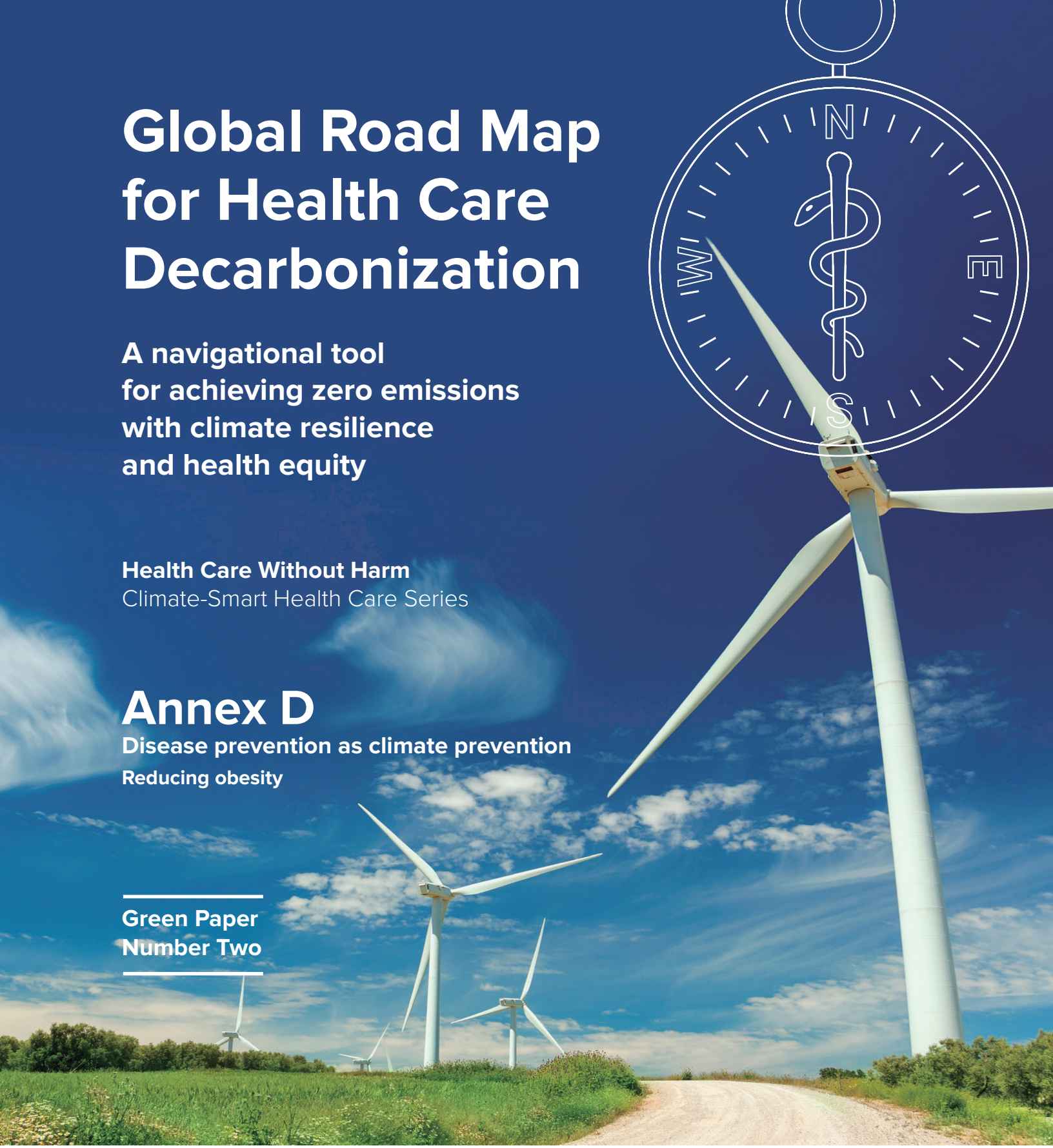
Global Road Map for Health Care Decarbonization

A navigational tool for achieving zero emissions with climate resilience and health equity



Health Care Without Harm
Climate-Smart Health Care Series

Annex D

Disease prevention as climate prevention

Reducing obesity

Green Paper Number Two

Health Care Without Harm

Produced in collaboration with ARUP

Annex D: Disease prevention as climate prevention - Reducing obesity

Reducing obesity is good not only for people's health, it is also beneficial for the planet's health, as doing so will reduce greenhouse gas (GHG) emissions from food and transport systems as well as GHGs coming from the utilization of health care due to obesity-related diseases.

Why is it important for global health?

Since 1980, the worldwide prevalence of obesity – characterized by body mass index (BMI) greater than 30 – has nearly tripled. By 2016, almost two-fifths (38.9%) or 2 billion of the adult global population was considered overweight (BMI above 25), while 13.1% or 650 million adults were considered obese (Figure 1)[1]. The most recent Global Burden of Disease Study[2] estimated that overweight and obesity collectively (i.e., high BMI) were responsible for 5.02 million deaths in 2019. Being overweight and obese is associated with multiple adverse health consequences, like increased risk of heart disease, stroke, diabetes, various kinds of cancer, and other conditions. While it was once considered a problem only in high-income countries, obesity is now dramatically on the rise in low- and middle-income countries.

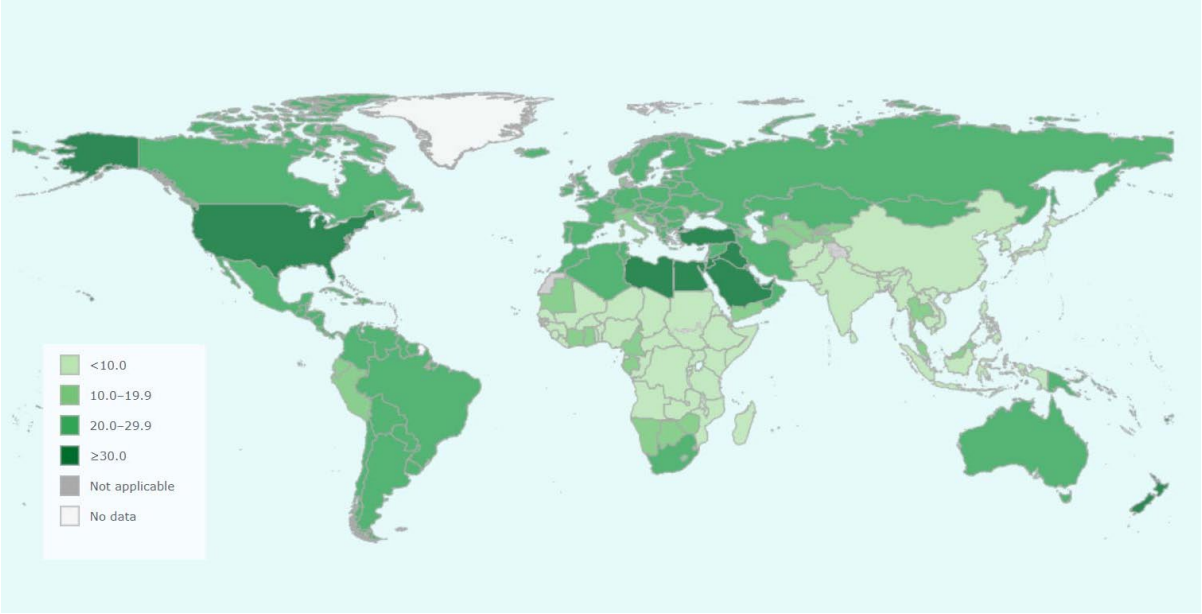


Figure 1. Worldwide prevalence (%) of obesity among people over 18, 2016[3]

Obesity is a complex, systemic, and multi-causal problem with environmental, psychological, and even genetic roots. However, two major pathways contribute to the rise in obesity: shifts in eating behavior toward diets containing energy-dense foods, diets high in fat and sugars, and a decrease in physical activity due to the sedentary nature of many forms of work and modes of transportation. Ultimately, the emergence of obesity as a global health challenge can also be traced to the

globalization of risk factors through trade liberalization, which has accelerated the spread of low-nutrient, highly processed foods specially to developing countries.

Because of their associated diseases, being obese and overweight can incur an enormous amount of medical expenses. One analysis revealed that on average, treating obesity-related issues accounts for 8.4% of total health care spending in OECD countries[4]. Without timely action to reduce obesity, health care spending in OECD countries could grow by 50% to 100% between 2007 and 2040[5]. Beyond health care costs, the global economic impact of obesity – which includes lost productivity and forgone economic growth – was estimated to be USD 2.0 trillion or 2.8% of the global gross domestic product.

Why is it important for tackling the climate crisis?

Present-day food and transport systems, which contribute to the rise in obesity, are also major emitters of GHGs that drive climate change. The current food system, which favors food rich in calories and often low in nutritional quality and diversity, contributes up to 21% of anthropogenic GHG[6]. This is in addition to other ecological impacts, like deforestation and biodiversity loss. A 2019 Lancet report described the global food system as producing a "syndemic" – the confluence of multiple epidemics, in this case obesity, undernutrition, and climate change[7]. Meanwhile, transport systems, especially in highly urbanized areas, not only disallow active travel and physical activity – which are essential to fighting obesity – they also heavily rely on vehicles that emit enormous amounts of GHGs and worsen ambient air pollution.

How will this help decarbonize health care?

Figure 2 illustrates the pathways that link reduction of overweight and obesity to both direct GHG emissions reductions from transformations in food and transport systems and indirect emissions reductions through the decarbonization of health care. When the prevalence of overweight and obese populations is reduced globally, fewer people with obesity-related NCDs can be expected. This would mean fewer patients coming to hospitals and other health facilities for chronic management of cardiovascular and other diseases as well as for treatment for acute ailments. The potential for reduced health care utilization offers many opportunities for GHG emission reduction. This might include the use of resources like electricity, water, and food, as well as the entire manufacturing and supply chain of products needed for clinical care, like pharmaceuticals and syringes.

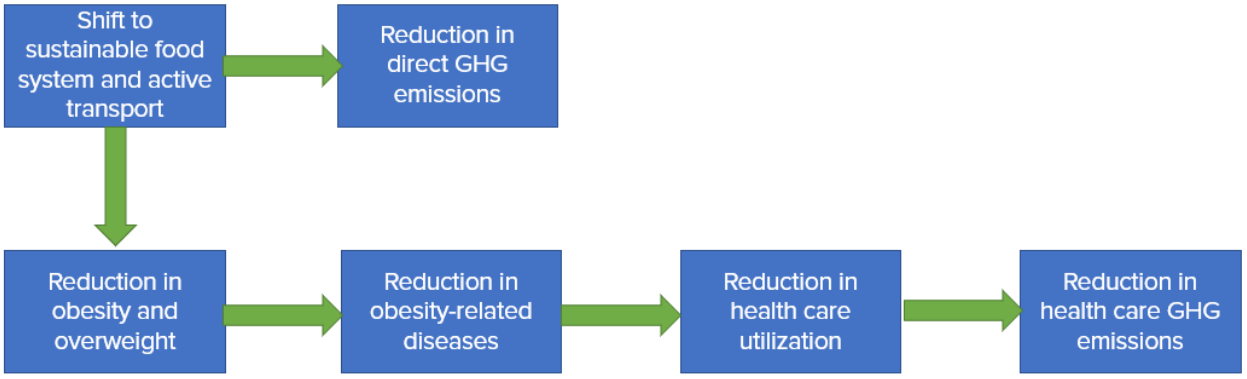


Figure 2. GHG emission reductions from interventions that reduce obese and overweight populations through direct and indirect pathways

Using available estimates of obesity-related health care spending,[8] and assuming that a public health policy enabling a global change in BMI is implemented in such a way that by 2050 those that were previously obese become overweight[9], it is estimated that there would be an annual reduction in total health care spending of 1.1%, which translates to a cumulative reduction in health care's climate emissions by 215 million metric tons from 2014 to 2050 (Figure 3). This amount is equivalent to one year of GHG emissions from 55 coal fired power plants or from burning more than 515 million barrels of oil[10]. Implementing policy measures that eliminate obesity and reduce obesity-related health care utilization also generates significant climate co-benefits.

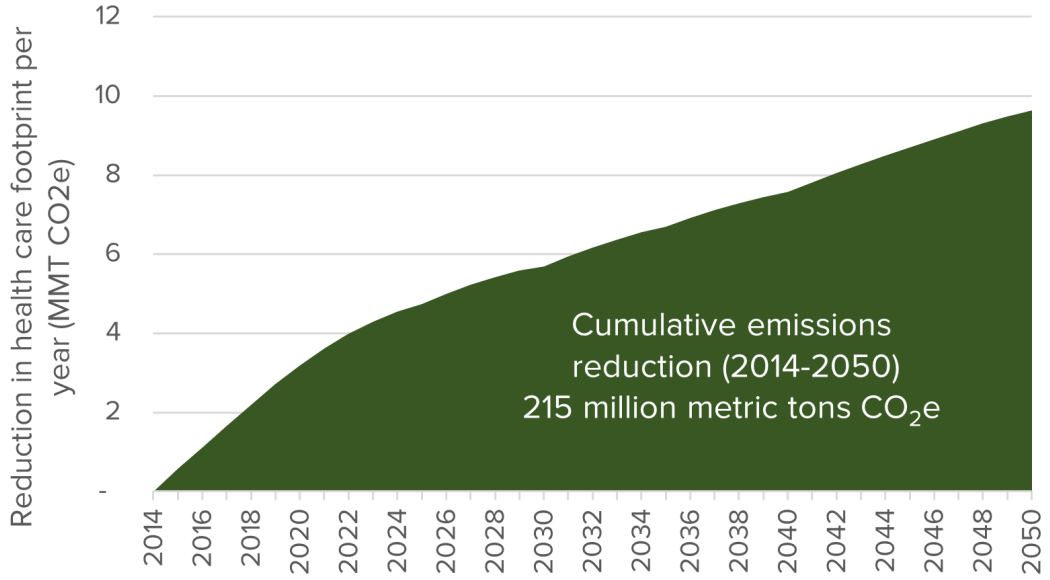


Figure 3. Annual health care emissions reduction from reduced obesity prevalence from 2014 to 2050

We recognize that one major limitation of this approach is that spending, and in turn emissions averted by these interventions may simply be reallocated to a later point in a person's life or to another part of a health system budget. This is otherwise known as a rebound effect, which is difficult to model specifically and therefore often not considered in climate modeling exercises.

Despite this limitation, the results we have generated illustrate the potential climate benefits of top priority health interventions, like reducing obesity. These findings underscore the need for further research and greater understanding of the role that individual and population health can play in contributing to reduced climate impact.

What must the global health community do?

To realize the target of halting obesity globally based on WHO's Global Monitoring Framework for NCDs[11], a diverse range of policy interventions need to be implemented. This includes policies that influence lifestyles through information and education, like food labelling and mass media campaigns promoting physical activity, policies that increase the number of healthy choice options, like workplace and school-based wellness programs and expanded public transport, policies that change the prices of food products, like taxes on sugary drinks and subsidies for healthy food options, and policies that regulate or restrict actions promoting unhealthy choice options, like statutory bans on advertising that targets children[12].

Ultimately, global long-term prevention of obesity will require the transformation of food and transport systems toward healthier and lower-carbon futures. Agro-food systems must prioritize the production of food products of high nutritional quality while observing sustainable methods to limit the use of water, land, and energy resources and reduce GHG emissions. Meanwhile, shifting to lower-carbon transport systems – with widely accessible public transport, walking and cycling infrastructure, and safe parks and communal recreational areas – will not only encourage physical activity but also lower GHG emissions.

The global health community must continue pushing for policy solutions that will reduce the prevalence of obesity globally. This will ensure the achievement of the Sustainable Development Goals (SDG), particularly SDG 3.4 – reducing premature mortality from noncommunicable diseases (NCDs) by one-third. Reducing obesity worldwide will help save lives and, through reduced direct and indirect GHG emissions, save the planet as well.

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www.healthcareclimateaction.org/RoadMap

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