



YOUR LOGO

HUMAN DEVELOPMENT— HEALTH

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What is health?

- A state of complete mental, physical, and social well-being and not merely the absence of disease (WHO);
- Measures of health:
 - Mortality: deaths in a population
 - Life expectancy: estimated life span, calculated at birth
 - Morbidity: rates of disease



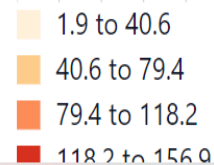
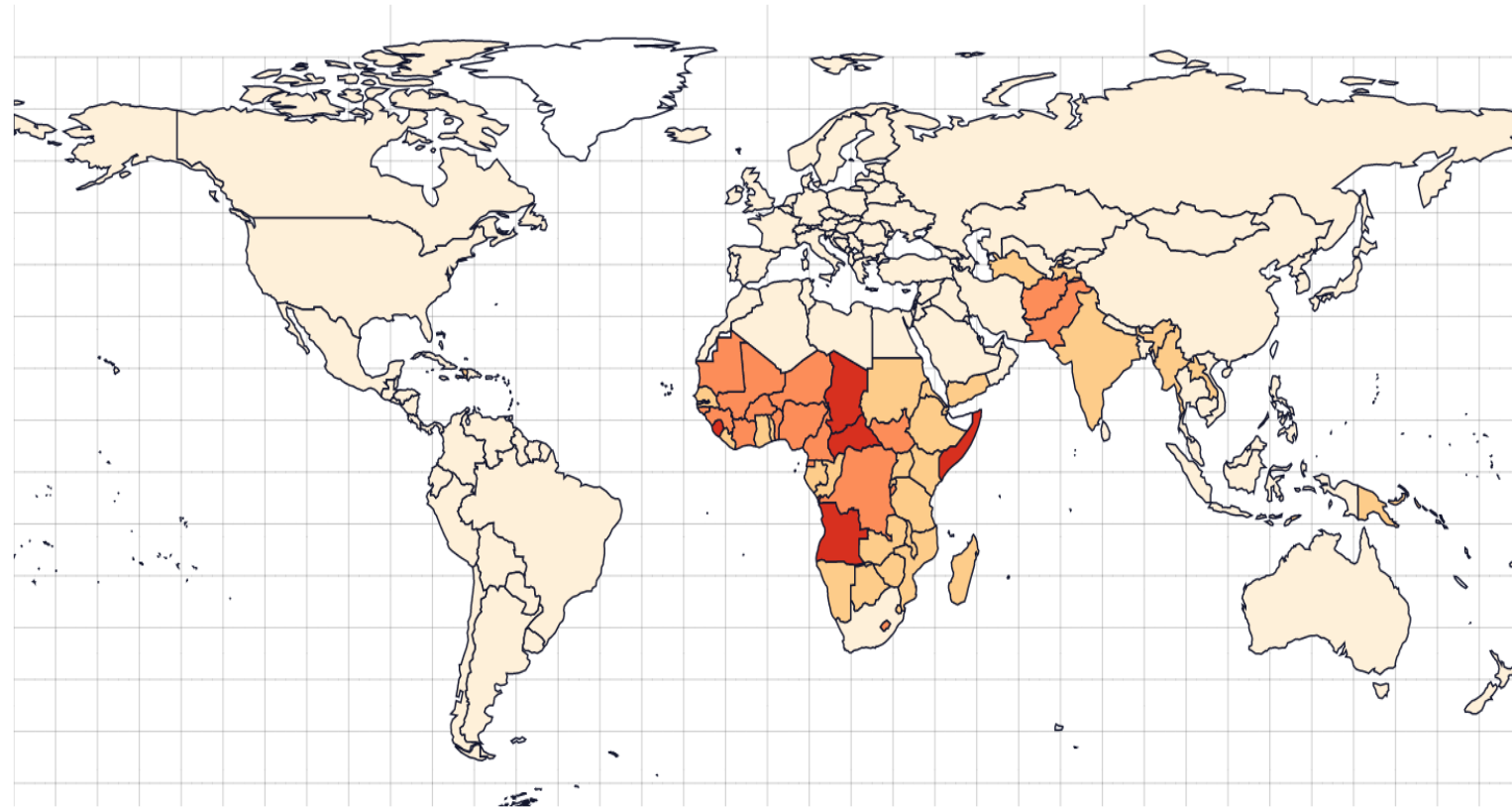
Under-5 mortality rate

- The probability per 1,000 births that the baby will die before reaching age five
- Subject to age-specific mortality rates of the specified year
- U5-MR is a good indicator of public health

Mortality rate, under-5 (per 1,000)

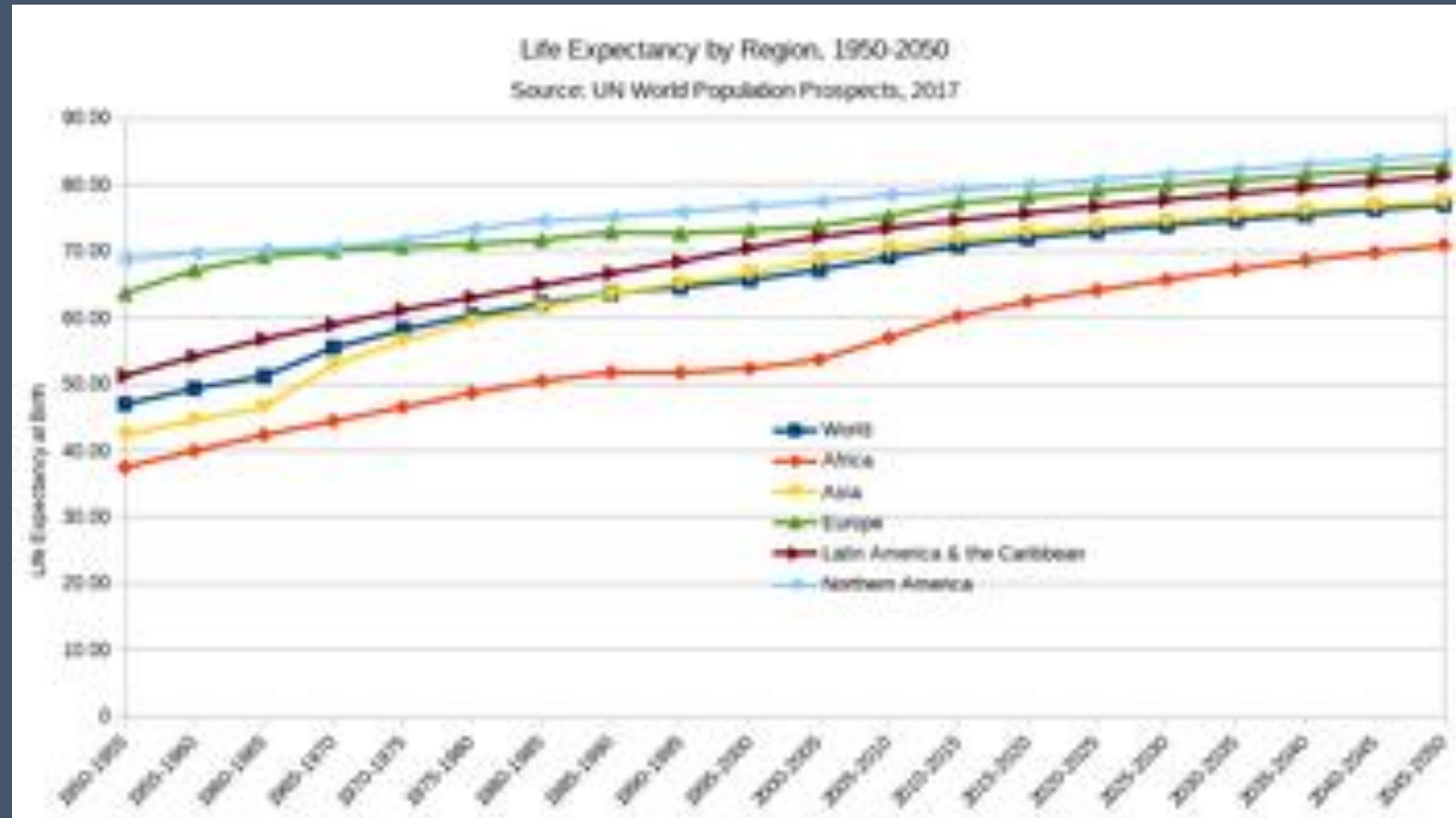
Year

-5 -1 2015

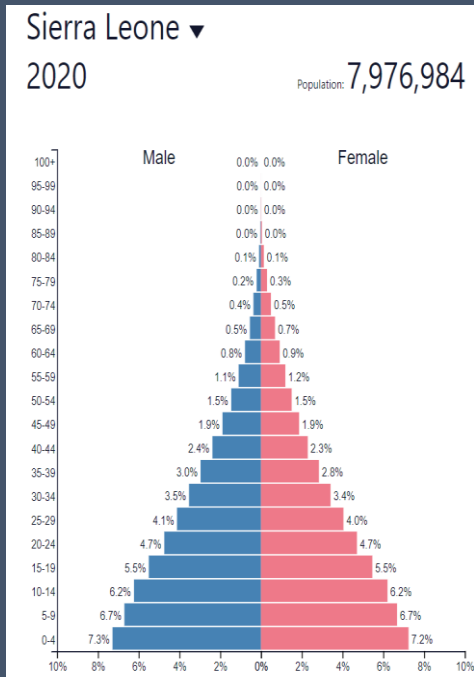


Life expectancy

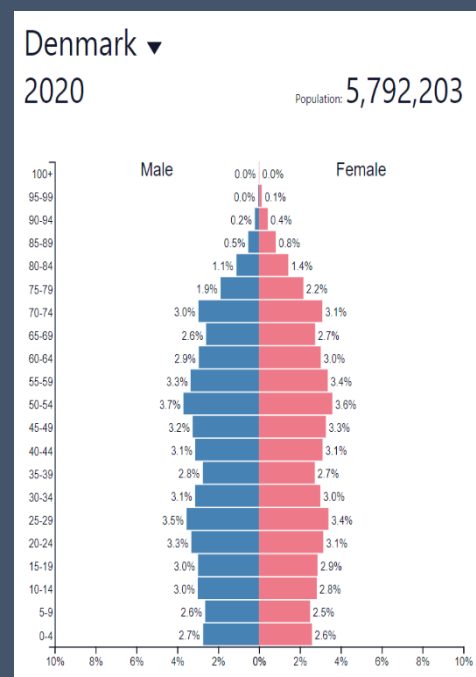
- Life expectancy: the number of years a person can expect to live
- Based on an estimate of the average age that members of a particular population group will be when they die



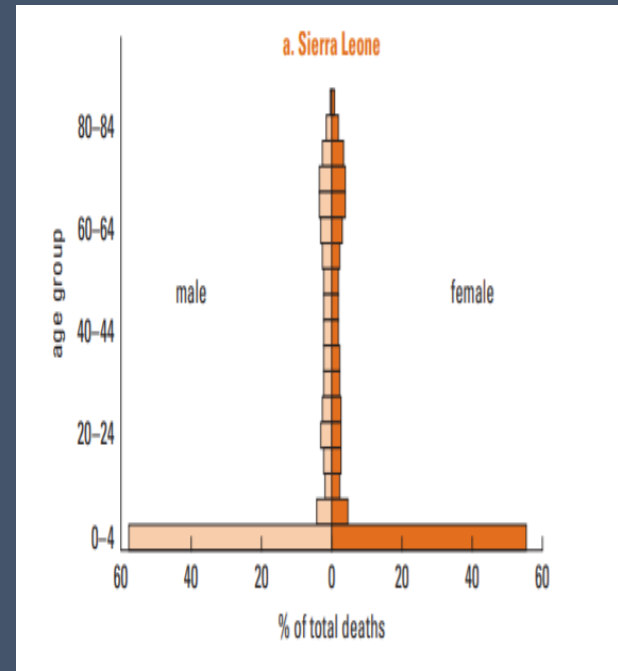
Two countries, contrasting statistics



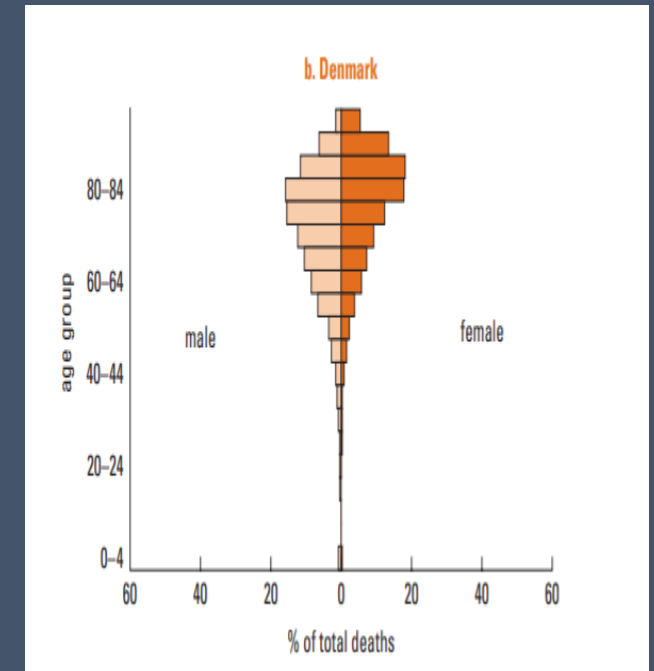
Sierra Leone
Population Pyramid



Denmark
Distribution of Age at Death



Sierra Leone
Distribution of Age at Death



Denmark
Distribution of Age at Death

Two countries, contrasting statistics

Sierra Leone

- Deaths occur in the first 4 years
- Median age of death: 4 years old
- Under-5 mortality rate: 269 deaths/1,000 births
- Life expectancy: 40 years
- Access to improved water sources: 83%
- Per capita health expenditure: \$41

Denmark

- Child deaths rarely occur
- Median age of death: 77 years old
- Under-5 mortality rate: 4 deaths/1,000 births
- Life expectancy: 79 years
- Access to improved water sources: 100%
- Per capita health expenditure: \$3,349

Transitions in global health

- Remarkable improvements in health and life expectancy occurred from 1800s to 1960s
- In 1800s, life expectancy at birth was 30 years; many people died in infancy or early childhood



Transitions in global health

- From 1960 to 2008, life expectancy worldwide increased from 50 to 69 years
- For low income countries the increase was from 44 to 67 years
- However HIV/AIDS decreased life expectancy in Africa. Other decline in life expectancy: Russia in 1990s (64 years to 58 years)



Epidemiologic transition

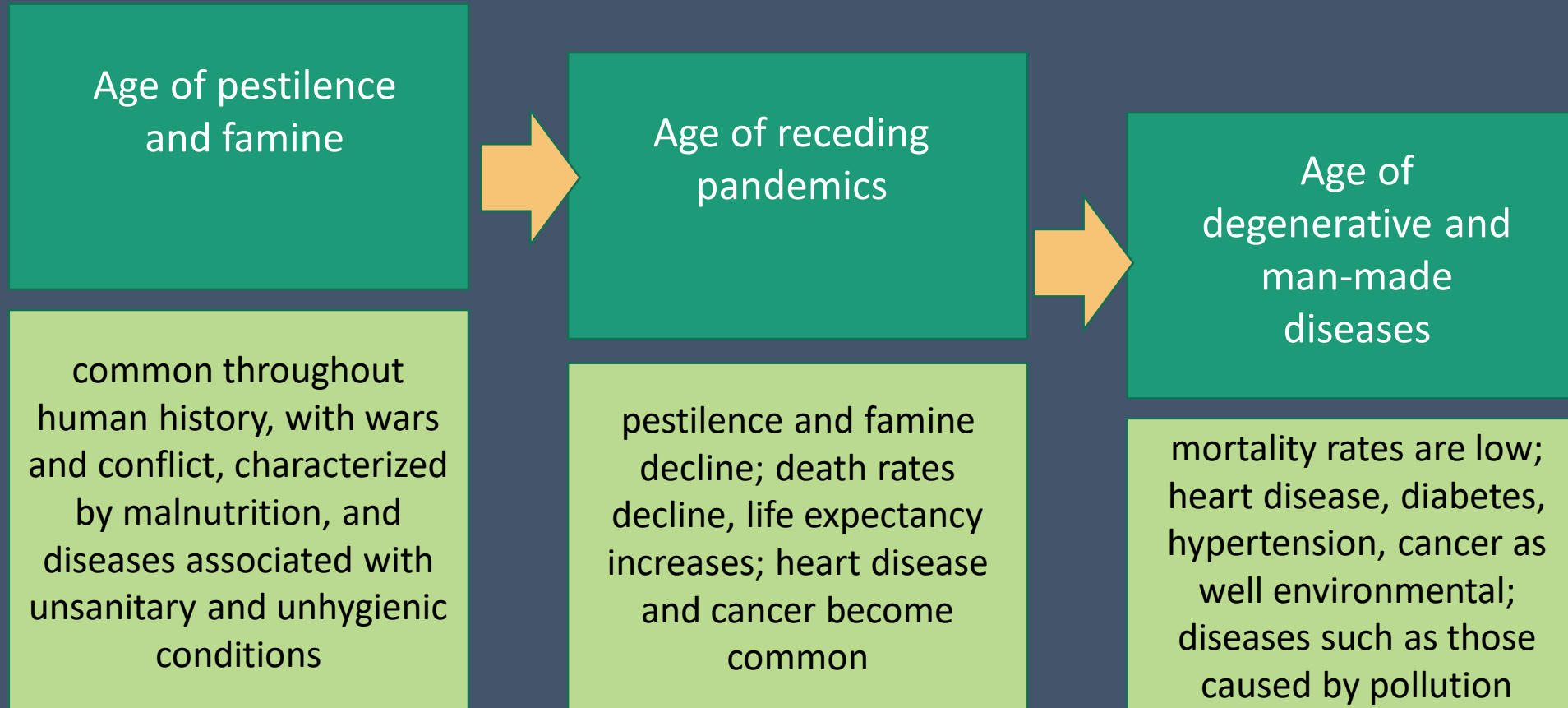
- Dramatic improvements in life expectancy and reductions in infant and child mortality during the past century
- This resulted in dramatic demographic and socioeconomic changes
- Lower fertility rates, decline in death rates and slower rates of population growth



Epidemiologic transition

As societies age and health improves,
the pattern of disease and causes of
death shift in a predictable pattern

Epidemiologic transition



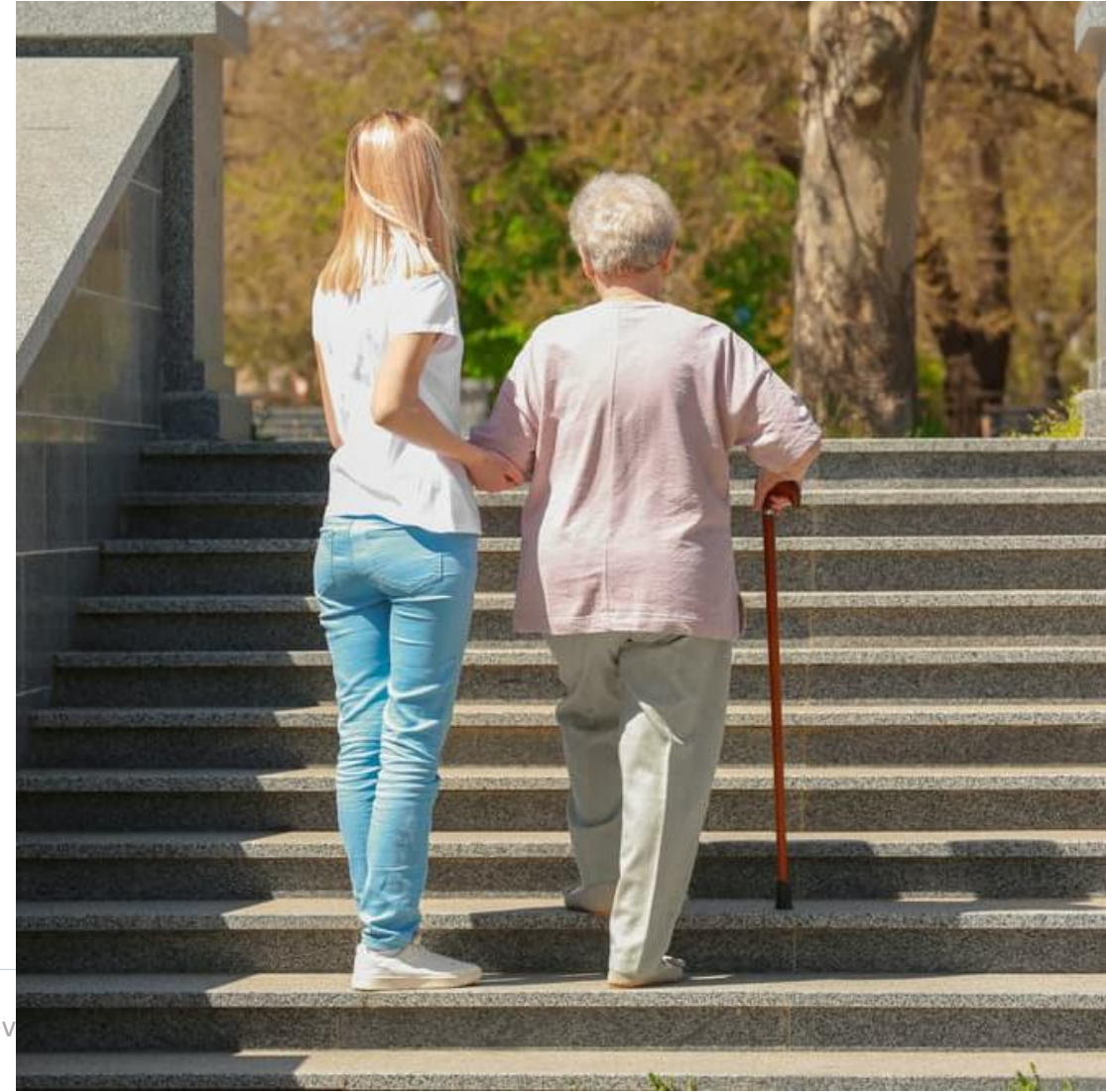
Determinants of improved health

- Improved health and increases in life expectancy
- Several factors: nutrition, better sanitary hygiene, better physical and environment
- Major improvements in agriculture and food distribution in Europe led to the disappearance of famine and starvation



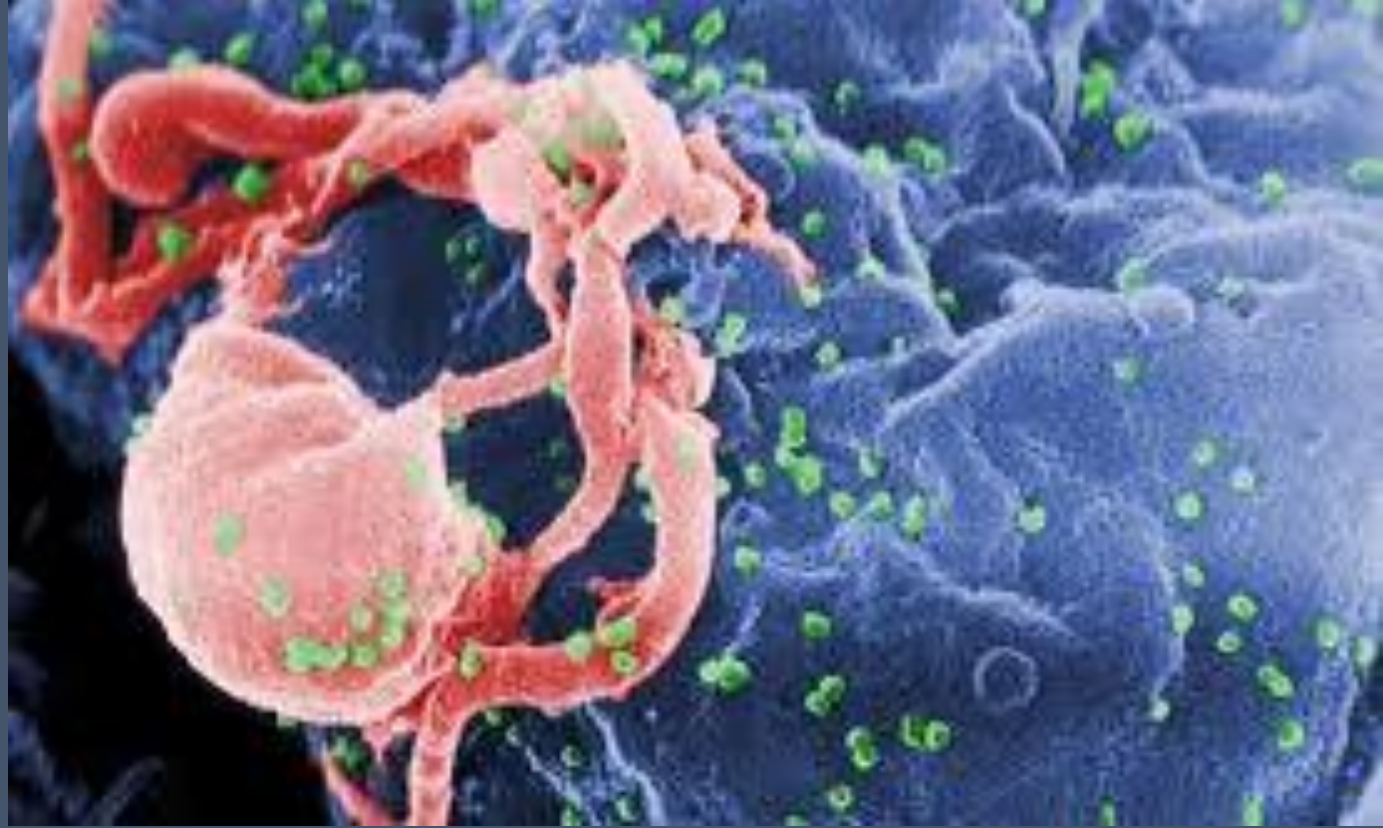
Determinants of improved health

- As incomes increase, people are able to increase spending on a range of goods and services that directly or indirectly improve health (fitness, healthy living, knowledge).
- Government are able to build hospitals and other health facilities.
- Improved health leads to improved productivity



HIV/AIDS

- Acquired immunodeficiency syndrome : final and fatal stage of infection of the human immunodeficiency virus
- AIDS epidemic began 2013; 70 million people infected; ½ died
- Some progress made; new infections has decreased steadily
- With better health care and practices for women and children; significant rate of decrease



Sub-Saharan region remains most severely affected, with nearly 1 in every 5 adults affected

Malaria

- Over half of the world's population (106 countries) is at risk of malaria
- Causes 800,000 deaths each year
- Malaria has disproportionate impact on the poor; likely to occur in slum areas, or in countryside where environmental hygiene is poor
- Some progress in preventing risk from malaria: using bed nets using preventive drugs for pregnant women



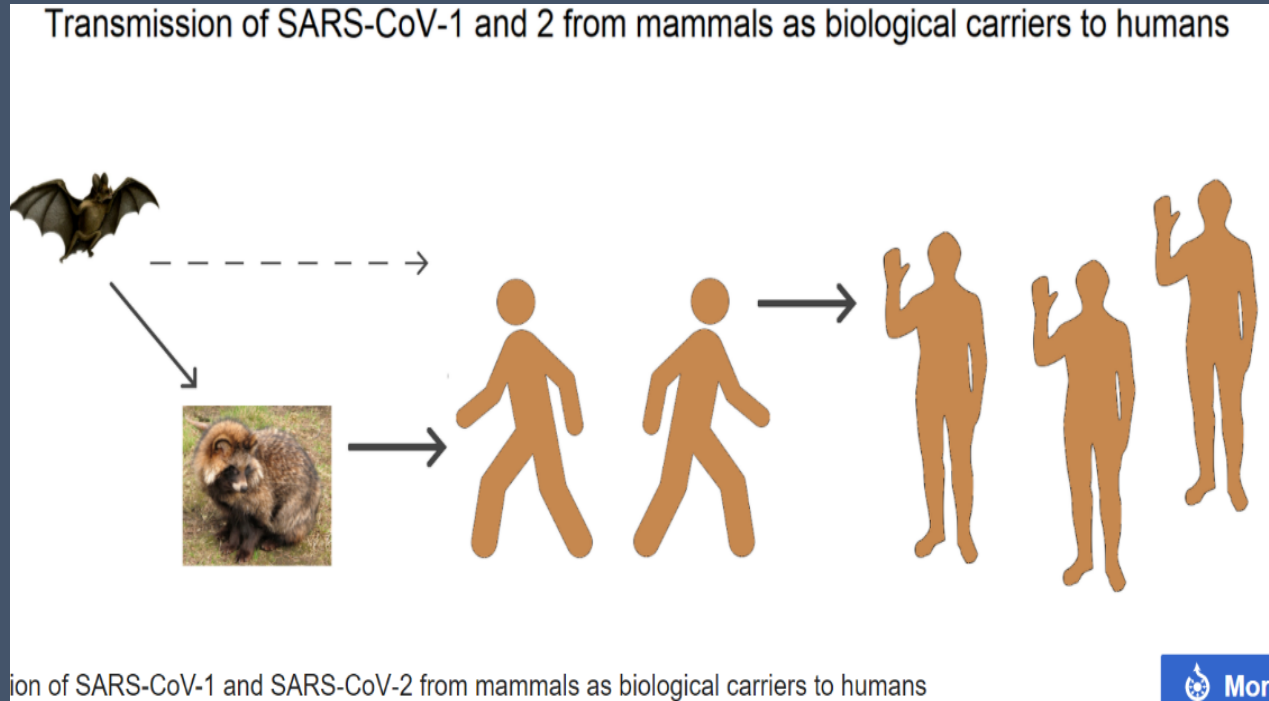
Tuberculosis

- Over 1/3 of world population is infected with TB; most people infected do not carry symptoms
- Causes 1.7 million deaths each year; 90% of deaths occur in developing countries
- Low immune systems of people with HIV/AIDS makes them vulnerable to TB; occurs in dense areas with poor environmental hygiene
- Strategy to eliminate TB: drug dosage combined with clinical observation visits



Pandemics: Covid 19

- SARS-CoV-2: cases of unexplained pneumonia noted in Wuhan, China, end of 2019
- Key feature: human-to-human transmission
- Virus demonstrates great infectivity, particularly to those with respiratory symptoms and co-morbid; affects the immune system
- 374 million people worldwide affected, 5.7 million deaths



Pandemics: Covid 19

Europe 143,224,359 confirmed

Americas 135,082,663 confirmed

South-East Asia 52,155,418 confirmed

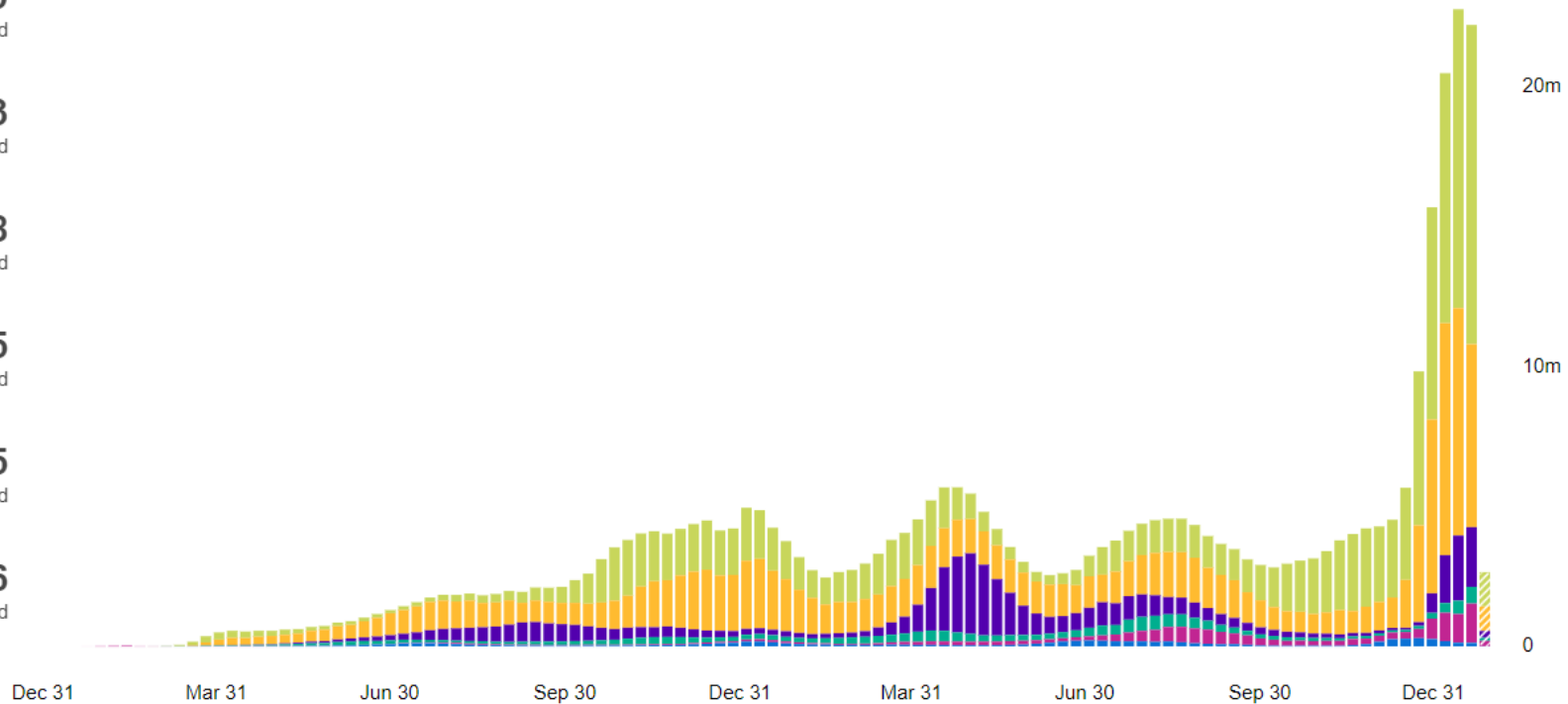
Eastern Mediterranean 18,933,395 confirmed

Western Pacific 15,767,915 confirmed

Africa 8,064,866 confirmed

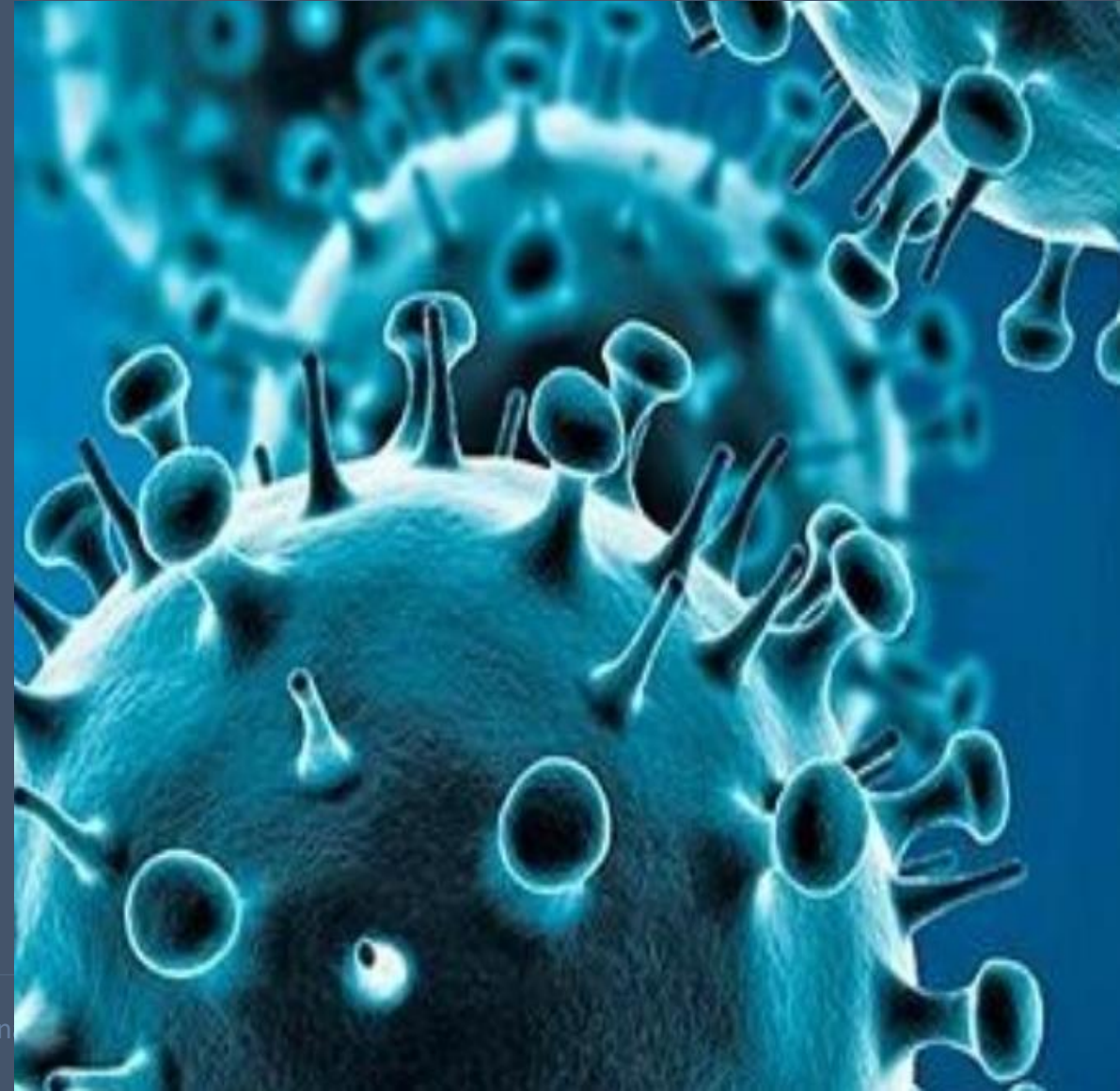
Source: World Health Organization

▨ Data may be incomplete for the current day or week.



Measures to address Covid 19

- Public health measures: wear masks, wash hands, physical distancing, avoid crowds, reduce mobility,
- Interventions: administer vaccines, quarantine-at-entry, lockdown measures



Impact of Covid 19 on the economy

- Economic recession
- Decline of worldwide GDP to 3.4%, loss of income by 10% equivalent to \$3.5 trillion
- Loss of 400 million jobs
- Increased debt burdens
- Loss in stock value
- Decrease in global trade



Government role in health

- Develop good policies to ensure public health
- Address negative externalities, such as outbreaks, spread of diseases and pandemics
- Invest in health infrastructure
- Prepare and develop public health programs that have been proven successful



Summary

- Improving health and rising levels of per capita income are strongly correlated. Access to clean water and sanitation, vaccination programs, and awareness education programs for women, significantly improve public health
- Infectious diseases continue to plague less developed countries. Most common are HIV/AIDS, malaria and tuberculosis
- Experience with COVID 19 pandemic demonstrates the magnitude of worldwide economic loss; concerted efforts must be taken by world leaders to minimize its impacts

Summary

- Improving health and rising levels of per capita income are strongly correlated. Access to clean water and sanitation, vaccination programs, and awareness education programs for women, significantly improve public health
- The challenge of the 21st century will be for low and middle income countries to win the battle against both old and new infectious diseases, address the prevalence of chronic noncommunicable diseases associated with higher incomes

THANK **Y**OU!