"Health, Nutrition, Peace and Sustainable Development Goals"

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Abstract

The 2030 Agenda for Sustainable Development has been lunched at the end of 2015 after completion of MDG 2015. This Agenda frames health and well-being as both outcomes and foundations of social inclusion, poverty reduction and environmental protection. The agenda's core is 17 Sustainable Development goals including 78 SDG indicators. As all we know the third goal that is health and well being is very important goal as it helps to achieve many other goals for sustainable development. So it is really interesting to get a better understanding of the interconnections SDG3 with SDG 1, SDG 2, SDG 6, SDG 8, SDG 11, SDG 13 and SDG 16 goals and targets. And to study the achievement in health sector since 2000 is also very much interesting. Globally, life expectancy has been improving at a rate of more than 3 years per decade since 1950 and there was a global increase of 5.0 years in life expectancy between 2000 and 2015, with an even larger increase of 9.4 years observed in the WHO African Region.

Introduction: The 2030 Agenda for Sustainable Development is the world's first comprehensive blueprint for sustainable development. Launched at the end of 2015, this Agenda frames health and well-being as both outcomes and foundations of social inclusion, poverty reduction and environmental protection. From a health perspective, development can be said to be "sustainable" when resources – natural and manufactured – are managed by and for all individuals in ways which support the health and well-being of present and future generations. In addition to acting as a stimulus for action, the 2030 Agenda provides an opportunity to build better systems for health – by strengthening health systems per se to achieve universal health coverage (UHC), and by recognizing that health depends upon, and in turn supports, productivity in other key sectors such as agriculture, education, employment, energy, the environment and the economy.

During the period 2000–2015, the MDGs focused on programmes tailored to specific health conditions – mainly in relation to maternal and child health, and communicable diseases (notably HIV/AIDS, malaria and tuberculosis). Far less attention was given to the performance of whole health systems, including health services, with the result that the potential benefits of doing so were neglected. The SDGs remedy this situation by emphasizing the crucial need for UHC, including full access to and coverage of health services, with financial risk protection, delivered via equitable and resilient health systems. UHC is not an alternative to the disease-control programmes of the MDG era – rather it embraces these programmes so that increased population coverage can be sustained within a comprehensive package of health services. The SDGs also encompass the provision of

services for noncommunicable diseases (NCDs), mental health and injuries, while fostering practical ways of implementing health interventions through already established international and other mechanisms. Such mechanisms include the WHO Framework Convention on Tobacco Control which is now considered to be an instrument capable of promoting not only health but development more broadly.

So here with the focus on health sector and sustainable development goals we will focus on below mentioned Objectives:

Our main objectives are:

Objective:

1. To study the SDG goal 3 and its interconnections with other SDGs of peace (SDG16), No hunger (SDG2) and pure water and sanitation for all (SDG6).
2. To study the Measurement of nutritional status and its growth.
3. To analyze the achievement of Good Health from since 2000.

Explanation: According to the objectives we will explain the SDG 3 and its targets, interrelation with other SDGs and its achievements since 2000.

SDG 3 targets: SDG 3 seeks to ensure health and well-being for all, at every stage of life. The goal addresses all major health priorities including: reproductive, maternal, and child health; communicable, non-communicable, and environmental diseases; universal health coverage; and access for all to safe, effective, quality and affordable medicines and vaccines. It also calls for more research and development, increased health financing, and strengthened capacity of all countries in health risk reduction and management.

What is health? So, how do we think about health and ensuring good health in our society and our world? Is it just about life expectancy or quantity of life? Does your thinking immediately go to physical illness and disease? What about quality of life? What about mental health and broader well-being?

The WHO defines health (since 1948) as: "A state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity."

So, what would a healthier world look like? This SDG sets targets to reduce global maternal and child mortality, end the epidemics of AIDS, TB, and malaria, reduce premature mortality from non-communicable diseases, improve environmental health, and more.

Measuring health: Global organizations, such as the WHO and the World Bank, are constantly tracking our progress against health goals by using indicators such as the prevalence and incidence of a disease and mortality.

- **Prevalence (or morbidity)** refers to the number of individuals who have a disease, like HIV or diabetes, at a particular point in time.

- **Incidence** is the number of new cases within a time period, for example a year.

- **Mortality** refers to the number of deaths in a population.

Health indicators like these help us to measure our progress in tackling specific health challenges, and to understand how close we are to the overall goal of ensuring health and well-being for all.

Interconnections of SDG goal 3 on good health with other SDGs: Health is both a key enabler and a critical outcome of sustainable development. The health of people and the health of the planet are fundamentally interdependent. Poverty is a structural factor influencing health. In the future, climate change is likely to become the key determinant of health. Now we will see how health is a complex and all-encompassing concept that intertwines with many other SDGs, and relates closely to our ultimate development objective: to ensure that people all around the world have better lives. And then we will consider the challenges to achieving a complex goal like SDG 3.

1. **Health and well-being cannot be achieved without peace (SDG 16):**

- Health and well-being cannot be achieved without peace.

- Peace is meaningless if we cannot heal the physical and mental health of our communities.

- Health workers deserve protection to do their work in conflict zones, even when healthcare itself is in danger.

- The rebuilding of health systems after conflict is an important marker of peacebuilding.

2. **Health linkages with Fresh Water and Sanitation (SDG 6):** Equal access to safe and affordable drinking water can certainly contribute to reducing the global maternal mortality ratio, especially due to the risk of infection during /after give birth. However, there are many factors involved. Direct / inverse relationship Achieving universal and equitable access to safe and affordable drinking water can likely have a more direct contribution to ending preventable deaths of newborns and children under 5 years, especially as 9% of post neonatal (under 5) death are caused by diarrhoea. Having safe and affordable drinking water will help to reduce the risk to diarrhea. And it can also directly reduce the number of deaths and illnesses from hazardous chemical and contamination, particularly since many, if not most hazardous chemicals end up with water resources that people use for direct consumption.
Sanitation and hygiene help to reduce the risk of infection during /after give birth. 9% of post neonatal death caused by Diarrhoea. Access to adequate and equitable sanitation and hygiene can directly and significantly the risk to diarrhoea and mortality from diarrhoea, or other gastrointestinal problems arising from ingesting contaminated water and food. And it will have direct impact on reducing cases of hepatitis, water-borne diseases and other communicable diseases.
Hazardous chemicals and materials discharged into water bodies in can cause higher risks of cancer in some people, depending on amount, concentration and time.

3. **SDG 3 and SDG 1 (End Poverty in all its forms everywhere):** Universal health care linked with a strong workforce and supportive research infrastructure underpins all health targets.

Reducing communicable diseases combined with enhanced sexual and reproductive health care can reduce newborn, infant and maternal mortality. Controlling tobacco and reducing substance abuse and exposure to hazardous chemicals also reduces mortality.

4. **SDG 3 and SDG 8 (Promote Sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all):** A healthy population is a prerequisite for development and underpins economic growth. The interaction between health and economic growth is mostly synergistic because economic growth, when sustainable and equitable, enables health and well-being through access to decent work, food, housing, medical care and education, which in turn contribute to higher productivity and income generation. However, the synergies are highly dependent on economic development being directed towards enhancing social and natural capital to achieve long-term health gains.

    Health and development are fundamentally linked. One of the key indicators we can consider is life expectancy in a population. Global life expectancy has increased from 52 years in 1960 to 72 years in 2015. When we examine the relationship between income and life expectancy, over time we see that increased income per capita is strongly associated with increased life expectancy. As a general rule, there are no very low-income countries in the world with very high life expectancy, and there are no high-income countries with a very low life expectancy.
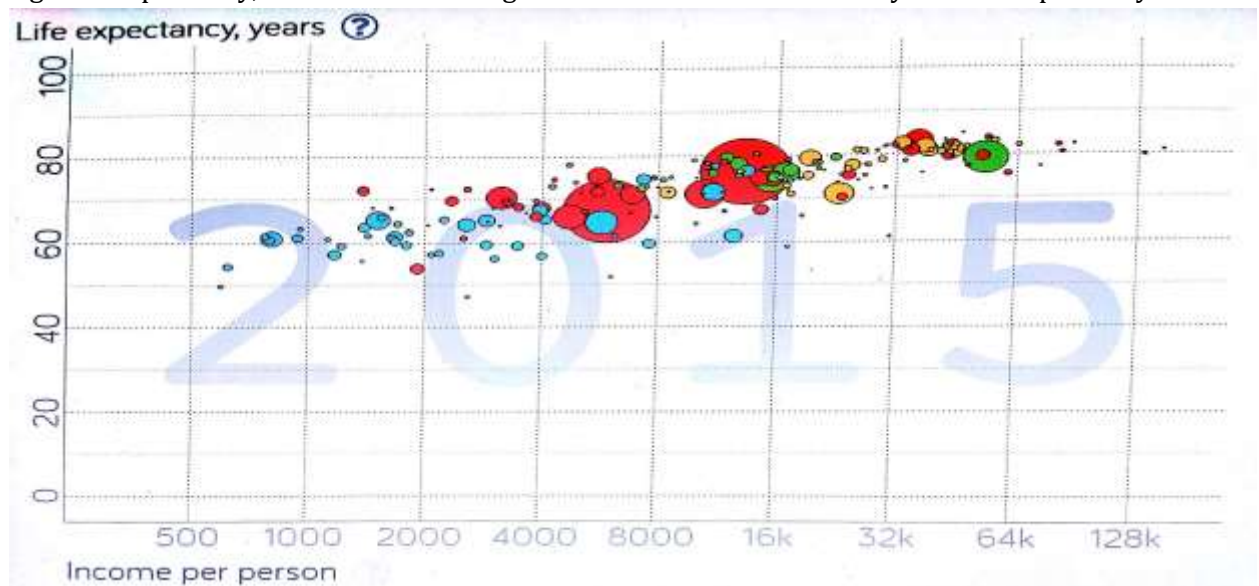
5. **SDG 3 and interrelation with SDG 11(Make cities and human settlement inclusive, safe, resilient and sustainable):** Cities concentrate a growing part of the global population and have a critical influence on physical and mental health. Sustainable urban planning and decent and affordable housing support mental health and access to health services, and reduce non-communicable diseases and limit environmental impacts.

6. **SDG 3 and interrelation with SDG 13(Take urgent action to combat climate change and its impact):** Climate change is already having significant impacts on health. Many of these impacts are direct (such as the effects of heat stress on ability to work outside), while others are indirect and arise through climate change that promotes the spread of disease or

contributes to food and water insecurity, or to mass movements of people. Failure to address the climate action goal will make achieving the health goal impossible. As well as major long-lasting health impacts, climate mitigation would have some immediate health benefits (such as through better air quality).

7. **SDG 2 (End Hunger, Achieve food security and improved nutrition and promote sustainable Agriculture) is also interlinked with achieving health:** Now we will look at the overlap between SDG 2: Zero Hunger, and SDG 3: Good Health and Well-being, and the importance of food security and nutrition to health.

We have often heard of the phrase "food as the first medicine". In other words, food and adequate nutrition are the foundations for so much of our health. Feeding the world's population is a huge challenge to our society, and a major challenge to achieving SDG 3: Good Health and Well-being. Let's look at some of the aspects of this challenge and the impact of nutrition on our health.

The MDGs aimed to cut hunger by half. Despite huge improvements between 2000–2015, globally one in nine people in the world (or 795 million people) are undernourished. Poor nutrition causes the deaths of approximately 3 million children under five per year. A related SDG, SDG 2, sets an even more challenging set of targets, with the aim to "End hunger, achieve food security and improved nutrition and promote sustainable agriculture."

How can we recognize hunger and malnutrition? When we talk about hunger we are referring to the distress associated with lack of food. The Food and Agriculture Organization of the United Nations (FAO) defines food deprivation, or undernourishment, as: "The consumption of food that is not sufficient to provide the minimum amount of dietary energy that each individual requires to live a healthy and productive life, given his or her sex, age, stature and physical activity level."

Dietary energy is typically measured in terms of calorie intake. The recommended daily allowance of calories varies according to an individual's age, gender, and level of activity. Adult females require an average of 2,000 calories a day, and adult males an average of 2,500 calories.

Undernutrition and overnutrition: Malnutrition refers to both undernutrition and overnutrition which are both problematic. When we talk about the term undernutrition, this goes beyond calorie intake. Undernutrition means being deficient in energy, protein, or essential vitamins and minerals. It is the result of inadequate intake of food in terms of either quantity or quality, poor utilisation of nutrients due to infections or other illnesses, or a combination of these factors. Undernutrition is the underlying contributing factor in about 45% of all child deaths, making children more vulnerable to severe diseases. Malnourished children, particularly those with severe acute malnutrition, have a higher risk of death from common childhood illness such as diarrhoea, pneumonia, and malaria.

We have considered undernutrition but what about overnutrition? Undernutrition refers to deficiencies whereas **overnutrition** refers to problems with unbalanced diets, which include consuming too many calories in relation to energy requirements. In recent years, for the first time **the world has more people who are obese than malnourished.** A recent study in The Lancet, of trends across 200 countries, found that over four decades, up to 2014, the global prevalence of

underweight men decreased to 8.8% and women to 9.7% compared with the global prevalence of overweight men which increased to 10.8% and women to 14.9%.

Overnutrition and obesity are associated with many of the non-communicable diseases that are starting to put a large burden on our health systems today such as diabetes and cardiovascular disease.

Undernutrition and overnutrition can occur in the same country or region; they are not mutually exclusive. The worldwide number of overweight children increased from an estimated 31 million in 2000 to 42 million in 2015, including in countries with a high prevalence of childhood undernutrition.

Challenges facing world malnutrition

The major challenges that countries face to reduce malnutrition are varied and complex. For example, these are some of the challenges that impact the ability of individuals and households to achieve adequate nutrition:

- Inadequate maternal or child health practices
- Inadequate access to health services
- Inadequate food supply chains in countries or regions
- Climate change
- Food insecurity

Food security exists when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life.

So given the importance of food as medicine, how best can we measure how the world is facing this challenge?

The Global Hunger Index: GHI is a tool designed to measure and track hunger globally, regionally, and by country. This calculation results in GHI scores on a 100-point scale, where 0 is the best score (no hunger) and 100 is the worst.

Each year, the International Food Policy Research Institute (IFPRI) calculates GHI scores in order to assess progress, or the lack thereof, in decreasing hunger. An increase in a country's GHI score indicates that the hunger situation is worsening, while a decrease in the score indicates an improvement in the hunger situation. A country's GHI score is made up of 4 components:

The proportion of the population that is undernourished

Child stunting per population

Child wasting per population

Child mortality per population

Since 1992 the GHI shows a drop across all four components in all regions of the world indicating improvement.

Measuring nutritional status with the Body Mass Index

Another way that health and nutritional status is often measured is using the Body Mass index (BMI). To get an individual's BMI we measure their height and weight, and then divide their weight in kilograms by their height squared in centimetres. We then use a BMI table to determine whether a person is within a normal range for their age, or whether they may be underweight or overweight. A BMI of 18.5–25 is within the normal range. Under 18.5 is underweight, with 17–18 being mildly

malnourished, 16–17 being moderately malnourished, and under 16 severely malnourished. What about the other end of the spectrum? A BMI of 25–30 is overweight and above 30 is obese.
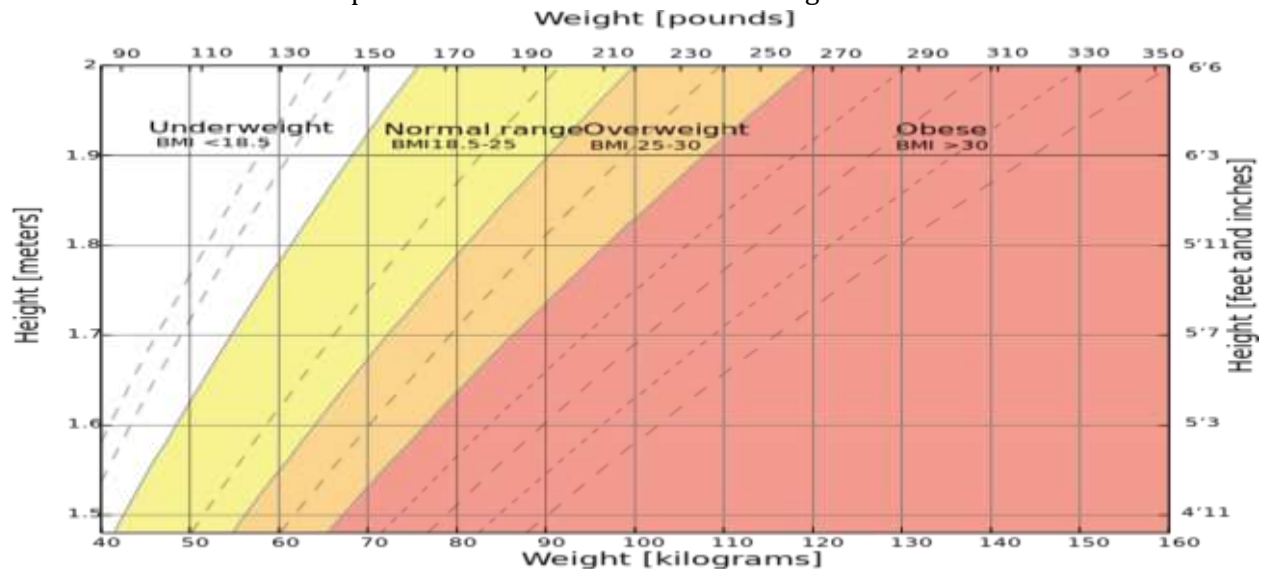
BMI is a common and useful measure but it is a rough measure. Nutritionists increasingly recommend using a collection of measures in order to understand nutritional status, to be able to determine the right course of treatment for under and overnutrition, and the right timing of that treatment.

Measuring nutritional status with ABCD: A comprehensive measurement of nutritional status will take into account multiple measures including some, or all, of the ABCD of measures.

- A is for anthropometry; this refers to the measurement of body parameters to determine nutritional status. BMI is a common anthropometric measure.

- B is for biochemical tests; this is where we take blood or urine samples and use them to assess whether a person has adequate micronutrients.

- C is for clinical history; this is where we assess a patient's clinical profile including symptoms and history of illness.

- D is for diet; this is where we assess a patient's actual food intake, often using tools like 24 hour dietary recall or food frequency questionnaires.

Global, Regional, and National Trends: Since 2000, significant progress has been made in the fight against hunger. The 2000 Global Hunger Index (GHI) score was 30.0 for the developing world, while the 2016 GHI score stands at 21.3, representing a reduction of 29 percent (Figure 2.1). To put this in context, the higher the GHI score, the higher the level of hunger. Scores between 20.0 and 34.9 points are considered serious.

Thus while the GHI scores for the developing world—also referred to as the global GHI scores—for 2000 and 2016 are both in the serious category, the earlier score was closer to being categorized as alarming, while the later score is closer to the moderate category. Underlying this improvement are

reductions since 2000 in each of the GHI indicators—the prevalence of undernourishment, child stunting (low height for age), child wasting (low weight for height), and child mortality.

FIGURE 2.1 DEVELOPING WORLD AND REGIONAL 1992, 2000, 2008, AND 2016 GLOBAL HUNGER INDEX SCORES, WITH CONTRIBUTION OF COMPONENTS
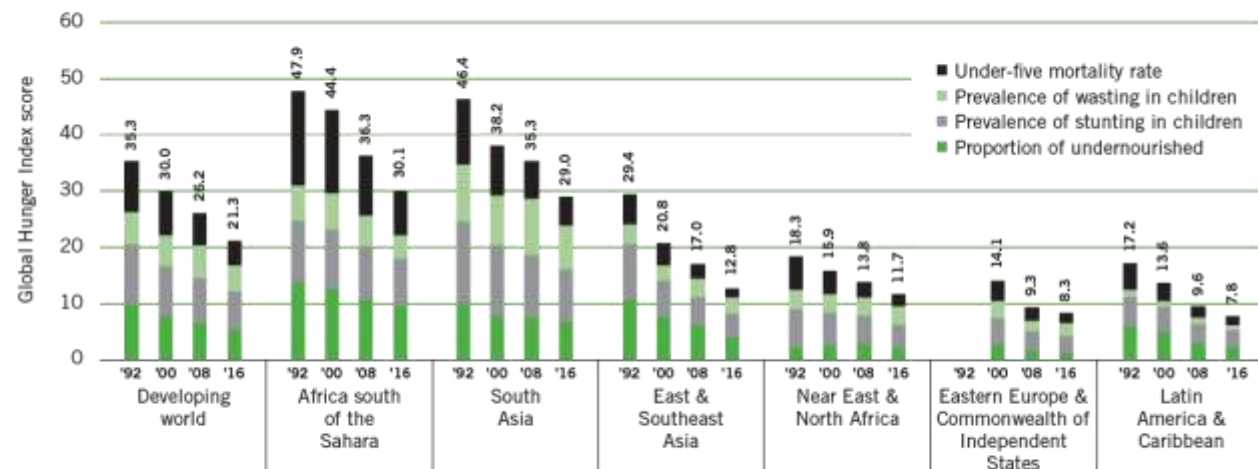
Source: Authors.

Note: See Appendix B for data sources. A 1992 regional score for Eastern Europe and the Commonwealth of Independent States was not calculated because many countries in this region did not exist in their present borders.

Large Regional Differences: The global averages mask dramatic differences among regions and countries. Africa south of the Sahara and South Asia have the highest 2016 GHI scores, at 30.1 and 29.0, respectively. Both reflect serious levels of hunger. In contrast, the GHI scores for East and Southeast Asia, Near East and North Africa, Latin America and the Caribbean, and Eastern Europe and the Commonwealth of Independent States range between 7.8 and 12.8, and represent low or moderate levels of hunger.

Achievement for good health from 2000: Life expectancy is a summary measure of mortality rates at all ages, and all health and health-related programmes contribute to it. Despite large gaps in the coverage of global mortality data systems, mortality is more amenable to accurate measurement than disease or disability. Globally, life expectancy has been improving at a rate of more than 3 years per decade since 1950, with the exception of the 1990s. During that period, progress on life expectancy stalled in Africa because of the rising HIV epidemic; and in Europe because of increased mortality in many ex-Soviet countries following the collapse of the Soviet Union. Life expectancy increases accelerated in most regions from 2000 onwards, and overall there was a global increase of 5.0 years in life expectancy between 2000 and 2015, with an even larger increase of 9.4 years observed in the WHO African Region.

Progress towards the MDGs has, on the whole, been remarkable. With regard to the proportion of undernourished people in the developing regions has fallen from 23% in 1990–1992 to 13% in 2014–2016. The child under nutrition indicator target has almost been met. Globally, the HIV, TB and malaria MDG targets have been met. Child mortality has fallen by 53% and maternal mortality by 43%.

The challenges we face in achieving SDG 3:

SDG 3 seeks to contribute to sustainable development by achieving good health and well-being for all the earth's citizens. But there are many challenges. First of all, there are worldwide reductions in funding. And yet expenditures are going higher and higher, they are not going down. There are still many countries in Africa whose national budget on health is more that 50% funded by donors. So how does such a country participate in determining sustainability of healthcare?"

"When considering the SDGs it's more important to consider our **economic indicators**. So if we are putting SDGs as a priority and yet we still have Gross Domestic Product (GDP) as an economic goal we're not going to succeed. We need to put into our economic indicator: equity, environmental sustainability, clean air, and clean water. These are part of the SDGs but **if we have the wrong economic drivers we're never going to meet the SDGs**. For example Bhutan has done this; they have an index on happiness that incorporates biodiversity, equity, sustainable health, and so if any policy doesn't meet all of the criteria it doesn't go forward. So I think we need to change our economic goals and that's the only way we really get after the SDGs.

- The 17 SDGs are interconnected. They must be tackled together and not considered one by one. So SDG 3 cannot be achieved without considering the other goals.
- We must address the core determinants of health and well-being, including socio-economic determinants, such as education, income and gender.
- Investing in healthcare must be a priority and adequate funding secured if we want to make a long term impact.
- We need to strive not just to tackle disease but to achieve a healthy society for everyone.
- We need to work together as an international community to achieve the SDGs.
- We need to **understand health in its fully integrated way** and **not just be a sick care system** with hospitals and clinics, but really **design a healthy society.**"

The future of healthcare: There are some biggest changes and challenges to healthcare in the future. This included the following:

- Rising non-communicable diseases

- Keeping up the fight against familiar and emerging infectious diseases

- The importance of new technology

- Considering systems approach to health

- Ensuring adequate access to health services, health insurance, and medicines

- Thinking about broader environmental factors

- Considering socio-economic determinants

- Changing world demographics

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