SDGs: Focus on Health Indicators

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Research And Action To Fight Health Inequalities Worldwide

- Basic and Translational Research
- Clinical Epidemiology
- Clinical Research
- Education and Training
- Health Systems Research, Innovative Models of Care
- International Cooperation
- Maternal, Newborn and Child Health (MNCH)
- Migration Medicine
- Natural Substances, Traditional Medicine, Integrated Medicine
- Operational and Implementation Research
- Policy and Advocacy
- Work with International Organizations and the UN System
1. The concept of Global Health
Size: Population, total

1800

https://www.gapminder.org/tools/#_state_time_value=1800;&ui_presentation: true;&chart-type=map
The Growth of Life Expectancy

Life expectancy globally and by world regions since 1770

Source: Life expectancy – James Riley for data 1990 and earlier; WHO and World Bank for later data (by Max Roser)

OurWorldinData.org/life-expectancy/ • CC BY-SA

and its determinants......
Life Expectancy vs. GDP per Capita from 1800 to 2012 — by Max Roser

GDP per capita is measured in International Dollars. This is a currency that would buy a comparable amount of goods and services a U.S. dollar would buy in the United States in 1990. Therefore incomes are comparable across countries and across time.
Clean water

Worldwide, 1 out of every 5 deaths of children under 5 is due to a water-related disease.
Social Determinants

- Marketing and advertising
- Changes in gender roles
- Physical activity
- Equality
- Education
- Nutrition
  - Industrialization of food production
  - Agriculture
    - Organic farming
    - Chemistry and pesticides
- Environment
- Social networks
- Mental well-being
  - Depression
  - Unemployment
  - Stress
- Innovation in medicine
- Urban development
- Social innovation
- Demographic change

HEALTH & WELLBEING
Progress of Medicine

1796

1977

smallpox is dead!
Advancements in Health have not been equally distributed
Global inequalities

At least 20 million people die **prematurely** (half of then before the age of 5) in developing countries for lack of adequate access to basic health care. They die for causes that are very often **preventable or treatable**.

Despite the convergence on the concept of health as a human right, there still exist intolerable global inequalities in accessing health and health services and in terms of life expectancy and morbidity and mortality from **communicable and non-communicable diseases**.

The persistence of inequalities in terms of health - **not only between rich and poor countries, but also between different regions in the same country** - is also a contradiction to science, given the growing geographic interdependence of the **biomedical causes and of the social determinants of health and diseases**.
LIFE EXPECTANCY

Global Life Expectancy

Mean life expectancy in years, 2013
- <40
- 40 to 45
- 45 to 50
- 50 to 55
- 55 to 60
- 60 to 65
- 65 to 70
- 70 to 75
- 75 to 80
- >80
- no data

Map created by Tina Gotthardt & Benjamin Hennig
Data Source: UN Human Development Report 2014

Reference Map
Healthy life expectancy (HALE) at birth, both sexes, 2015

The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Source: World Health Statistics 2016, WHO
Note: WHO Member States with a population of less than 90,000 in 2015 were not included in the analysis.

Data Source: World Health Organization
Map Production: Information Evidence and Research (IER)
World Health Organization
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MATERNAL MORTALITY RATIO
per 100 000 live births, 2013
HIV Prevalence
Adults living with the human Immunodeficiency virus

HIV prevalence
adult (% ages 15-49)
>15%
above 10 to 15%
above 5 to 10%
above 1 to 5%
≤1%

Countries resized according to the number of people aged 15-49 who are living with HIV

Data source: HDR & WHO (2015). Global Health Observatory

Map by Benjamin Hennig
www.viewsfromthetop.net
Estimated TB incidence rates, 2016

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Estimated TB mortality rates excluding TB deaths among HIV-positive people, 2016

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Prevalence of HCV

- >10%
- 5–10%
- 2–5%
- 1–2%
- <1%
- No data

* Estimated number of chronically infected individuals (2010)

2008 Global HPV-related burden:
607,000 annual cancer cases

- Genital warts: 30,000,000
- Anal cancer: 11,000 + 13,000 = 24,000
- Oropharyngeal cancer: 21,000 + 4,400 = 25,400
- Penile cancer: 11,000
- Vulva and Vaginal cancer: 17,000 + 530,000 = 547,000

*Circles proportional to annual burden

International Agency for Research on Cancer

World Health Organization

De Martel et al. 2012 Lancet Oncol (cancers) and Dillner et al. 2010 BMJ (genital warts)
Deaths due to noncommunicable diseases: age-standardized death rate (per 100,000 population)
Both sexes, 2015

Death rate
(per 100,000 population)
≤400
401–500
501–600
601–700
701–800
801–900
>900
Data not available
Not applicable

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Data Source: World Health Organization
Map Production: Information Evidence and Research (IER)
World Health Organization
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Immunization coverage with DTP3 vaccines in infants (from <50%), 2016

Map production: Immunization. Vaccines and Biologicals (IVB), World Health Organization. 194 WHO Member States.
Date of issue: 19 July 2017.

Legend:
- <50% (8 countries or 4%)
- 50-79% (27 countries or 14%)
- 80-89% (20 countries or 13%)
- >90% (136 countries or 67%)
- Not available
- Not applicable

Note: The International and national borders and administrative units on the map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area, or concerning the delimitation of its frontiers or boundaries. The expression of the denominations employed and the boundaries delineated do not imply the endorsement by the WHO of the situations existing there or of any facts or assumptions. © WHO 2017. All rights reserved.
GENDER (IN-)EQUALITY

Gender Inequality

Data Source: Human Development Index (2014)
Main map shows an equal population projection (gridded population cartogram)
Global coverage of surveillance data on drug resistance, 1995–2017

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ROAD TRAFFIC MORTALITY

Road traffic mortality rate, 2013*

Mortality rate
(per 100 000 population)

- <10.0
- 10.0–19.9
- 20.0–24.9
- ≥25.0
- Data not available
- Not applicable

* WHO Member States with a population of less than 90,000 in 2015 who did not participate in the survey for the Global status report on road safety 2015 were not included in the analysis.

Data Source: World Health Organization
Map production: Information Evidence and Research (IER)
World Health Organization

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What is Global Health?
Global health is the health of populations in a global context

An area for study, research, and action
That prioritize improving health and achieving equity in health for all people worldwide
Transcending the perspectives and concerns of individual nations
With specific attention to the poor, the marginalized, and the underserved.....
Globalization, Poverty and Health

1. The current version of globalization has delivered economic growth

2. But at enormous cost: rising inequalities, massive environmental destruction, and growing lawlessness.

3. Poverty is both a cause and a consequence of poor health.

4. The causes of poor health for millions globally are rooted in political, social and economic injustices.
The causes of poor health for millions globally are rooted in political, social and economic injustices.

Only 1% of people owns 50.4% of the global wealth;
2.4 billion adults own only 1%

Marginalised groups and vulnerable individuals are often worst affected.
1.5 billion people live in slums
“Displaced populations”
THE MIGRATION OF ANATOMICALLY MODERN HUMANS

Evidence from fossils, ancient artefacts and genetic analyses combine to tell a compelling story.
EXPLOITED YOUNG WOMEN

High rates of HIV among key populations: young women in Africa


Young women have up to 8 times more HIV than men

Source: Adapted from UNAIDS 2012

HIV prevalence in young pregnant women in rural Vulindlela, South Africa (2005-2008)

<table>
<thead>
<tr>
<th>Age Group (Years)</th>
<th>HIV Prevalence (N=1237)</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤16</td>
<td>10.6%</td>
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<tr>
<td>17-18</td>
<td>21.3%</td>
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<tr>
<td>19-20</td>
<td>33.0%</td>
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<td>21-22</td>
<td>44.3%</td>
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<td>23-24</td>
<td>51.1%</td>
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</table>
2. Investing in Health
Investing in Health is very cost-effective

Fewer children die as more money is spent on health

The arrows show the change for all countries in the world, from 1995 (earliest available data) to 2014 (latest available data). [Not all countries are labelled]

- Child mortality is the share of children that die before their 5th birthday.
- Total health expenditure is the sum of public and private health expenditures. It covers the provision of health services (preventive and curative), family planning activities, nutrition activities, and emergency aid designated for health but does not include provision of water and sanitation.
The Challenge of Financing Global Health: competing with emerging new priorities

financial crisis, conflict situations, migration, security, climate change, natural and human-made disasters
YEAR 2000: difference in mortality between the rich and the poor

Annual AIDS deaths since 1982

- **1980** - 1984: AIDS deaths are relatively low.
- **1984** - **1990**: A steady increase in AIDS deaths as the epidemic spreads.
- **1991**: First AIDS drug AZT becomes available, but results are mixed.
- **1992** - **1996**: Deaths continue to rise, but three-drug combination therapy becomes the norm in Western countries, but it is unaffordable in Africa.
- **1999**: AIDS deaths reach a peak of 2.4 million.
- **2000**: 1.1 million AIDS deaths, a significant drop from previous years.
World AIDS Conference
DURBAN, 2000
INNOVATIVE FINANCING TO FIGHT AIDS, TB & MALARIA
The rise of antiretroviral treatment coverage

Source: UNAIDS/WHO estimates.
MORTALITY IMPACT

Antiretroviral therapy coverage and number of AIDS-related deaths, global, 2000–2015

Key:
- Green bars: HIV treatment coverage (all ages)
- Blue bars: AIDS-related deaths (all ages)

HIV/AIDS: life-expectancy impact
Development assistance for health (DAH)

Growth is stagnant, but the needs haven’t gone away

DAH by health focus area, 1990-2016

Total DAH amounted to $37.6 billion in 2016

Continued improvements in maternal, newborn, and child health may depend on increased funding in those areas.¹

HIV/AIDS remains an epidemic, but DAH for HIV/AIDS has declined by $100 million per year since 2010. With access to treatment, HIV/AIDS is a chronic condition requiring ongoing management.

*2015 and 2016 are preliminary estimates.

¹The majority of countries did not reach their goals for MDGs 4 and 5 (reducing child and maternal mortality).

Note: Health assistance for which we have no health focus area information is designated as “unidentified.” “Other” captures DAH for which we have project-level information but which is not identified as funding any of the health focus areas tracked.
3. The Global Burden of Diseases

Institute for Health Metrics and Evaluation

http://www.healthdata.org
What is the Global Burden of Disease (GBD)?

Everyone, all over the world, deserves to live a long life in full health. The Global Burden of Disease study measures what prevents us from achieving that goal.

The study identifies the biggest health problems in 195 countries and territories.

GBD includes

- 2 billion+ results
- 300+ diseases, injuries, and risk factors
- Results by sex
- Over 20 age groups

What questions can it answer?

- What are my country’s biggest health problems?
- What causes more ill health in my country, depression or breast cancer?
- What contributes to more death and disability in my country - smoking, obesity/overweight, or unsafe water?
- What is the leading cause of death among children under the age of 5 in the world?
- I’m designing an intervention to improve the health of young women - which diseases, injuries, and risk factors should I target to make the greatest impact?
- Which countries have the highest death rates from drug use? Leukemia? Cardiovascular diseases?

GBD is a worldwide effort

Published in *The Lancet*, the study uses more than 80,000 data sources, drawing from the world’s largest global health database. Governments in Australia, Brazil, Kenya, Norway, the UK, and the US, as well as the Bill & Melinda Gates Foundation and the World Bank, are using GBD findings to inform decision-making.
Global, regional, and national disability-adjusted life-years (DALYs) for 315 diseases and injuries and healthy life expectancy (HALE), 1990–2015: a systematic analysis for the Global Burden of Disease Study 2015

Summary

Healthy life expectancy (HALE) and disability-adjusted life-years (DALYs) provide summary measures of health across geographies and time that can inform assessments of epidemiological patterns and health system performance, help to prioritize investments in research and development, and monitor progress toward the Sustainable Development Goals (SDGs). We aimed to provide updated HALE and DALYs for geographies worldwide and evaluate how disease burden changes with development.

Methods: We used results from the Global Burden of Diseases, Injuries, and Risk Factors Study 2015 (GBD 2015) for all-cause mortality, cause-specific mortality, and non-fatal disease burden to derive HALE and DALYs by sex for 195 countries and territories from 1990 to 2015. We calculated DALYs by summing years of life lost (YLLs) and years of life lived with disability (YLDs) for each geography, age group, sex, and year. We estimated HALE using the Sullivan method, which draws from age-specific death rates and YLDs per capita. We then assessed how observed levels of DALYs and HALE differed from expected trends calculated with the Socio-demographic index (SDI), a composite indicator constructed from measures of income per capita, average years of schooling, and total fertility rate.

Findings: Total global DALYs remained largely unchanged from 1990 to 2015, with decreases in communicable, neonatal, maternal, and nutrition (Group 1) disease DALYs offset by increases in DALYs due to non-communicable diseases (NCDs). Much of this epidemiological transition was caused by changes in population growth and ageing, but it was accelerated by widespread improvements in SDI that also correlated strongly with the increasing importance of NCDs. Both total DALYs and age-standardised DALY rates due to groups 1 causes significantly decreased by 2015, and although total burden climbed for the majority of NCDs, age-standardised DALY rates due to NCDs declined. Nonetheless, age-standardised DALY rates due to several high-burden NCDs (including osteoarthritis, drug use disorders, depression, diabetes, congenital birth defects, and skin, oral, and some organ diseases) either increased or remained unchanged, leading to increases in their relative ranking in many geographies. From 2005 to 2015, HALE at birth increased by an average of 2.5 years (95% uncertainty interval 2.3–2.7) for men and 3.5 years (1.4–3.7) for women while HALE in age 65 years improved by 0.45 years (0.78–0.91) and 1.2 years (1.0–1.4) respectively. Rising SIDI was associated with consistently higher HALE and a country has smaller proportion of life span with functional health loss; however, rising SIDI was related to increases in total disability. Many countries and territories in central America and western sub-Saharan Africa had increasingly lower rates of disease burden than expected given their SDI. At the same time, a subset of geographies recorded a growing gap between observed and expected levels of DALYs, a trend driven mainly by rising burden due to war, interpersonal violence, and various NCDs.

Interpretation: Health is improving globally, but this means more populations are spending more time with functional health loss, an absolute expansion of morbidity. The proportion of life spent in ill health decreases somewhat with increasing SIDI, a relative compression of morbidity, which supports continued efforts to increase personal income, improve education, and boost fertility. Our analysis of DALYs and HALE and their relationship to SDI represents a robust framework on which to benchmark geography-specific health performance and SDG progress. Cause-specific drivers of disease burden, particularly for causes with higher than expected DALYs, should inform financial and research investment, pro-poor efforts, health policies, and health system improvement initiatives for all countries along the development continuum.

Funding: Bill & Melinda Gates Foundation.

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### Figure 2

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<td>-49.6</td>
<td>-42.8</td>
<td>29 Alzheimer’s disease</td>
<td>32.8</td>
<td>17.4</td>
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<tr>
<td>30 Chronic kidney disease</td>
<td>30 Falls</td>
<td>6.0</td>
<td>-13.7</td>
<td>-15.4</td>
<td>30 Interpersonal violence</td>
<td>-5.9</td>
<td>-16.8</td>
<td>-16.1</td>
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<tr>
<td>31 Interpersonal violence</td>
<td>31 Other neonatal</td>
<td>32 Interpersonal violence</td>
<td>33 Anxiety disorders</td>
<td>34 Other musculoskeletal</td>
<td>35 Drowning</td>
<td>81 Measles</td>
<td>100 Tetanus</td>
<td></td>
</tr>
</tbody>
</table>

- Communicable, maternal, neonatal, and nutritional
- Non-communicable
- Injuries
Causes of DALYs, global, 1990-2015

Disability-adjusted life years (DALYs) are years of healthy life lost to premature death and disability. This figure shows that communicable diseases declined between 1990 and 2015.
### Figure 3

<table>
<thead>
<tr>
<th>Age Group</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
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<tbody>
<tr>
<td>Early neonatal (0-6 days)</td>
<td>NN Preterm</td>
<td>NN Enceph</td>
<td>NN Sepsis</td>
<td>Congenital</td>
<td>Other NN</td>
<td>LRI</td>
<td>NN Haemol</td>
<td>STD</td>
<td>Diarrhoea</td>
<td>Meningitis</td>
</tr>
<tr>
<td>Late neonatal (7-27 days)</td>
<td>NN Sepsis</td>
<td>NN Preterm</td>
<td>NN Enceph</td>
<td>Congenital</td>
<td>LRI</td>
<td>Other NN</td>
<td>Diarrhoea</td>
<td>Meningitis</td>
<td>Malaria</td>
<td>NN Haemol</td>
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<tr>
<td>Post-neonatal (28-364 days)</td>
<td>LRI</td>
<td>Diarrhoea</td>
<td>Congenital</td>
<td>Malaria</td>
<td>PEM</td>
<td>Meningitis</td>
<td>HIV</td>
<td>Haemog</td>
<td>Iron</td>
<td>NN Preterm</td>
</tr>
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<td>1-4 years</td>
<td>Malaria</td>
<td>Diarrhoea</td>
<td>LRI</td>
<td>PEM</td>
<td>Iron</td>
<td>Congenital</td>
<td>Meningitis</td>
<td>Drowning</td>
<td>Skin</td>
<td>Haemog</td>
</tr>
<tr>
<td>5-9 years</td>
<td>Iron</td>
<td>Skin</td>
<td>LRI</td>
<td>Diarrhoea</td>
<td>Intest inf</td>
<td>Malaria</td>
<td>HIV</td>
<td>Asthma</td>
<td>Road injuries</td>
<td>Congenital</td>
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<tr>
<td>10-14 years</td>
<td>Iron</td>
<td>Skin</td>
<td>HIV</td>
<td>Conduct</td>
<td>Asthma</td>
<td>Road injuries</td>
<td>Anxiety</td>
<td>Intest inf</td>
<td>Migraine</td>
<td>Haemog</td>
</tr>
<tr>
<td>15-19 years</td>
<td>Road injuries</td>
<td>Skin</td>
<td>Depression</td>
<td>Iron</td>
<td>Back &amp; neck</td>
<td>Self-harm</td>
<td>Migraine</td>
<td>Anxiety</td>
<td>Violence</td>
<td>HIV</td>
</tr>
<tr>
<td>20-24 years</td>
<td>Road injuries</td>
<td>Depression</td>
<td>Self-harm</td>
<td>Back &amp; neck</td>
<td>Skin</td>
<td>Violence</td>
<td>HIV</td>
<td>Migraine</td>
<td>Iron</td>
<td>Other MSK</td>
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<tr>
<td>25-29 years</td>
<td>Road injuries</td>
<td>HIV</td>
<td>Back &amp; neck</td>
<td>Depression</td>
<td>Self-harm</td>
<td>Migraine</td>
<td>Skin</td>
<td>Violence</td>
<td>TB</td>
<td>Drugs</td>
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<tr>
<td>30-34 years</td>
<td>HIV</td>
<td>Back &amp; neck</td>
<td>Road injuries</td>
<td>Depression</td>
<td>Self-harm</td>
<td>Migraine</td>
<td>IHD</td>
<td>TB</td>
<td>Skin</td>
<td>Violence</td>
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<tr>
<td>35-39 years</td>
<td>HIV</td>
<td>Back &amp; neck</td>
<td>Road injuries</td>
<td>Depression</td>
<td>IHD</td>
<td>Migraine</td>
<td>TB</td>
<td>Self-harm</td>
<td>Stroke</td>
<td>Other MSK</td>
</tr>
<tr>
<td>40-44 years</td>
<td>Back &amp; neck</td>
<td>HIV</td>
<td>IHD</td>
<td>Road injuries</td>
<td>Depression</td>
<td>Stroke</td>
<td>Diabetes</td>
<td>Sense</td>
<td>TB</td>
<td>Migraine</td>
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<tr>
<td>45-49 years</td>
<td>IHD</td>
<td>Back &amp; neck</td>
<td>Stroke</td>
<td>Diabetes</td>
<td>HIV</td>
<td>Depression</td>
<td>Road injuries</td>
<td>Sense</td>
<td>TB</td>
<td>Other MSK</td>
</tr>
<tr>
<td>50-54 years</td>
<td>IHD</td>
<td>Stroke</td>
<td>Back &amp; neck</td>
<td>Diabetes</td>
<td>Sense</td>
<td>Depression</td>
<td>Lung C</td>
<td>COPD</td>
<td>Road injuries</td>
<td>TB</td>
</tr>
<tr>
<td>55-59 years</td>
<td>IHD</td>
<td>Stroke</td>
<td>Back &amp; neck</td>
<td>Diabetes</td>
<td>Sense</td>
<td>COPD</td>
<td>Lung C</td>
<td>Depression</td>
<td>TB</td>
<td>CKD</td>
</tr>
<tr>
<td>60-64 years</td>
<td>IHD</td>
<td>Stroke</td>
<td>Diabetes</td>
<td>Back &amp; neck</td>
<td>COPD</td>
<td>Sense</td>
<td>Lung C</td>
<td>CKD</td>
<td>LRI</td>
<td>Depression</td>
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<tr>
<td>65-69 years</td>
<td>IHD</td>
<td>Stroke</td>
<td>COPD</td>
<td>Diabetes</td>
<td>Sense</td>
<td>Back &amp; neck</td>
<td>Lung C</td>
<td>CKD</td>
<td>LRI</td>
<td>Stomach C</td>
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<tr>
<td>70-74 years</td>
<td>IHD</td>
<td>Stroke</td>
<td>COPD</td>
<td>Sense</td>
<td>Diabetes</td>
<td>Back &amp; neck</td>
<td>Lung C</td>
<td>LRI</td>
<td>Alzheimer's</td>
<td>CKD</td>
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<tr>
<td>75-79 years</td>
<td>IHD</td>
<td>Stroke</td>
<td>COPD</td>
<td>Alzheimer's</td>
<td>COPD</td>
<td>Sense</td>
<td>LRI</td>
<td>Lung C</td>
<td>LRI</td>
<td>CKD</td>
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<td>≥80 years</td>
<td>IHD</td>
<td>Stroke</td>
<td>Alzheimer's</td>
<td>COPD</td>
<td>Sense</td>
<td>LRI</td>
<td>Diabetes</td>
<td>CKD</td>
<td>Back &amp; neck</td>
<td>HTN HD</td>
</tr>
</tbody>
</table>

**Rate of change 2005-15 (%)**

- -0.56 to -0.31
- -0.31 to -0.19
- -0.19 to -0.09
- -0.09 to -0.04
- -0.04 to 0.01
- 0.01 to 0.08
- 0.08 to 0.15
- 0.15 to 0.23
- 0.23 to 0.32
- 0.32 to 0.57
What are GBD’s main findings?

- The world is in the midst of an “epidemiological transition,” which means that as countries increase their levels of development, early death and disability from communicable diseases are declining and life expectancies are rising.

- While more developed countries tend to be healthier than less developed ones, some countries are much healthier than expected given their level of development, such as Ethiopia and Spain.

- People’s exposure to poor sanitation, indoor air pollution, and childhood undernutrition has dropped, resulting in dramatic declines in the burden of diarrhea and pneumonia in children.

- Several risk factors linked to development increased markedly from 1990 to 2015. These include obesity/overweight, high blood sugar, ambient air pollution, and drug use.
The disease burden by country
4. The Sustainable Development Goals
Figure 1. The 17 Sustainable Development Goals

“Transforming our world: the 2030 Agenda for Sustainable Development”,
SDGs INTERLINKAGE
SDG # 3

Sustainable Development Goal 3 and Its Targets

SDG 3: Ensure healthy lives and promote well-being for all at all ages

Target 3.8: Achieve universal health coverage, including financial risk protection, access to quality essential health-care services, medicines and vaccines for all

MDG Unfinished and Expanded Agenda

3.1: Reduce maternal mortality
3.2: End preventable newborn and child deaths
3.3: End the epidemics of AIDS, TB, malaria and NTDs and combat hepatitis, waterborne and other communicable diseases
3.7: Ensure universal access to sexual and reproductive health-care services

New SDG 3 Targets

3.4: Reduce mortality from NCDs and promote mental health
3.5: Strengthen prevention and treatment of substance abuse
3.6: Halve global deaths and injuries from road traffic accidents
3.9: Reduce deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination

SDG 3 Means of Implementation Targets

3.a: Strengthen implementation of framework convention on tobacco control
3.b: Provide access to medicines and vaccines for all, support R&D of vaccines and medicines for all
3.c: Increase health financing and health workforce in developing countries
3.d: Strengthen capacity for early warning, risk reduction and management of health risks

Interactions with Economic, Other Social and Environmental SDGs and SDG 17 on Means of Implementation
SDG # 3 - Targets

• By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births
• By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births
• By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases
• By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being
• Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol
• By 2020, halve the number of global deaths and injuries from road traffic accidents
• By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes from hazardous chemicals and air, water and soil pollution and contamination
• Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate
SDG # 3 - Targets

• Support the research and development of vaccines and medicines for the communicable and noncommunicable diseases that primarily affect developing countries, provide access to affordable essential medicine

• Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all

• By 2030, substantially reduce the number of deaths and illnesses and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all

• Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States

• Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks
Intersectios between SDG #3 and other SDGs

**Goal 3:** Ensure healthy lives and promote well-being for all at all ages

- 3.1 Reduce maternal mortality
- 3.2 End preventable deaths
- 3.3 End AIDS, TB, etc.
- 3.4 Mortality from non-communicable diseases
- 3.5 Substance abuse
- 3.6 Road traffic accidents
- 3.7 Access to sexual & reproductive health
- 3.8 Universal health coverage
- 3.9 Hazardous chemicals & pollution
- 3.10 Access to sexual & reproductive health

**Goal 10:** Reduce Inequality Within and Among Countries

- 10.1 Reduce inequality within and among countries

**Goal 11:** Make cities and human settlements inclusive, safe, resilient and sustainable

- 11.1 Make cities and human settlements inclusive, safe, resilient and sustainable
- 11.2 Improving road safety for all

**Goal 13:** Take urgent action to combat climate change and its impacts

- 13.1 Take urgent action to combat climate change
- 13.2 Mobilize resources for combating climate change

**Goal 5:** Achieve gender equality and empower all women and girls

- 5.1 Achieve gender equality
- 5.2 Eliminate all forms of violence against women and girls
- 5.3 Eliminate harmful practices such as child marriage & FGM
- 5.4 Ensure access to sexual & reproductive health

**Goal 6:** Ensure availability and sustainable management of water and sanitation

- 6.1 Ensure availability and sustainable management of water and sanitation
- 6.2 Achieve sustainable management of water and sanitation

**Goal 7:** Ensure access to affordable and modern energy

- 7.1 Ensure access to affordable and modern energy
- 7.2 Achieve universal access to modern energy services

**Goal 8:** Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

- 8.1 Promote sustained, inclusive and sustainable economic growth
- 8.2 Achieve full and productive employment and decent work for all

**Goal 9:** Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

- 9.1 Build resilient infrastructure
- 9.2 Promote inclusive and sustainable industrialization
- 9.3 Foster innovation

**Goal 12:** Ensure sustainable consumption and production patterns

- 12.1 Ensures sustainable consumption and production patterns
- 12.2 Achieve sustainable consumption and production patterns

**Goal 14:** Conserve and sustainably use the oceans, seas and marine resources for sustainable development

- 14.1 Conserve and sustainably use the oceans, seas and marine resources
- 14.2 Achieve sustainable management of oceans and seas

**Goal 15:** Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

- 15.1 Protect, restore and promote sustainable use of terrestrial ecosystems
- 15.2 Achieve sustainable management of forests
- 15.3 Combat desertification, land degradation and halt biodiversity loss

**Goal 16:** Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

- 16.1 Promote peaceful and inclusive societies for sustainable development
- 16.2 Ensure access to justice for all
- 16.3 Build effective, accountable and inclusive institutions at all levels

**Goal 17:** Strengthen the means of implementation and revitalize the global partnership for sustainable development

- 17.1 Strengthen the means of implementation and revitalize the global partnership for sustainable development
MEASURING THE DISTANCE TO TARGETS
MEASURING DISTANCE TO THE SDG TARGETS

An assessment of where OECD countries stand

June 2017
<table>
<thead>
<tr>
<th>Goal 3. Ensure healthy lives and promote well-being for all at all ages</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3.1 By 2030, reduce the global maternal mortality ratio to</strong></td>
</tr>
<tr>
<td><strong>3.1.1 Maternal mortality ratio</strong></td>
</tr>
<tr>
<td><strong>3.2 By 2030, end preventable deaths of newborns and children</strong></td>
</tr>
<tr>
<td><strong>3.2.1 Under-five mortality rate</strong></td>
</tr>
<tr>
<td><strong>3.2.2 Neonatal mortality rate</strong></td>
</tr>
<tr>
<td><strong>3.2.3 Estimated HIV Incidence rate</strong></td>
</tr>
<tr>
<td><strong>3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria</strong></td>
</tr>
<tr>
<td><strong>3.3.1 Tuberculosis incidence per 100,000 population</strong></td>
</tr>
<tr>
<td><strong>3.4 By 2030, reduce by one third premature mortality from</strong></td>
</tr>
<tr>
<td><strong>3.4.1 Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease</strong></td>
</tr>
<tr>
<td><strong>3.5 Strengthen the prevention and treatment of substance abuse, including</strong></td>
</tr>
<tr>
<td><strong>3.5.2 Alcohol per capita consumption (aged 15 years and older) within a calendar year in litres of pure alcohol</strong></td>
</tr>
<tr>
<td><strong>3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents</strong></td>
</tr>
<tr>
<td><strong>3.6.1 Death rate due to road traffic injuries</strong></td>
</tr>
<tr>
<td><strong>3.7 By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes</strong></td>
</tr>
<tr>
<td><strong>3.7.2 Adolescent birth rate per 1,000 adolescent women aged 15-19</strong></td>
</tr>
<tr>
<td><strong>3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all</strong></td>
</tr>
<tr>
<td><strong>3.8.2 Coverage for health care</strong></td>
</tr>
<tr>
<td><strong>3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination</strong></td>
</tr>
<tr>
<td><strong>3.9.1 Mortality rate attributed to household and ambient air pollution</strong></td>
</tr>
<tr>
<td><strong>3.9.2 Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene</strong></td>
</tr>
<tr>
<td><strong>3.9.3 Mortality rate attributed to unintentional poisonings</strong></td>
</tr>
<tr>
<td><strong>3.10 Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate</strong></td>
</tr>
<tr>
<td><strong>3.10.1 Prevalence of current tobacco use</strong></td>
</tr>
<tr>
<td><strong>3.11 Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, and small island developing States</strong></td>
</tr>
<tr>
<td><strong>3.11.2 Total official flows for medical research and basic health sectors, by recipient</strong></td>
</tr>
<tr>
<td><strong>3.12 Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States</strong></td>
</tr>
<tr>
<td><strong>3.12.1 Health worker density and distribution</strong></td>
</tr>
<tr>
<td><strong>3.13 Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks</strong></td>
</tr>
<tr>
<td><strong>3.13.1 International Health Regulations (IHR) core capacity Index</strong></td>
</tr>
</tbody>
</table>
Figure 6. How OECD countries vary in their distance to targets, by SDG Goal

Note: The distribution of OECD countries' distances on the 17 Goals in standard deviation units. Central black bars: OECD median country score. Box boundaries: first and third quartiles of the country distribution. Whiskers: 10th and 90th percentiles of this distribution.
Measuring progress and projecting attainment on the basis of past trends of the health-related Sustainable Development Goals in 188 countries: an analysis from the Global Burden of Disease Study 2016

http://www.healthdata.org/data-visualization/health-related-sdgs
• Globally, the median health-related SDG index was 56.7 (IQR 31.9–66.8) in 2016 and country-level performance markedly varied, with Singapore (86.8, 95% uncertainty interval 84.6–88.9), Iceland (86.0, 84.1–87.6), and Sweden (85.6, 81.8–87.8) having the highest levels in 2016 and Afghanistan (10.9, 9.6–11.9), the Central African Republic (11.0, 8.8–13.8), and Somalia (11.3, 9.5–13.1) recording the lowest.
Between 2000 and 2016, notable improvements in the UHC index were achieved by several countries, including Cambodia, Rwanda, Equatorial Guinea, Laos, Turkey, and China; however, a number of countries, such as Lesotho and the Central African Republic, but also high-income countries, such as the US, showed minimal gains.

Based on projections of past trends, the median number of SDG targets attained in 2030 was five (IQR 2–8) of the 24 defined targets currently measured.
Ethiopia, 2016

SDG index, Ethiopia

Health-related index for all indicators.
Health-related index for all indicators.

SDG index, Italy

Index value

SDG 78
Index value

Italy, 2016
United States, 2016

SDG index, United States

Index value

Health-related index for all indicators.
5. Universal Health Coverage
TARGET 3.8: ACHIEVE UNIVERSAL HEALTH COVERAGE, INCLUDING FINANCIAL RISK PROTECTION, ACCESS TO QUALITY ESSENTIAL HEALTH-CARE SERVICES, MEDICINES AND VACCINES FOR ALL

MDG UNFINISHED AND EXPANDED AGENDA
- 3.1: Reduce maternal mortality
- 3.2: End preventable newborn and child deaths
- 3.3: End the epidemics of AIDS, TB, malaria and NTDs and combat hepatitis, waterborne and other communicable diseases
- 3.7: Ensure universal access to sexual and reproductive health-care services

NEW SDG 3 TARGETS
- 3.4: Reduce mortality from NCDs and promote mental health
- 3.5: Strengthen prevention and treatment of substance abuse
- 3.6: Halve global deaths and injuries from road traffic accidents
- 3.9: Reduce deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination

SDG 3 MEANS OF IMPLEMENTATION TARGETS
- 3.a: Strengthen implementation of framework convention on tobacco control
- 3.b: Provide access to medicines and vaccines for all, support R&D of vaccines and medicines for all
- 3.c: Increase health financing and health workforce in developing countries
- 3.d: Strengthen capacity for early warning, risk reduction and management of health risks

INTERACTIONS WITH ECONOMIC, OTHER SOCIAL AND ENVIRONMENTAL SDGs AND SDG 17 ON MEANS OF IMPLEMENTATION
Universal health coverage and intersectoral action for health: key messages from Disease Control Priorities, 3rd edition


The World Bank is publishing nine volumes of Disease Control Priorities, 3rd edition (DCP3) between 2015 and 2018. Volume 9, Improving Health and Reducing Poverty, summarizes the main messages from all the volumes and contains cross-cutting analyses. This Review draws on all nine volumes to convey conclusions. The analysis in DCP3 is built around 21 essential packages that were developed in the nine volumes. Each essential package addresses the concerns of a major professional community (eg, child health or surgery) and contains a mix of intersectoral policies and health-sector interventions. 71 essential prevention policies were identified in total, 29 of which are priorities for early introduction. Interventions within the health sector were grouped onto five platforms (population based, community level, health centre, first-level hospital, and referral hospital). DCP3 defines a model concept of essential universal health coverage (EUHC) with 218 interventions that provides a starting point for country-specific analysis of priorities. Assuming steady-state implementation by 2030, EUHC in low-income and middle-income countries would reduce premature deaths by an estimated 4.2 million per year. Estimated total costs (at 2012 prices) vary from about 3.1% of (current) gross national income (GNI) in low-income countries to 5.2% of GNI in lower-middle-income countries. Financing provision of continuing intervention against chronic conditions accounts for about half of estimated incremental costs. For lower-middle-income countries, the mortality reduction from implementing the EUHC can only reach about half the mortality reduction in non-communicable diseases caused for by the Sustainable Development Goals. Full achievement will require increased investment in intersectoral action, and actions by finance ministries to tax smoking and polluting emissions and to reduce or eliminate (often large) subsidies on fuels fuels appear of central importance. DCP3 is intended to be a model starting point for analyses at the level country, but country-specific cost structures, epidemiological needs, and national priorities will greatly influence the feasibility of achieving EUHC that differ from country to country and from the model in this Review. DCP3 is particularly relevant as achievement of EUHC relies extensively on greater domestic finance, with global development assistance in health focusing more on global public goods. In addition to assessing effects on mortality, DCP3 looked at outcomes of EUHC not necessarily the disabled- and adjusted life-year metric and related cost-effectiveness analyses. The other objectives included financial protection (potentially better provided upstream by keeping people out of the hospital rather than downstream by paying their hospital bills for them), stillbirths and neonatal and perinatal death. The first 1000 days after conception are highly important for child development, but the next 1000 days are likewise important and often neglected.

Introduction

In 1993, the World Bank published Disease Control Priorities in Developing Countries (DCP1), an attempt to systematically assess value for money (cost-effectiveness) of interventions that would address the major sources of disease burden in low-income and middle-income countries (LMICs). One motivation for DCP1 was to identify reasonable responses in high resource-constrained environments to the growing burden of non-communicable disease and of HIV/AIDS in LMICs. The World Bank had highlighted the already substantial problem of non-communicable diseases in countries for Malaysia and China and in a Shattuck Lecture. Mexican scholars pointed to the rapid growth of non-communicable diseases in Mexico and introduced the concept of a protracted epidemiological transition involving a dual burden of non-communicable diseases and infectious diseases. The dual burden paradigm remains valid today. The World Bank’s first (and only) World Development Report about health provided the first assessment of the global burden of disease, an assessment that underlined the importance of non-communicable diseases, which was consistent with subsequent assessments of global disease burden. It then drew heavily on findings from DCP1 to conclude that a number of specific interventions against non-communicable diseases (including tobacco control and multilevel strategies)
Figure 1

Intersectoral policies

Health sector policies (including financial protection policies)

- Access to and uptake of health interventions
- Quality of delivery of health interventions

To reduce behaviour and environmental risk factors

To reduce physiological factors. Examples include:
- Stunting
- Overweight
- Anaemia
- Hypertension
- Dyslipidaemia
- High blood glucose

To improve health outcomes. Examples include:
- Child deaths
- Premature adult deaths
- Short-term and long-term disability
- Pain and distress

To provide financial protection from health-care costs
Panel 3: Clusters of essential packages*

Age-related cluster (packages 1–5)
1. Maternal and newborn health
2. Child health
3. School-age health and development
4. Adolescent health and development
5. Reproductive health and contraception

Infectious diseases cluster (packages 6–10)
6. HIV and sexually transmitted infections
7. Tuberculosis
8. Malaria and adult febrile illness
9. Neglected tropical diseases
10. Pandemic and emergency preparedness

Non-communicable disease and injury cluster (packages 11–17)
11. Cardiovascular, respiratory, and related disorders
12. Cancer
13. Mental, neurological, and substance use disorders
14. Musculoskeletal disorders
15. Congenital and genetic disorders
16. Injury prevention
17. Environmental improvements

Health services cluster (packages 18–21)
18. Surgery
19. Rehabilitation
20. Palliative care and pain control
21. Pathology

*Country applications will define packages in a way relevant to local policy. For example, the structure here distributes urgent interventions across packages, but in many contexts defining an emergency care package might prove more relevant.
<table>
<thead>
<tr>
<th><strong>Lancet Commission on Investing in Health</strong>(^n)</th>
<th><strong>DCP3(^{304})</strong></th>
<th><strong>WHO 2017(^{25})</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Countries included</strong></td>
<td>34 low-income and three (large) lower-middle-income countries*</td>
<td>34 low-income and 49 lower-middle-income countries*</td>
</tr>
<tr>
<td><strong>Key definitions and Intervention range covered</strong></td>
<td>Grand convergence interventions lead to very substantial cross-country convergence in under-5, maternal, tuberculosis, malaria, and HIV/AIDS mortality and in the prevalence of neglected tropical diseases</td>
<td>21 packages (table 1) identified in terms that include intersectoral and health sector interventions (72 distinct intersectoral interventions and 244 distinct health sector interventions); EUHC are health sector interventions in the 21 packages (covered in national health accounts and potentially included in benefits packages); a highest priority subset of EUHC (HPP) includes a limited range of interventions against non-communicable diseases, injuries, and cross-cutting areas such as rehabilitation and palliative care, in addition to the grand convergence Interventions</td>
</tr>
<tr>
<td><strong>Intersectoral action for health</strong></td>
<td>Extensive discussion of intersectoral actions for health but not included in modelling grand convergence</td>
<td>Intersectoral Interventions defined as those typically managed and financed outside the health sector, each of the 21 packages contains the intersectoral Interventions deemed relevant; the costs and effects of intersectoral action on mortality reduction are not explicitly modelled</td>
</tr>
<tr>
<td><strong>Intervention coverage</strong></td>
<td>Full coverage defined at 85%, rates of scale-up defined using historical data on so-called best performers among similar groups of countries</td>
<td>Full coverage defined as 80%; the HPP differs from EUHC not in coverage level but in the scope of interventions included</td>
</tr>
<tr>
<td><strong>Estimated deaths averted</strong>(^{1})</td>
<td>4.5 million deaths averted per year between 2016 and 2030</td>
<td>2.0 million deaths averted in 2030</td>
</tr>
<tr>
<td><strong>Low-income countries</strong></td>
<td>4.5 million deaths averted per year between 2016 and 2030</td>
<td>2.0 million deaths averted in 2030</td>
</tr>
<tr>
<td><strong>Lower middle-income countries</strong></td>
<td>5.8 million deaths averted per year between 2016 and 2030</td>
<td>4.2 million deaths averted in 2030</td>
</tr>
<tr>
<td><strong>Benefit cost analysis undertaken</strong></td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

EUHC=essential universal health coverage. HPP=highest priority package. SDGs=Sustainable Development Goals. “Separate estimates for the low-income and lower-middle-income country groups are provided. Reported results are for all included countries combined. DCP3 reports the number of premature deaths averted (ie, deaths younger than 70 years). Averted deaths include stillbirths averted in the reports by the Lancet Commission on Investing in Health™ and WHO™ but not in DCP3™.** In the Lancet Commission report™ and DCP3, the reported deaths averted included only deaths averted in children actually born and women actually giving birth. Family planning averts unwanted pregnancies and hence potential deaths of women and children that would have occurred as a result of those averted pregnancies. The difference is large. For low-income countries, results of a sensitivity analysis in Global Health 2035™ showed that the more comprehensive estimate was 7.5 million deaths averted rather than the 4.5 million deaths averted shown in this table. WHO’s 2017 estimates™ of deaths averted are based on the larger and more inclusive number. Ambitious scale-up of family planning services accounted for 50% of averted child and maternal deaths and more than 65% of averted stillbirths in the WHO analysis (Stenberg K, Department of Health Systems Governance and Financing, WHO, personal communication). Sources: Jamison et al (2013)™, Boyle et al (2015)™, Watkins et al (2017)™, Watkins et al (2017)™, and Stenberg et al (2017)™.”

Table 4: Costs and consequences of large-scale investment in health systems by the Lancet Commission on Investing in Health, Disease Control Priorities, 3rd edition (DCP3), and WHO™.
A key element of universal health coverage:

access to essential medicines
“Each member has the right to grant compulsory licences and the freedom to determine the grounds upon which such licences are granted” and

“to determine what constitutes a national emergency or other circumstances of extreme urgency”.

Public health crises include “those relating to HIV/AIDS, tuberculosis, malaria and other epidemics” and “other circumstances of extreme urgency”.

Box 4: Access to medicines and the Doha Declaration on TRIPS and Public Health

Measuring access to medicines is a complex task, but price is one key factor among others. The Doha Declaration on TRIPS and Public Health recognized concerns about effects on prices while noting the need for innovation. Since the Declaration was adopted in 2001, prices for many treatments have fallen significantly, in part due to generic competition and tiered pricing schemes (see graph below). Surveys also show a marked increase in the use of TRIPS flexibilities to promote access to medicines.

Falling prices of first-line combinations of some first-line anti-retroviral therapies for HIV-AIDS since 2000

Essential medicines for universal health coverage

Vered Elijovich, ljusik Bajgar, Andrew Gray, Marjan Rifai, Sarah Pallicher, Mariana Alas, Mario Casaseca Latorre, Senjog, Wufei Li, Reginald Whitaker, Helen Miller, Commission Chair, Bernard Noser, Leandrea Higgs, Anoush Malekchi, Derek Bie-Doucet, Reinald Stephen, Vas Tarzianossoff, Shaf Ali, Ilyas Aishani Wagner, Ibrahim Yassiel Michael Gilbert

Executive summary

Essential medicines are the priority health-care needs of the population. Essential medicines policies are crucial to promoting health and achieving sustainable development. Sustainable Development Goal 3.8 specifically mentions the importance of “universal health coverage (UHC) and Sustainable Development Goal 3.8 emphasizes the need to develop medicines to address priority treatment gaps.

The importance of the essential medicines is not new. At the 1948 United Nations Conference on the Role of the United Nations, representatives from all countries agreed to develop essential medicines. In 2013, the Lancet Commission on Essential Medicines was established to explore questions about what progress has been achieved—and what challenges remain. This report addresses these questions, with the aim of promoting essential medicines policies on the global development agenda.

The Commission identified four areas that are crucial to essential medicines policies: paying for a basket of essential medicines; providing affordable, high-quality, and affordable essential medicines; and accessing health services.

The Commission proposed several recommendations to support essential medicines policies. These include:

- Ensuring that all essential medicines are included in national essential medicines lists.
- Providing adequate financing to ensure that essential medicines are available to all.
- Strengthening health systems to ensure that essential medicines are provided to all.
- Ensuring that essential medicines are included in national health insurance programs.

Towards access 2030

The Lancet Commission on Essential Medicines Policies identifies several areas crucial to access to essential medicines for 2030: paying for a basket of essential medicines, making essential medicines affordable, ensuring quality and safety of medicines, promoting quality use of medicines, and developing essential medication systems.

These are issues that WHO has prioritized for some time. The Commission, however, is unsure whether WHO’s recommendations have led to sufficient progress towards universal health coverage and the Sustainable Development Goals.

The Commission estimates that between US$2.7 and US$5 trillion per year (or $5 to $7 per capita) is needed to provide a basic package of 201 essential medicines for all low-income and middle-income countries. Affordability and quality of essential medicines are major challenges in the access to and use of medicines.

Everyone relies on the pharmaceutical industry to manufacture and deliver essential medicines. Yet, we have not yet a problem with two facets. The pharmaceutical industry is demanding higher prices for new products that are being developed; and many medicines such as the direct-acting antivirals for hepatitis C are unaffordable even in low-income and middle-income countries.

The Commission proposes for the problem to be addressed by promoting policies that are focused on the essential medicines that are crucial to essential medicines policies. These include:

- Ensuring that all essential medicines are included in national essential medicines lists.
- Providing adequate financing to ensure that essential medicines are available to all.
- Strengthening health systems to ensure that essential medicines are provided to all.
- Ensuring that essential medicines are included in national health insurance programs.
Access to medicines: lessons from the HIV response

Just two decades ago, HIV/AIDS treatments were prohibitively expensive and accessible in only a few affluent countries. But remarkable reductions in costs have enabled treatment expansion that has reduced mortality and transmission. Today, first-line HIV drugs cost less than US$100 per person per year, a 99% reduction from more than $10,000 in 2000. The number of people receiving HIV treatment doubled in just 5 years, from 9 million in 2011 to more than 18 million today.¹

In a world facing growing inequalities, the HIV response has lessons for low and middle-income countries (LMIC)—but also for high-income countries—on access to care and treatment for communicable diseases and for non-communicable chronic diseases, a global pandemic that dwarfs the HIV epidemic in scale.²

The transformative power of the HIV response was underpinned by moral rather than technical arguments. A unique coalition of activists, scientists, celebrities, and religious and community leaders from all over the world argued that no one should be denied life-saving treatment because of area of residence or income. The moral imperative was operationalised by activism for more urgent drug discovery, regulatory approval, and voluntary and compulsory licensing, followed by shifts towards large-scale generic production. Economies of scale underpinned a drive towards more efficient, cheaper production, and drove prices down. Major donors such as the Global Fund to Fight AIDS, Tuberculosis, and Malaria and the US President’s Emergency Plan for AIDS Relief bought generic drugs. The Clinton Health Access Initiative negotiated price-volume discounts

The concept of “public goods”

non exclusive: anyone can use them

non competitive: their use do not limit others to use them
Progress of medicine and essential drugs shall be considered as global public goods and be accessible to all human beings living on our planet.