90-90-90
Targets Workshop

July 21-22, 2018 • Amsterdam

Sponsored by:

IAPAC INTERNATIONAL ASSOCIATION OF PROVIDERS OF AIDS CARE

UNAIDS

In partnership with:

BRITISH COLUMBIA CENTRE *for* EXCELLENCE *in* HIV/AIDS

GNP+ GLOBAL NETWORK OF PEOPLE LIVING WITH HIV

IAS

Maintaining Momentum: HIV within an Evolving Global Health Agenda

Stefano Vella MD
Center for Global Health
Istituto Superiore di Sanità - Rome

90-90-90 Targets Workshop

July 21-22, 2018 • Amsterdam

Sponsored by:

IAPAC INTERNATIONAL ASSOCIATION OF PROVIDERS OF AIDS CARE

UNAIDS

In partnership with:

BRITISH COLUMBIA CENTRE *for* EXCELLENCE *in* HIV/AIDS

GNP+ GLOBAL NETWORK OF PEOPLE LIVING WITH HIV

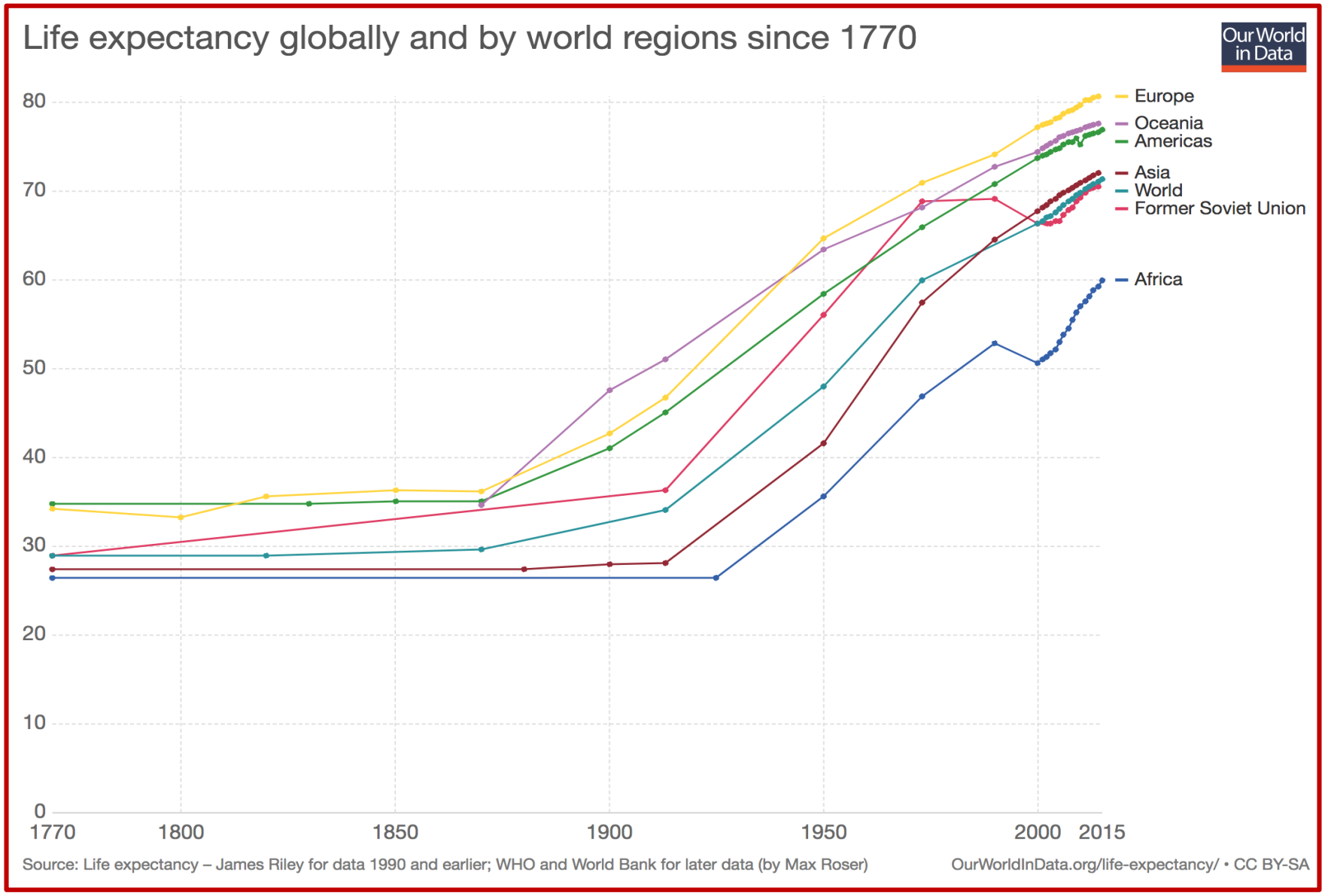
IAS

i.e: *from HIV to Global Health*

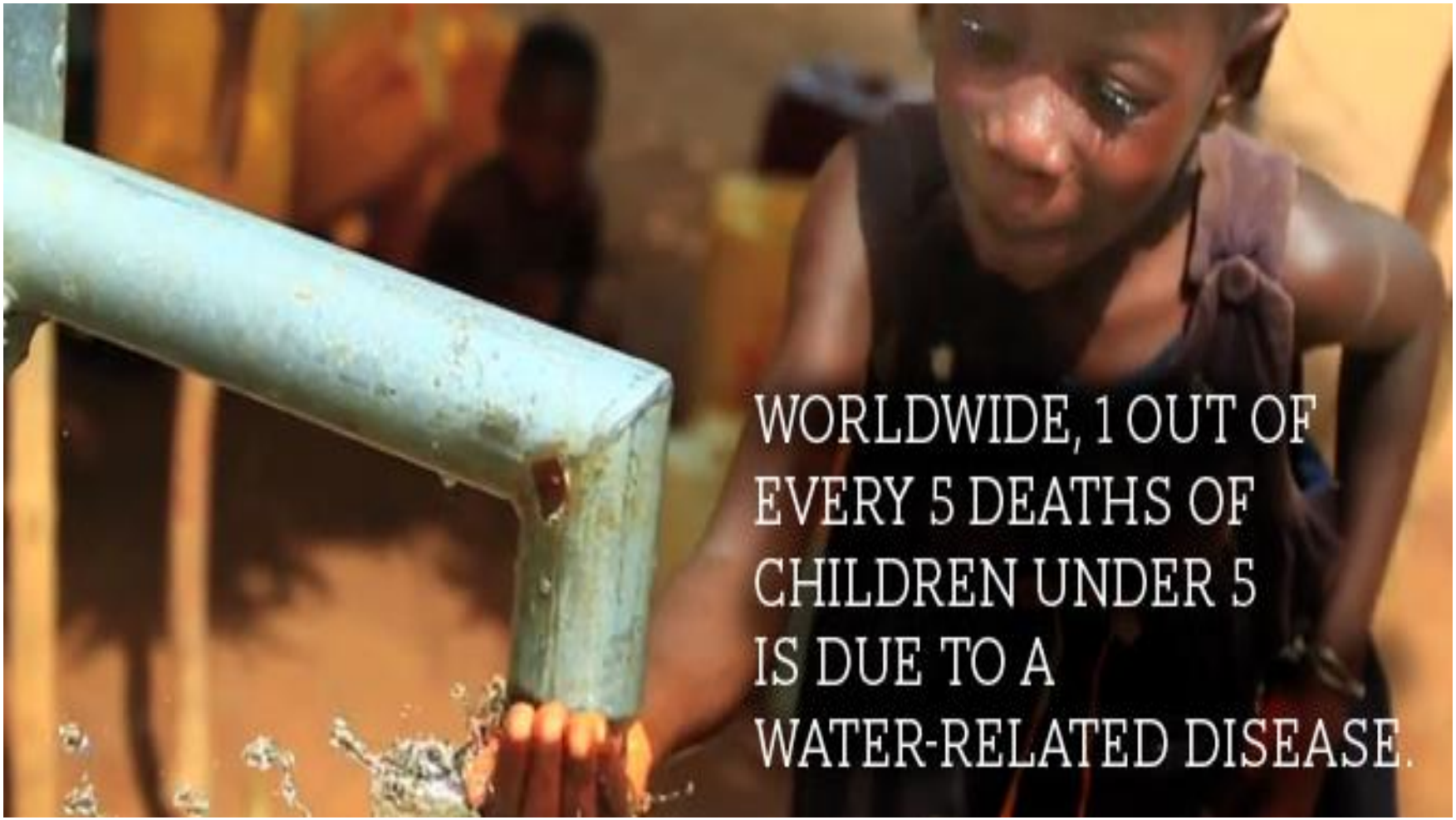
Chapter 1:

What is Global Health

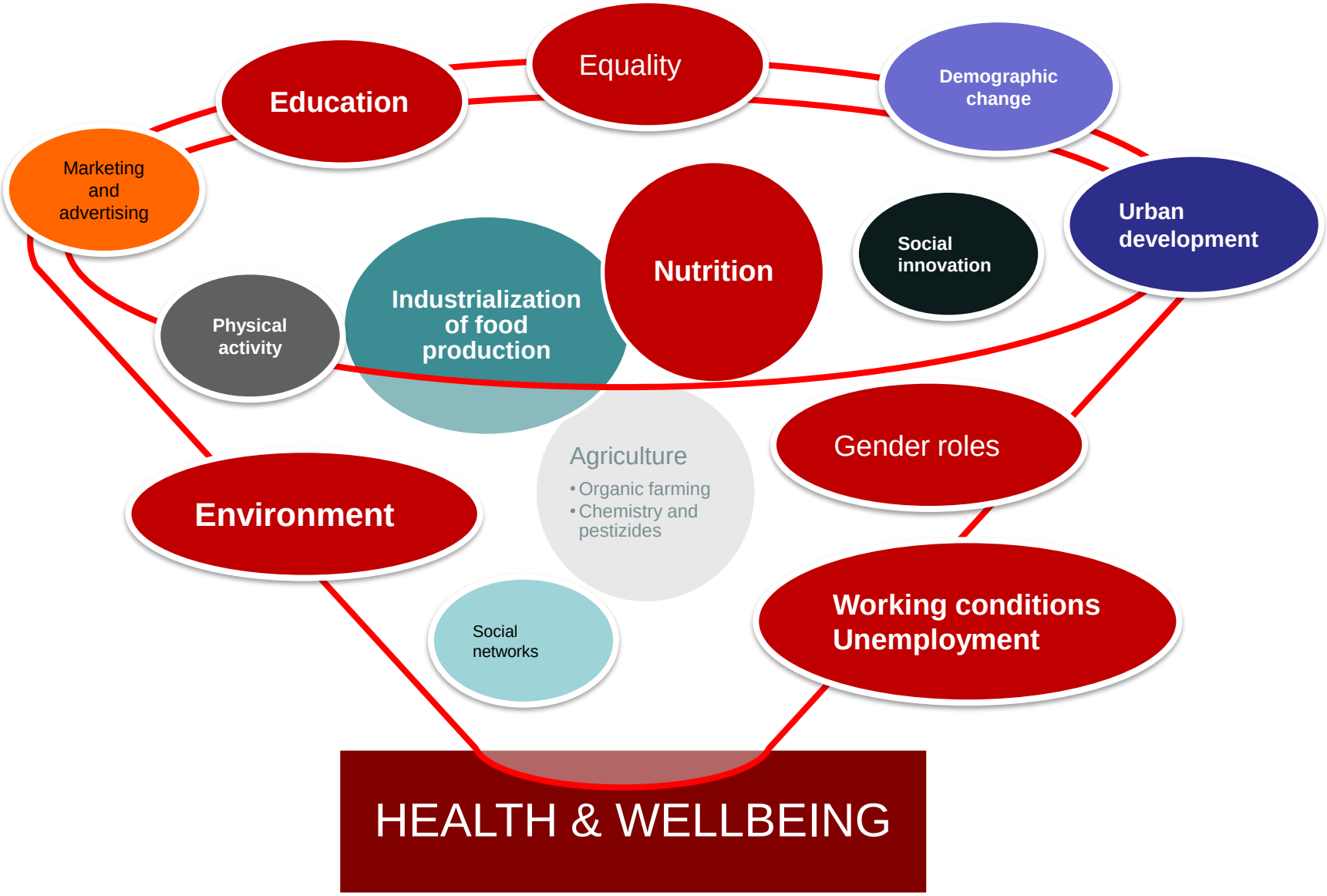
THE RISE OF LIFE EXPECTANCY



THE DRIVERS.....1. CLEAN WATER



THE DRIVERS.....2. SOCIAL DETERMINANTS

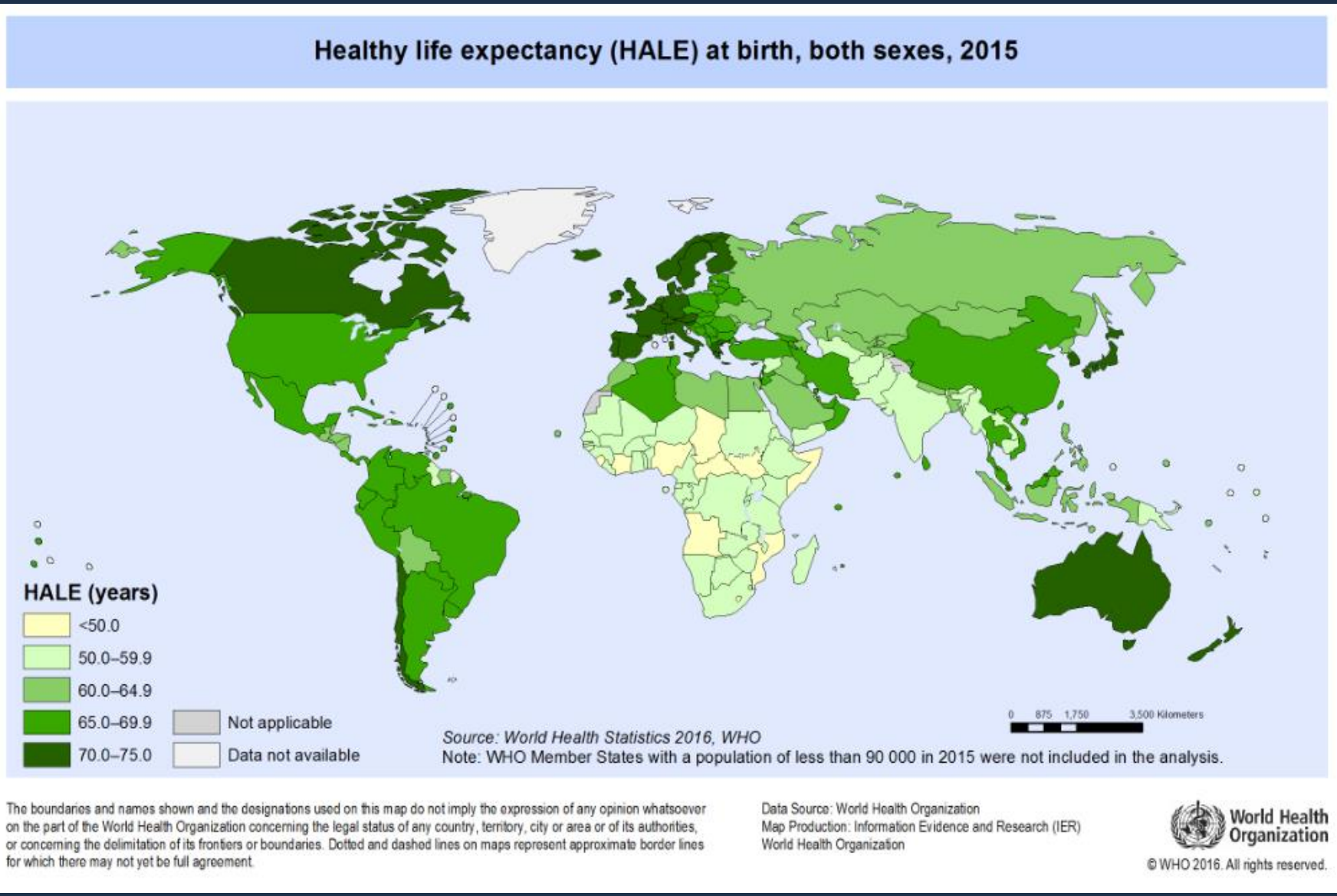


THE DRIVERS.....**3. ADVANCES OF MEDICINE**

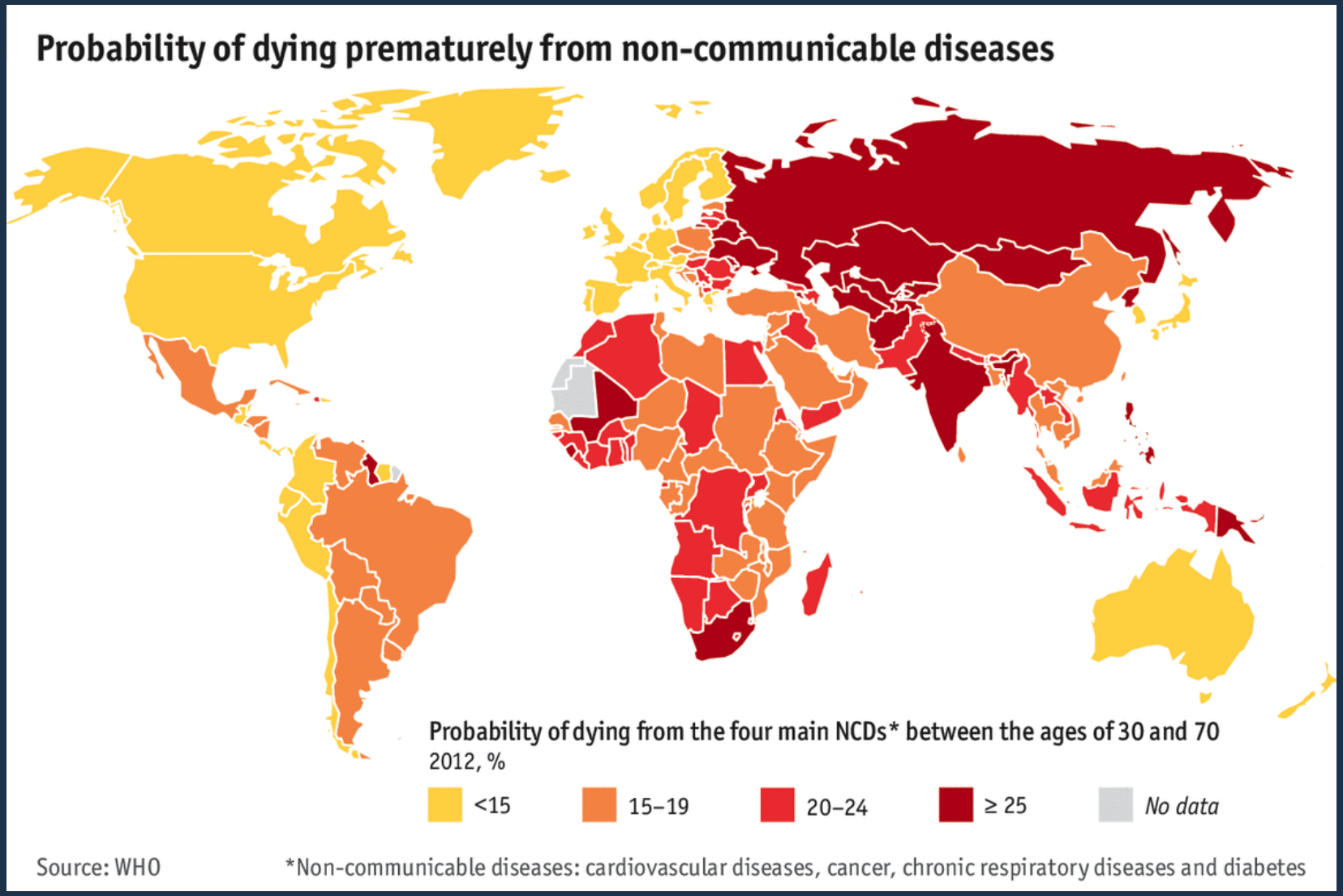
What Global Health is NOT

Clean water, better living conditions and progress of medicine didn't reach billions of human beings over the last century

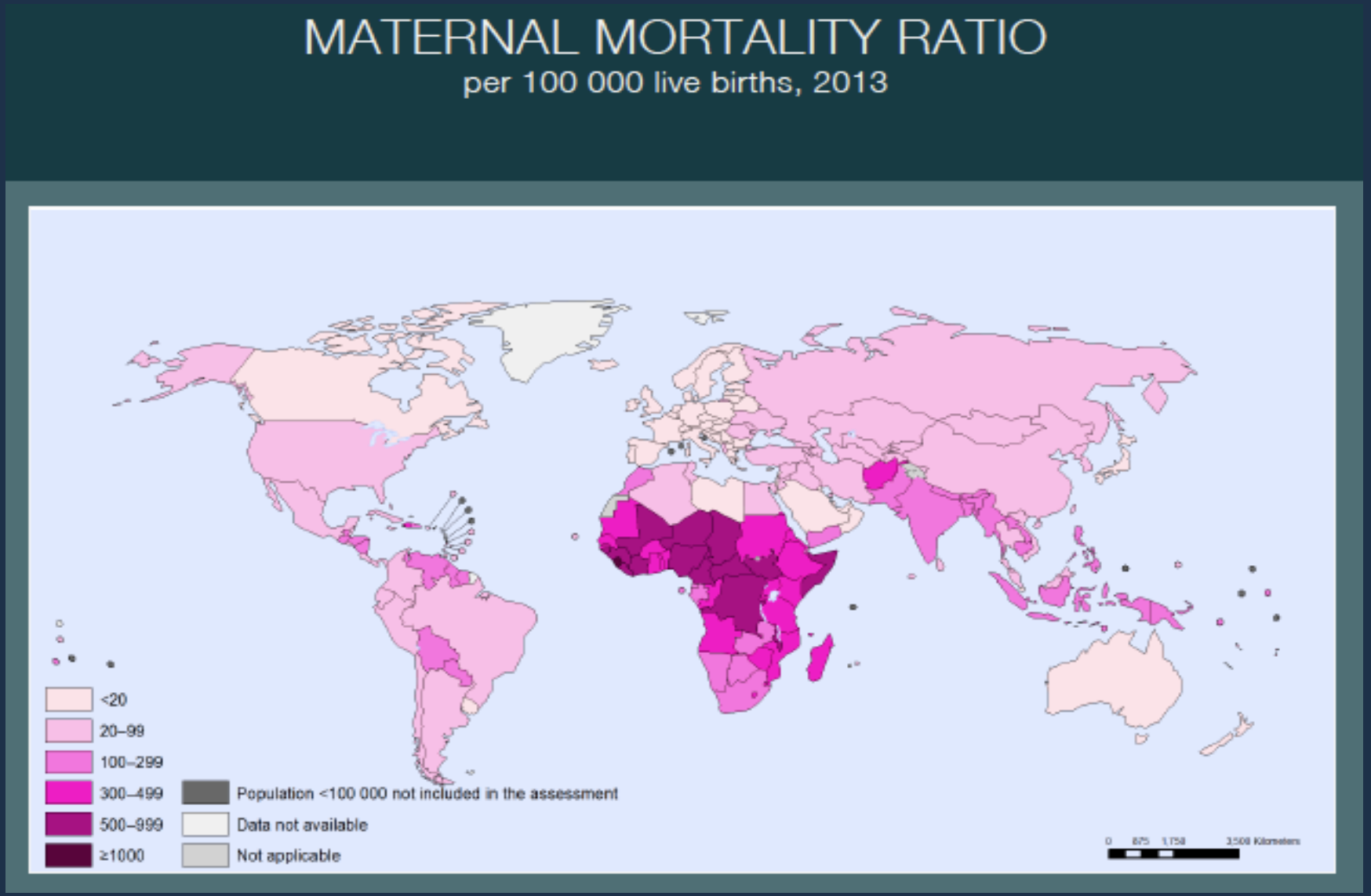
The unequal rise of «healthy» life expectancy



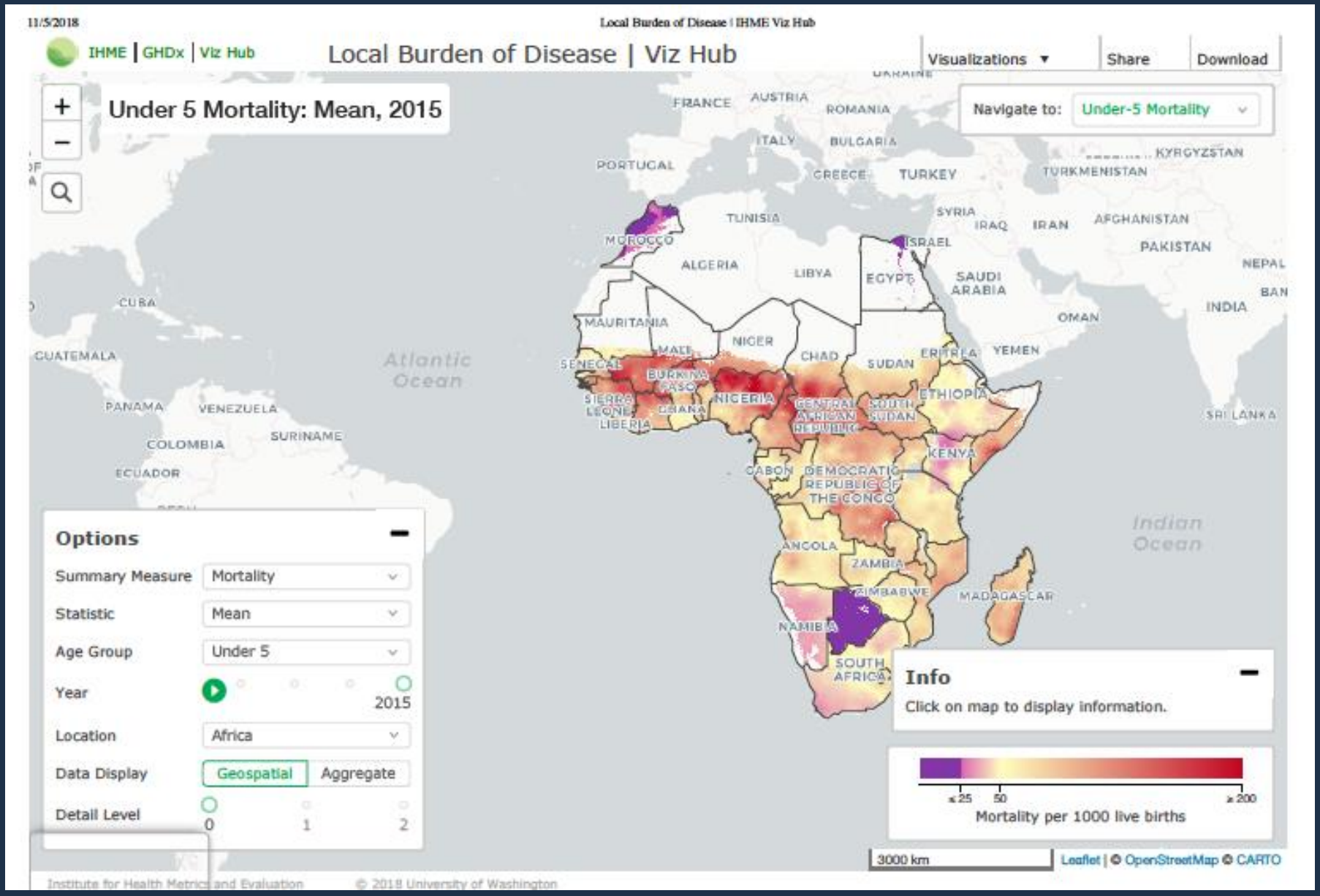
What Global Health is….not



What Global Health is….not



What Global Health is….not



What Global Health is….not

Ebola is back — and the top White House official in charge of pandemics is gone

There's a new outbreak in the Democratic Republic of the Congo.

By Julia Belluz | @juliaoftoronto | julia.belluz@voxmedia.com | May 11, 2018, 11:40am EDT

13, 2017, in Mumo, Democratic Republic of the Congo, during the country's last outbreak. The | AFP/Getty Images

Potential Viral Pathogens

Family	Prototype (s)	Licensed Vaccines
Paramyxo	Measles, Mumps, *Nipah*, RSV	Live-attenuated
Toga	Rubella, *Chikungunya*, *WEVEE*	Live-attenuated
Reo	Rotavirus	Live-attenuated
Orthomyxo	Influenza A, B	Live-attenuated, whole-inactivated
Adeno	Adenovirus 4, 7, *14*	Live-attenuated
Rhabdo	Rabies	Live-attenuated
Picorna	Polio 1,2,3, Hepatitis A, *EV68, 71*	Live-attenuated, whole-inactivated
Papilloma	HPV 6, 11, 16, 18	VLP
Pox	Variola	Live-attenuated
Hepadna	Hepatitis B	VLP
Herpes	Varicella	Live-attenuated
Flavi	Yellow Fever, TBE, JEV, Dengue, Zika	Live-attenuated, whole-inactivated, Live-chimeric
Hepe	Hepatitis E	VLP (Chim)
Filo	Ebola, Marburg	
Retro	HIV	
Corona	SARS, MERS	
Parvo	B19, Boca	
Calici	Noro	
Polyoma	JC, BK	
Arena	Lassa, Machupo	
Bunya	Hanta, Rift Valley	
Astro	Astrovirus	

Virus families with at least one representative licensed vaccine

Viruses with active vaccine research

Viruses with minimal vaccine research activity

Lets keep our eyes wide open for the epidemics to come…

Choose prototypic viruses within each family or each distinct genus

- Define structures of surface proteins and particles
- Determine extent of genetic variability
- Define tropism, entry mechanisms, receptors
- Study pathogenesis and establish animal models
- Isolate human mAbs and determine mechanisms of NT
- Develop assays for diagnosis and immunogenicity testing
- Define immune correlates of protection

The New York Times

Nipah Virus, Rare and Dangerous, Spreads in India

The infection, an emerging threat, has killed virtually all of its victims so far in India.

By Emily Baumgaertner

June 4, 2018

Burying a victim of the Nipah virus in Kozhikode, southern India. There is no vaccine and no cure for the disease. K.Shijith/Associated Press

A rare, brain-damaging virus that experts consider a possible epidemic threat has broken out in the state of Kerala, India, for the first time, infecting at least 18 people and killing 17 of them, according to the World Health Organization.

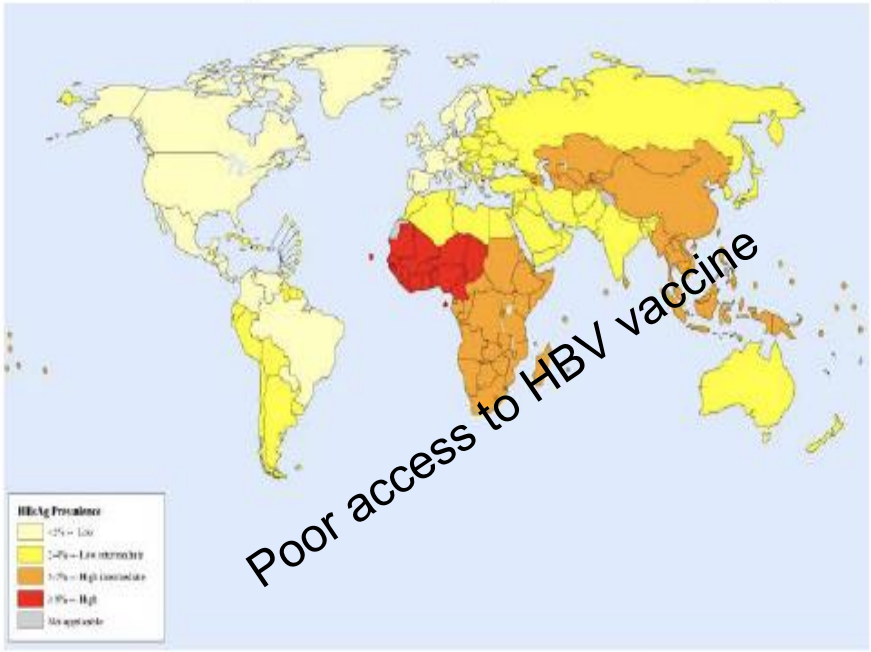
The Nipah virus naturally resides in fruit bats across South and Southeast Asia, and can spread to humans through contact with the animals' bodily fluids. There is no vaccine and no cure.

The virus is listed by the W.H.O. as a high priority for research. Current treatment measures are insufficient, according to Dr. Stuart Nichol, the head of the viral special pathogens branch at the Centers for Disease Control and Prevention.


ONE
HEALTH
ONE PLANET
ONE FUTURE

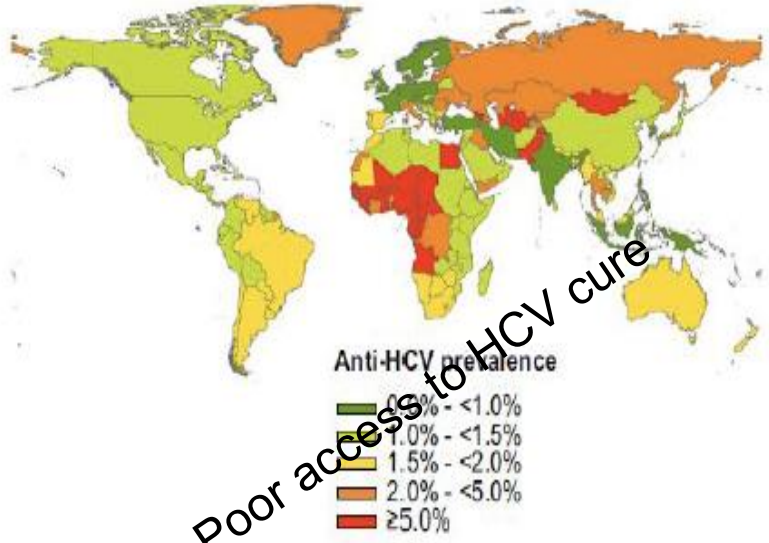
What Global Health is….not

Prevalence of hepatitis B infection, adults 19-89 years, 2005



Ott, J. J., G. A. Stevens, J. Groeger, and S. T. Wiersma. "Global epidemiology of hepatitis B virus infection: new estimates of age-specific HBsAg seroprevalence and endemicity." *Vaccine* 30, no. 12 (2012): 2212-2219.

Prevalence of anti-hepatitis C virus

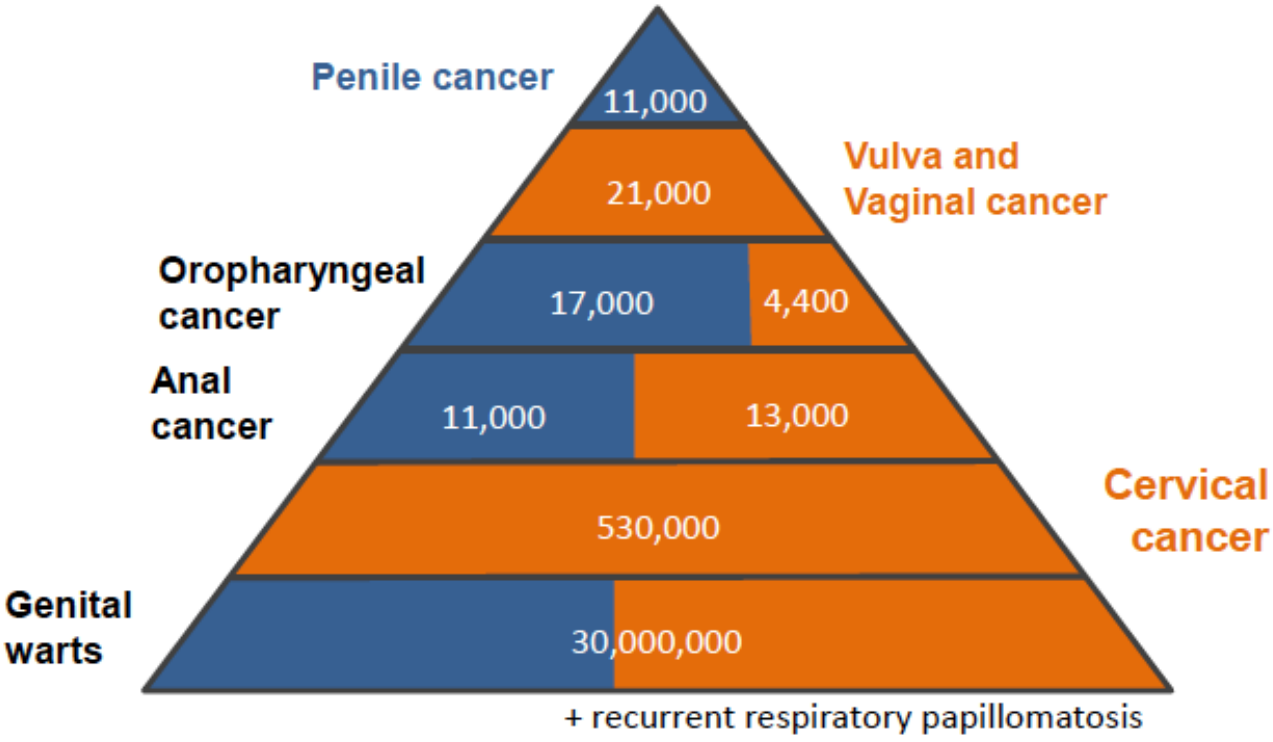


Gower, E., Estes, C., Blach, S., Razavi-Shearer, K., & Razavi, H. (2014). Global epidemiology and genotype distribution of the hepatitis C virus infection. Journal of hepatology, 61(1), S45-S57.

What Global Health is….not

2008 Global HPV-related burden:

607,000 annual cancer cases



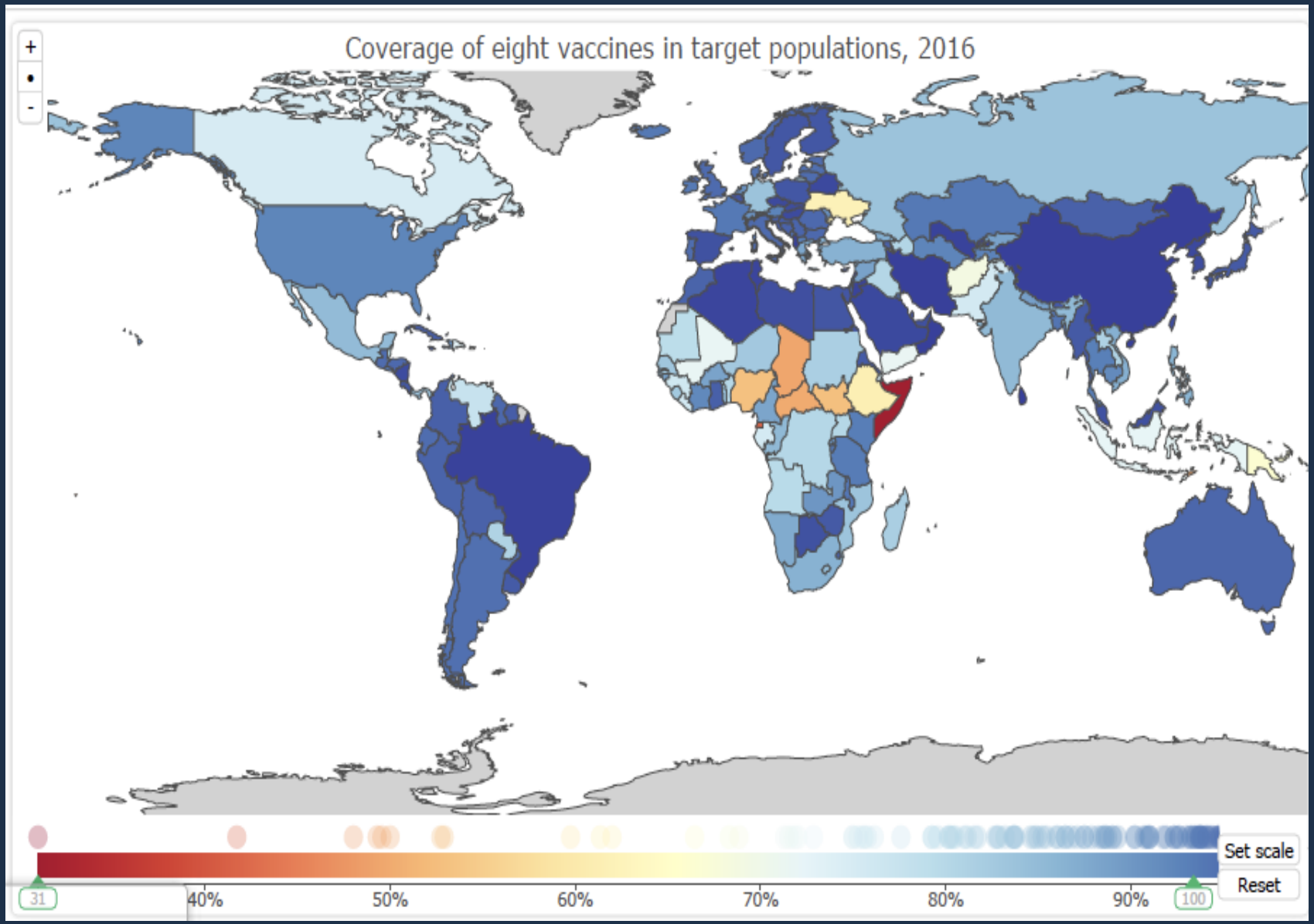
*Circles proportional to annual burden

International Agency for Research on Cancer

World Health Organization

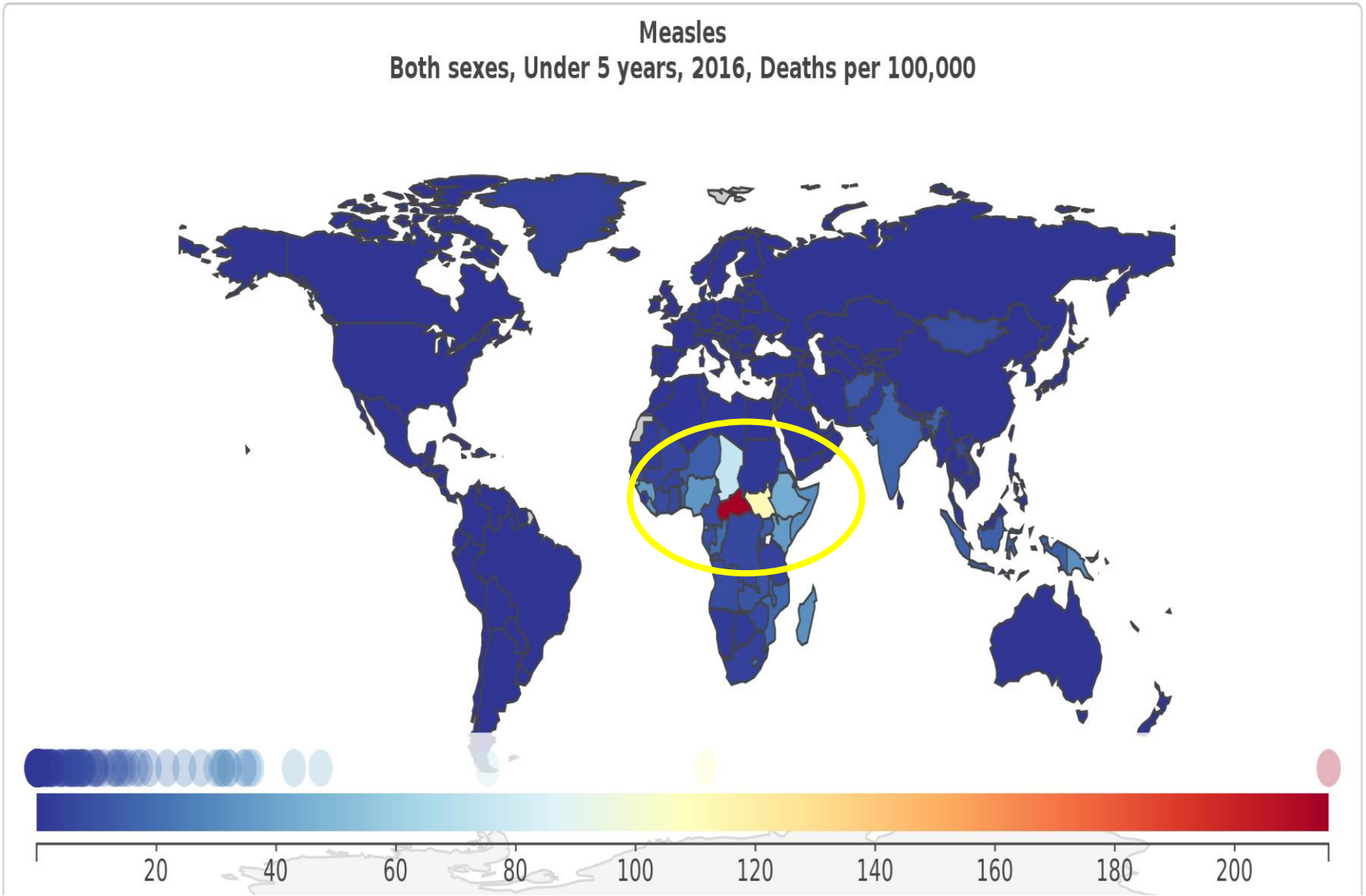
De Martel et al. 2012 Lancet Oncol (cancers) and Dillner et al. 2010 BMJ (genital warts)

What Global Health is….not

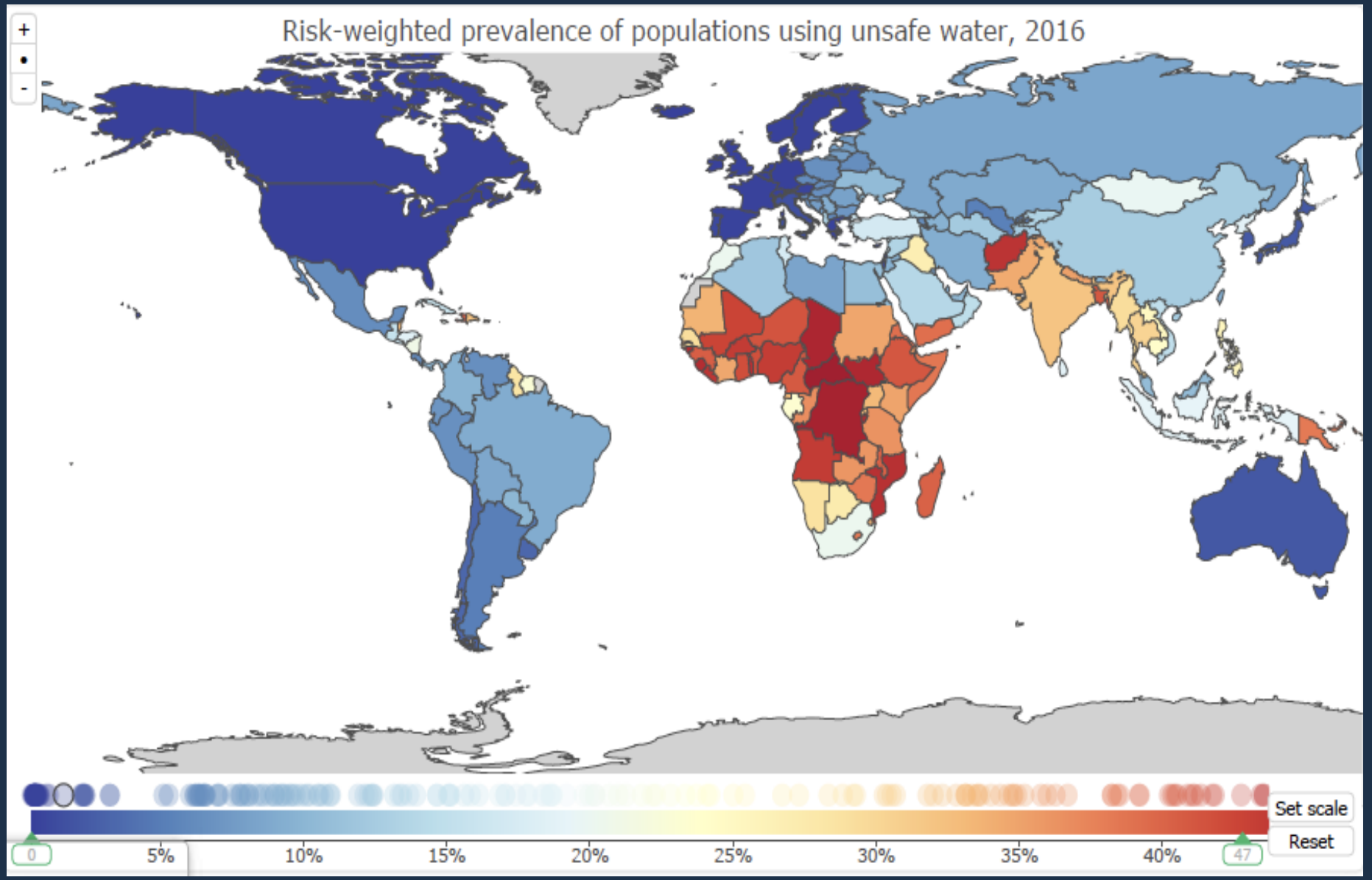


Measles immunization coverage
(% of children ages 12-23 months) (2016)

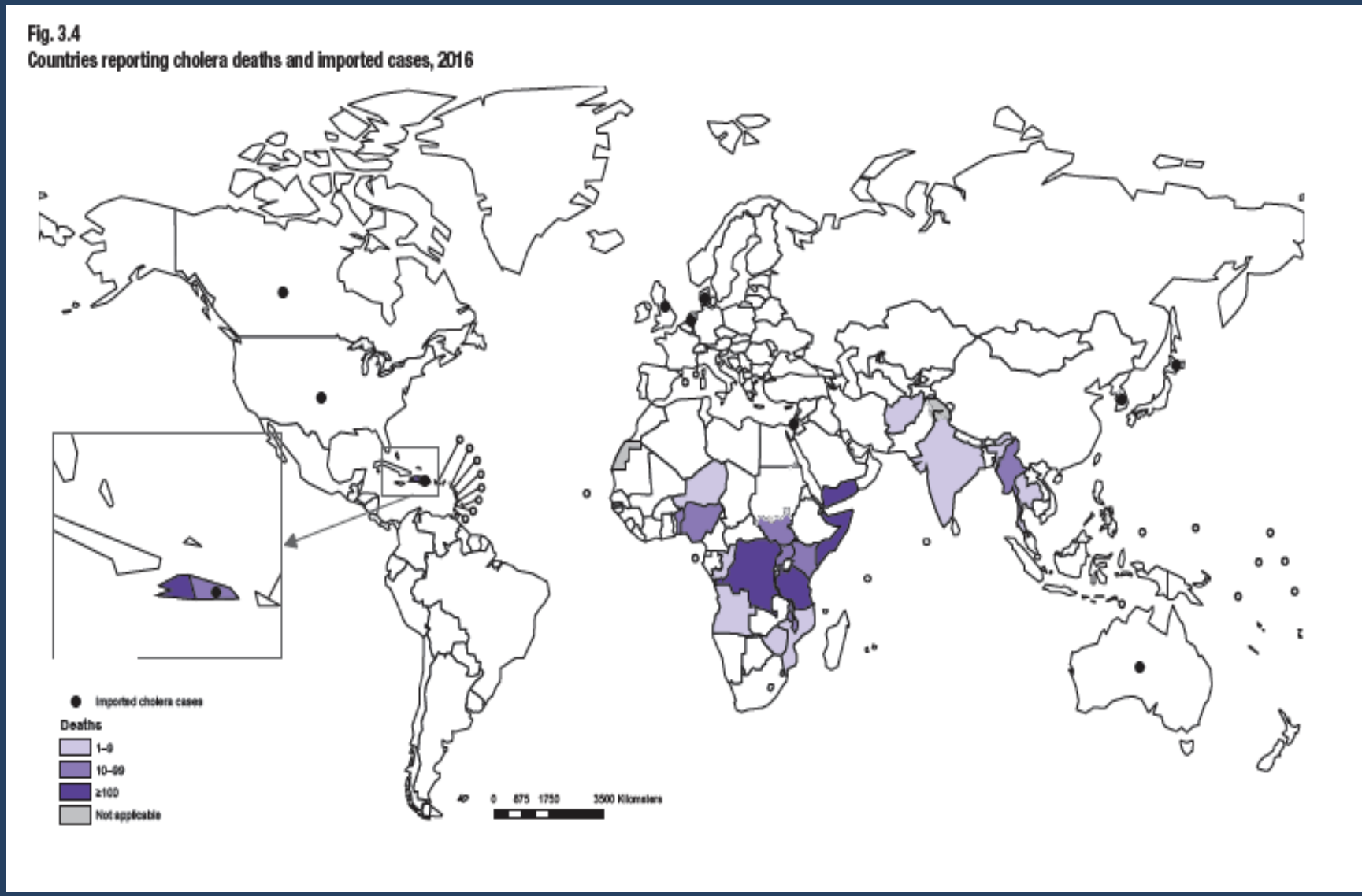
Measles mortality



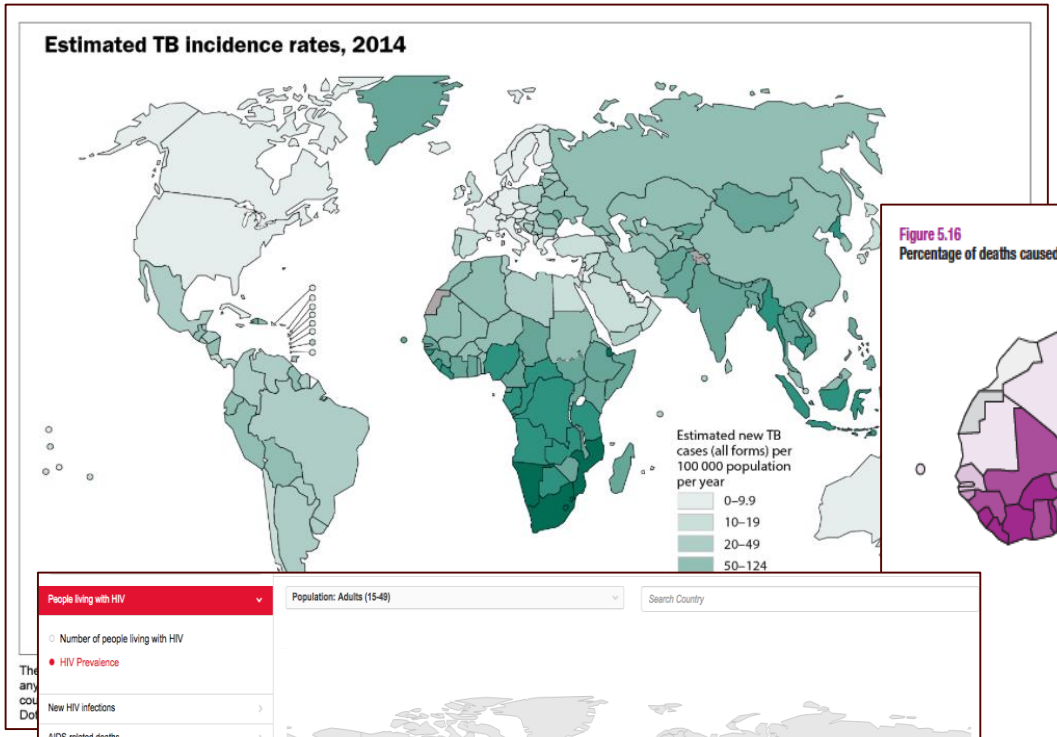
What Global Health is….not

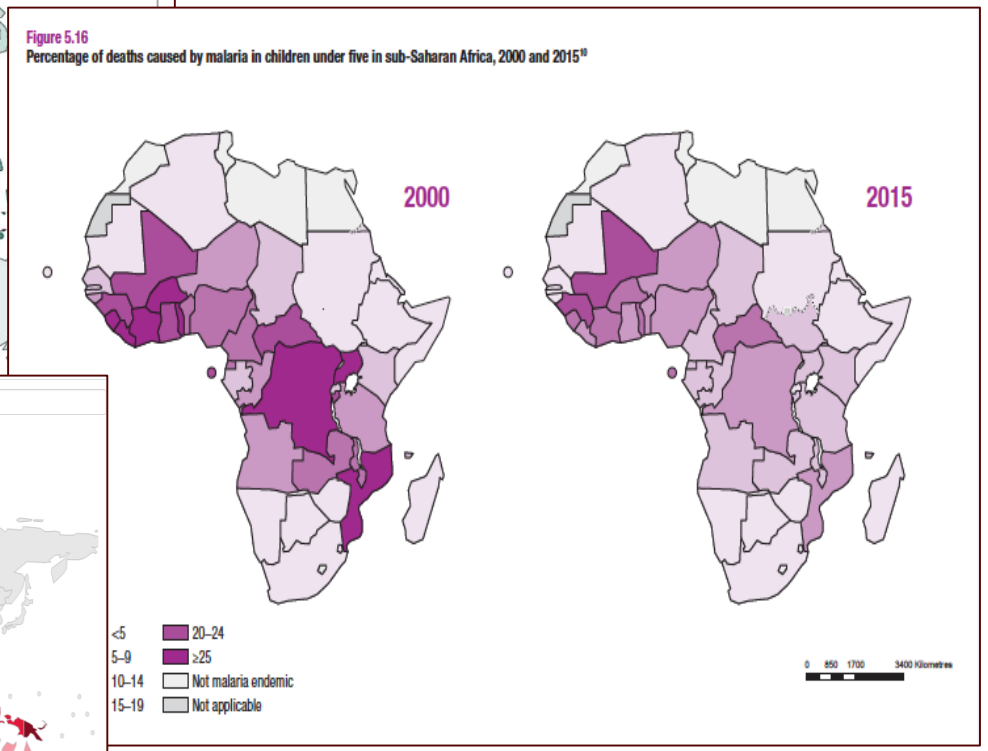


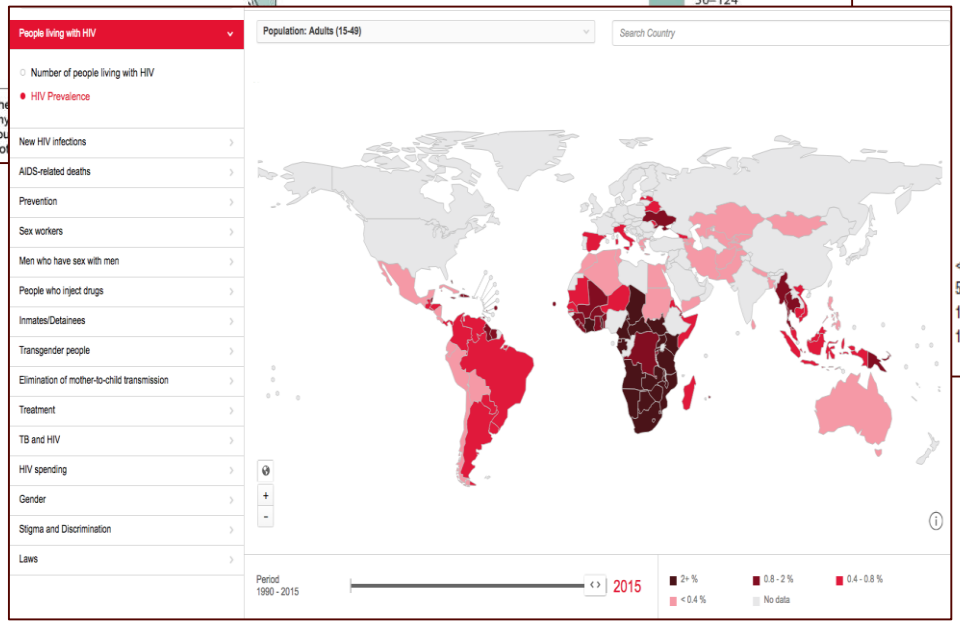
What Global Health is….not



What Global Health is….not







Global Health Inequalities

At least 30 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**.

Marginalised groups and vulnerable populations

are the worst affected, deprived of information, money and access to health services that would help them prevent and treat disease.

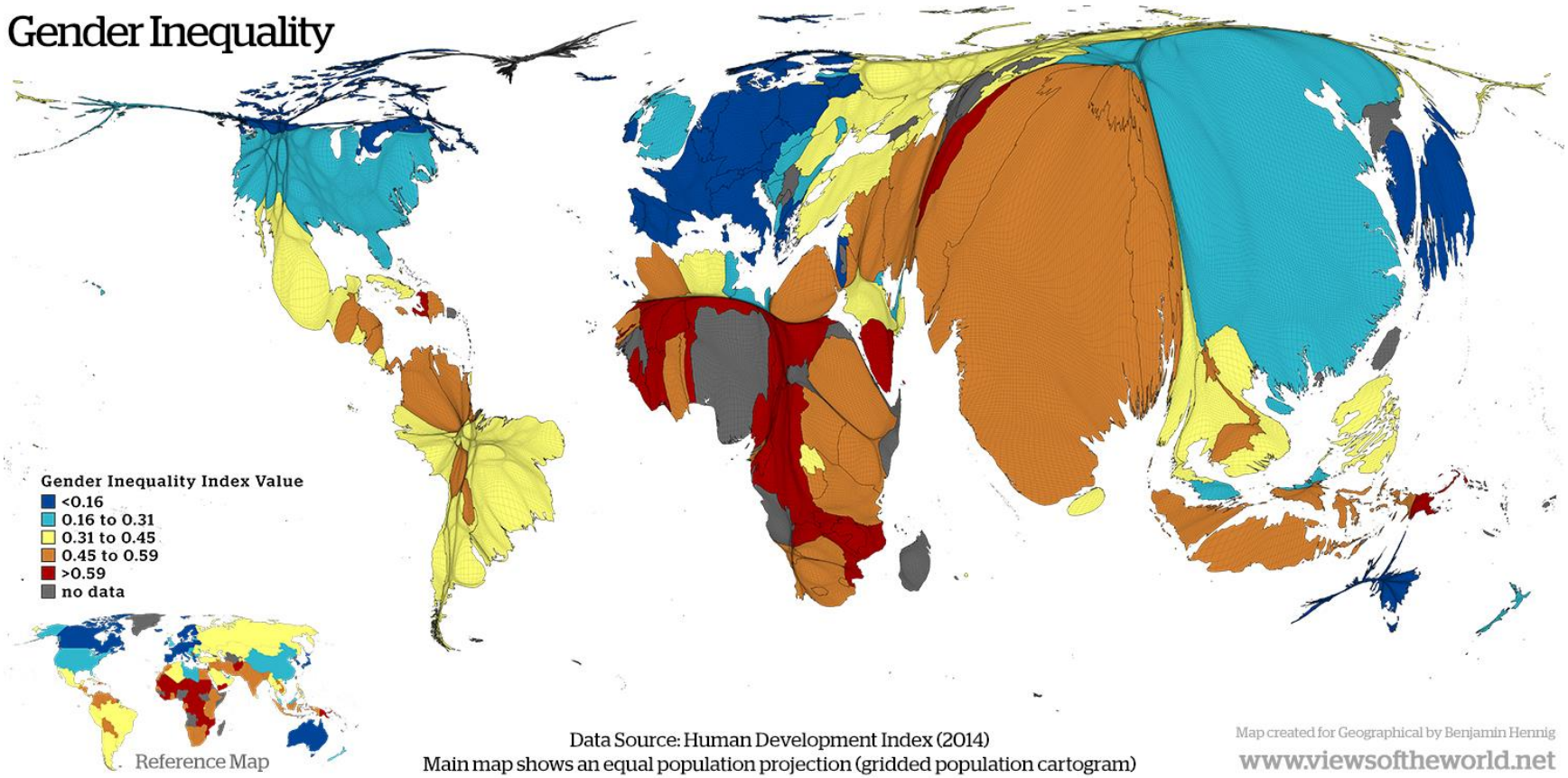
EXPLOITED WOMEN

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

Age Group (Years)	HIV Prevalence (N=1237)
≤16	10.6%
17-18	21.3%
19-20	33.0%
21-22	44.3%
23-24	51.1%

CAPRISA

GENDER (IN-)EQUALITY



HEALTH IN THE SLUMS

THE LANCET

Online First Current Issue All Issues Special Issues Multimedia Information for Authors

All Content Search Advanced Search

< Previous Article Volume 389, No. 10068, p547–558, 4 February 2017 Next Article >

Series

The history, geography, and sociology of slums and the health problems of people who live in slums

Alex Ezeh, PhD, Oyinlola Oyebode, PhD, David Satterthwaite, PhD, Yen-Fu Chen, PhD, Robert Ndugwa, PhD, Jo Sartori, BA, Blessing Mberu, PhD, G J Melendez-Torres, PhD, Tilahun Haregu, PhD, Samuel I Watson, PhD, Prof Waleska Caiaffa, PhD, Prof Anthony Capon, PhD, Prof Richard J Lilford, DSc

Published: 16 October 2016

PlumX Metrics

DOI: https://doi.org/10.1016/S0140-6736(16)31506-6 | CrossMark

Article Info

Summary Full Text Tables and Figures References Supplementary Material

Summary

ome major features of cities in many low-income and middle-income irst in a Series of two papers, we discuss why slums are unhealthy places with nfection and injury. We show that children are especially vulnerable, and that nutrition and recurrent diarrhoea leads to stunted growth and longer-term elopment. We find that the scientific literature on slum health is parison to urban health, and poverty and health. This shortcoming is important because health is affected by factors arising from the shared physical and social environment, which have effects beyond those of poverty alone. In the second paper we will consider what can be done to improve health and make recommendations for the development of slum health as a field of study.

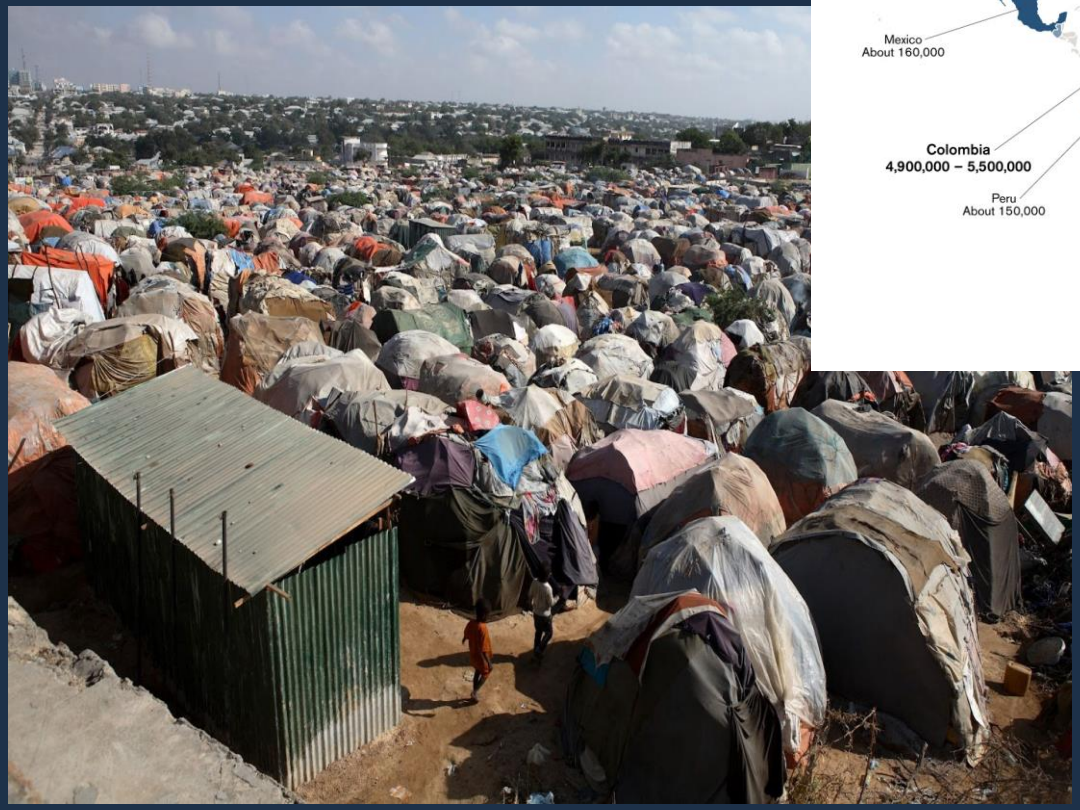
Previous Articles

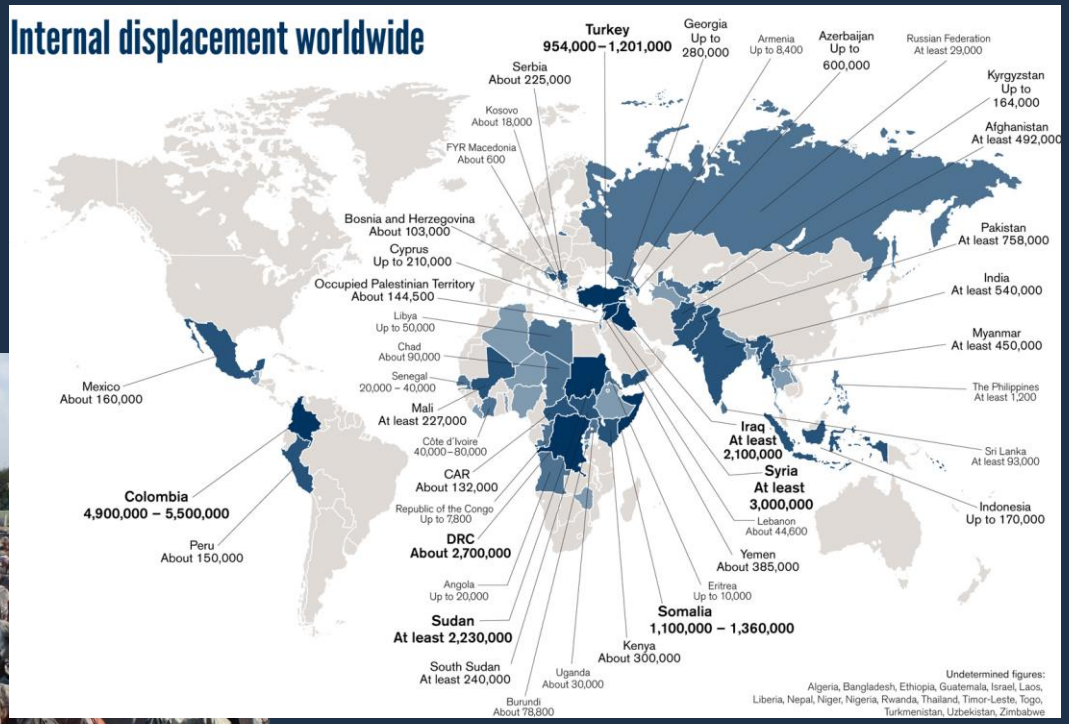
Use of MRI in the diagnosis of fetal brain abnormalities in utero (MERIDIAN): a multicentre, prospective cohort study

THE GREAT ESCAPE is a movie about men escaping from a prisoner-of-war camp in World War II. The Great Escape of this book is the story of mankind's escaping from deprivation and early death, of how people have managed to make their lives better, and led the way for others to follow.

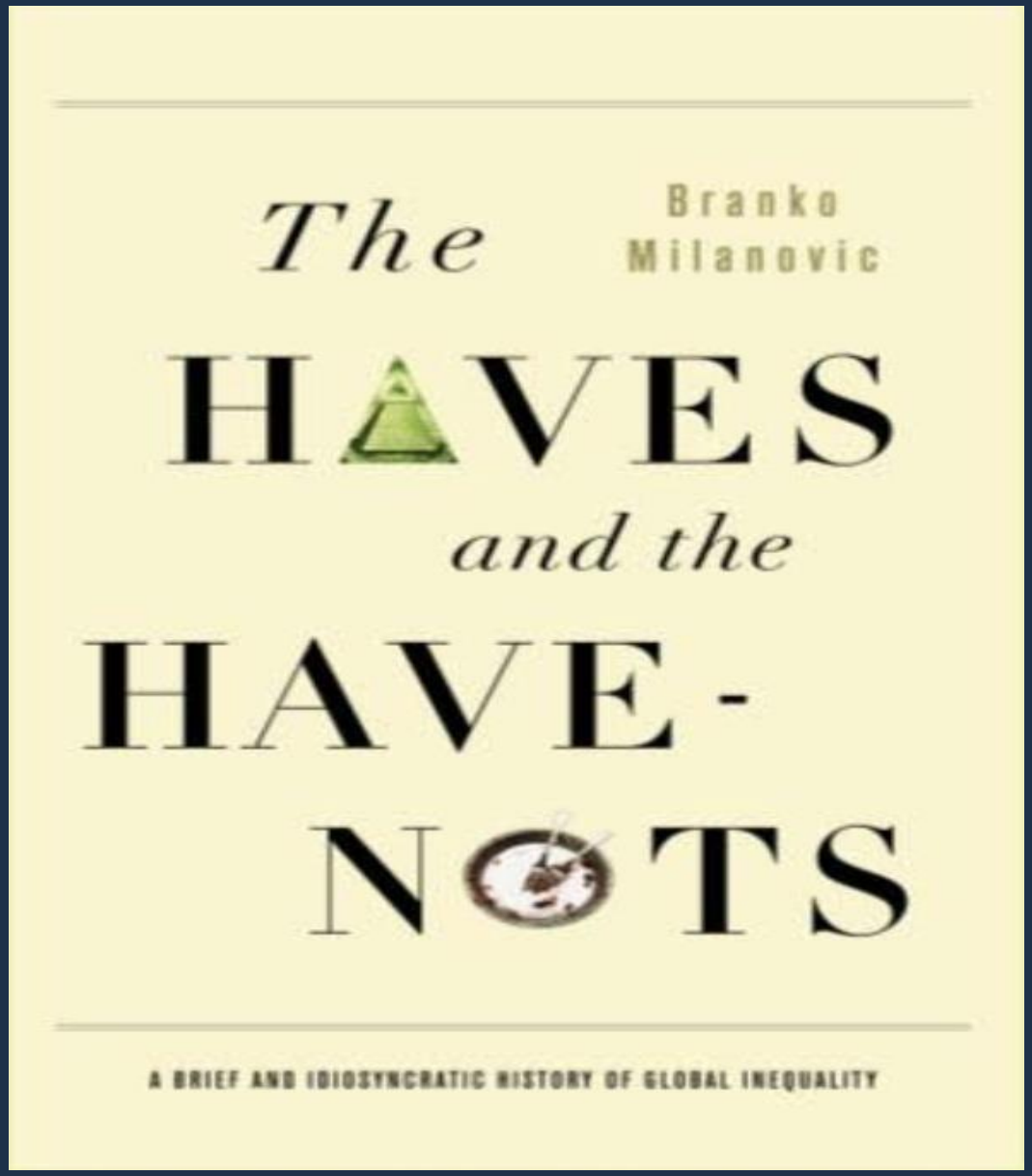
MIGRANTS

DISPLACED




Internal displacement worldwide
Turkey
954,000 – 1,201,000
Georgia
Up to
280,000
Armenia
Up to 8,400
Azerbaijan
Up to
600,000
Russian Federation
At least 29,000
Kyrgyzstan
Up to
164,000
Afghanistan
At least 492,000
Serbia
About 225,000
Kosovo
About 18,000
FYR Macedonia
About 600
Bosnia and Herzegovina
About 103,000
Cyprus
Up to 210,000
Occupied Palestinian Territory
About 144,500
Libya
Up to 50,000
Chad
About 90,000
Senegal
20,000 – 40,000
Mali
At least 227,000
Côte d'Ivoire
40,000 – 80,000
CAR
About 132,000
Republic of the Congo
Up to 7,800
DRC
About 2,700,000
Angola
Up to 20,000
Sudan
At least 2,230,000
South Sudan
At least 240,000
Uganda
About 30,000
Burundi
About 78,800
Kenya
About 300,000
Somalia
1,100,000 – 1,360,000
Eritrea
Up to 10,000
Yemen
About 385,000
Lebanon
About 44,600
Iraq
At least
2,100,000
Syria
At least
3,000,000
Pakistan
At least 758,000
India
At least 540,000
Myanmar
At least 450,000
The Philippines
At least 1,200
Sri Lanka
At least 93,000
Indonesia
Up to 170,000
Mexico
About 160,000
Colombia
4,900,000 – 5,500,000
Peru
About 150,000
Undetermined figures:
Algeria, Bangladesh, Ethiopia, Guatemala, Israel, Laos,
Liberia, Nepal, Niger, Nigeria, Rwanda, Thailand, Timor-Leste, Togo,
Turkmenistan, Uzbekistan, Zimbabwe

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


Branko Milanovic
The HAVES and the HAVE-NOTS
A BRIEF AND IDIOSYNCRATIC HISTORY OF GLOBAL INEQUALITY

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

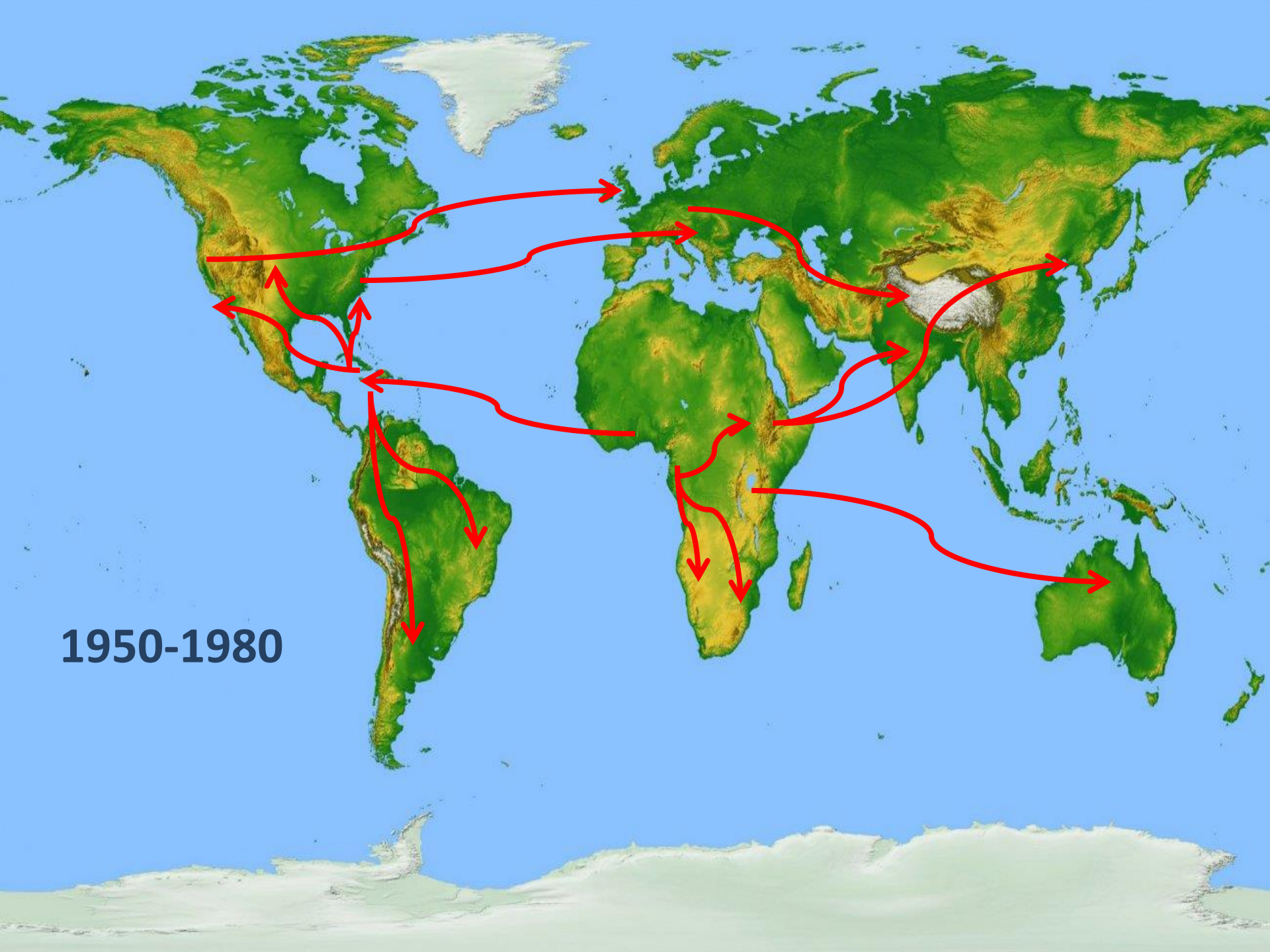
Global Wealth Report - Credit Suisse.

Chapter 2:

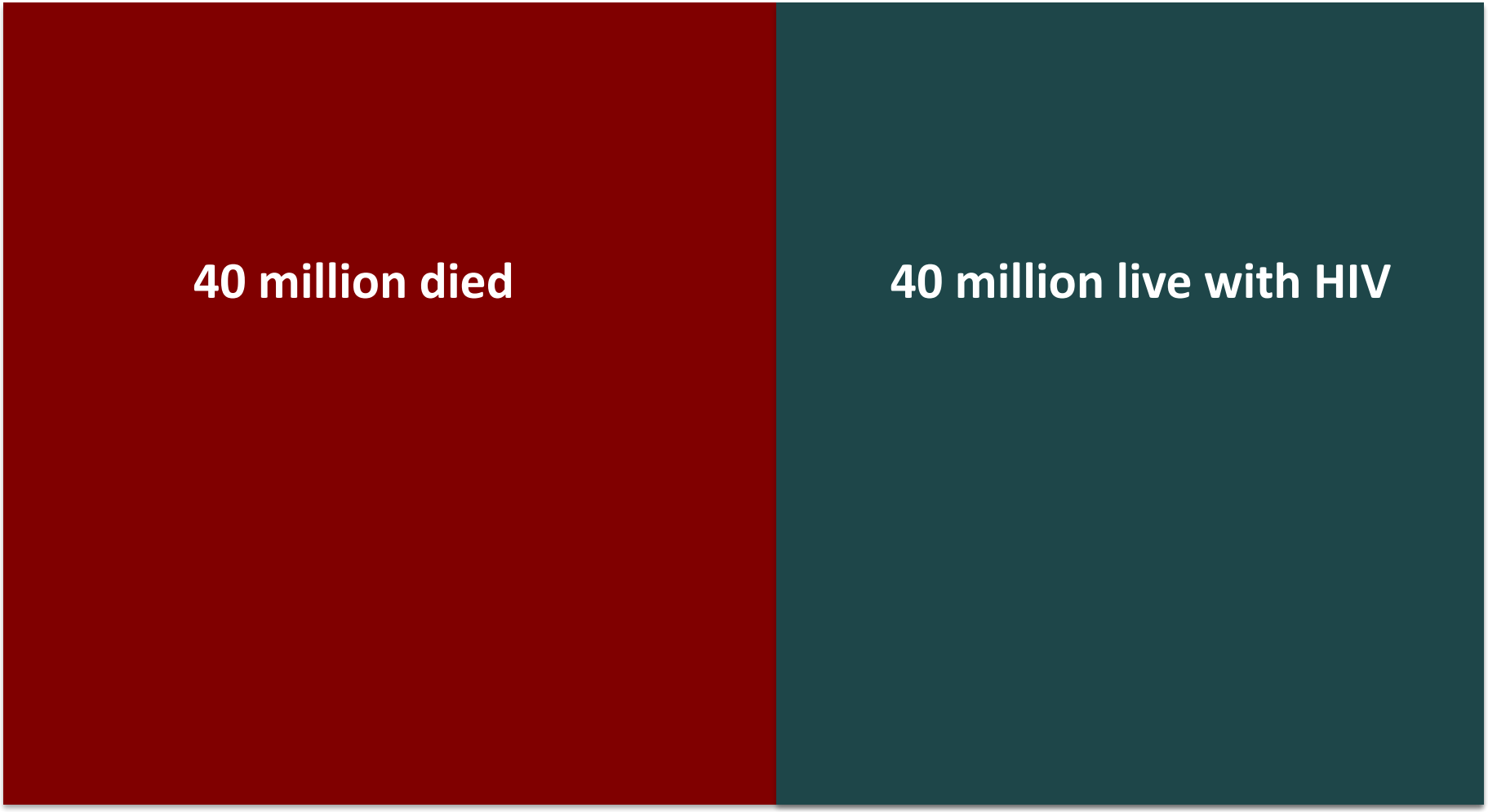
the HIV response

as a model for Global Health

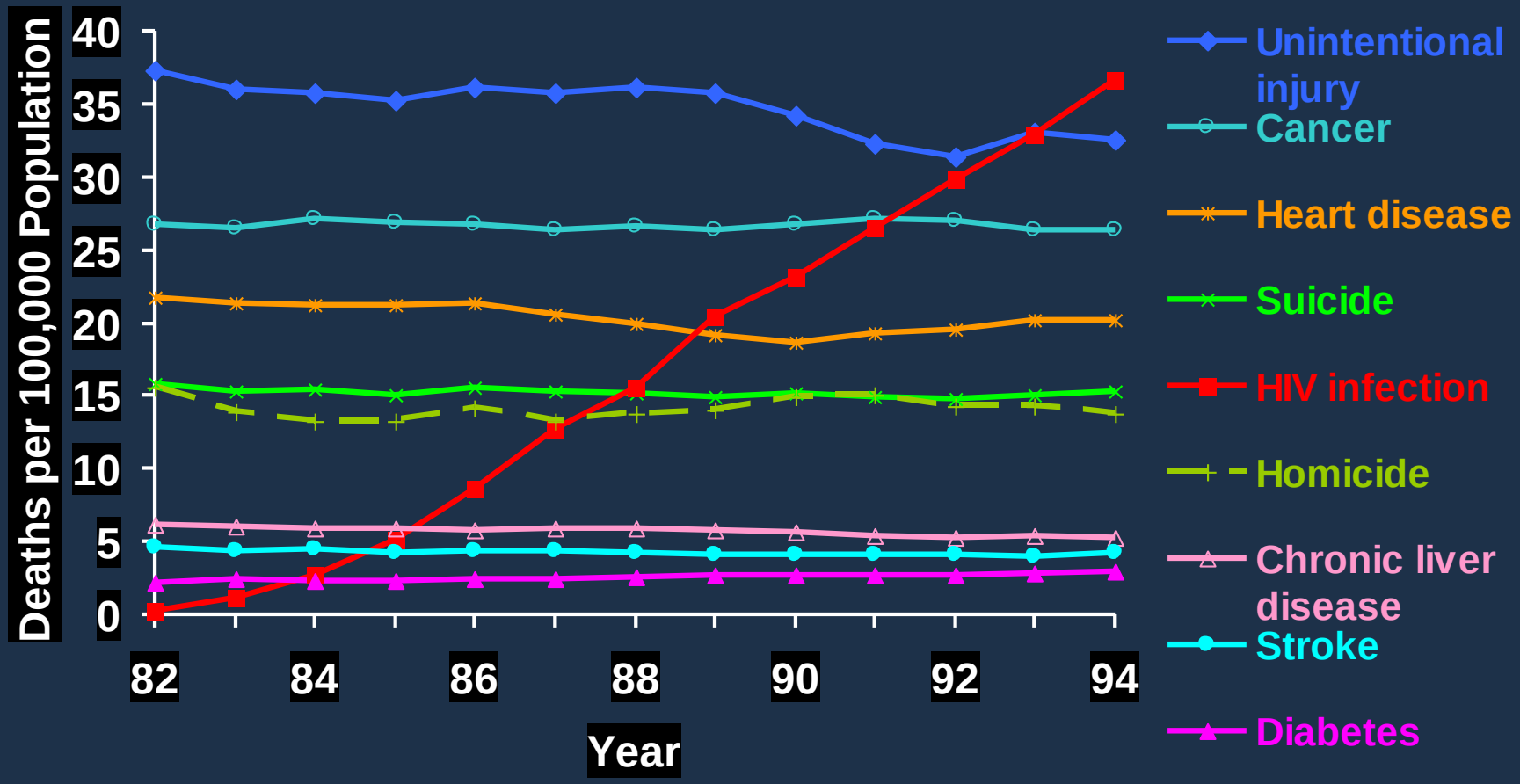

1920
© Magdalena Lukasik (JGI)


1950-1980

AIDS: a devastating impact in just a few years



Trends in Annual Rates of Death from Leading Causes of Death Among Persons 25-44 Years Old, USA



Antiretroviral Therapy for HIV Infection in 1996

Recommendations of an International Panel

Charles C. J. Carpenter, MD; Margaret A. Fischl, MD; Scott M. Hammer, MD; Martin S. Hirsch, MD; Donna M. Jacobsen; David A. Katzenstein, MD; Julio S. G. Montaner, MD; Douglas D. Richman, MD; Michael S. Saag, MD; Robert T. Schooley, MD; Melanie A. Thompson, MD; Stefano Vella, MD; Patrick G. Yeni, MD; Paul A. Volberding, MD; for the International AIDS Society–USA

Objective.—To provide clinical recommendations for antiretroviral therapy for human immunodeficiency virus (HIV) disease with currently (mid 1996) available drugs. When to start therapy, what to start with, when to change, and what to change to were addressed.

Participants.—A 13-member panel representing international expertise in antiretroviral research and HIV patient care was selected by the International AIDS Society–USA.

Evidence.—Available clinical and basic science data, including phase 3 controlled trials, clinical endpoint data, virologic and immunologic endpoint data, interim analyses, studies of HIV pathophysiology, and expert opinions of panel members were considered. Recommendations were limited to drugs available in mid 1996.

Process.—For each question posed, 1 or more member(s) reviewed and presented available data. Recommendations were determined by group consensus (January 1996); revisions as warranted by new data were incorporated by group consensus (February-May 1996).

Conclusions.—Recent data on HIV pathogenesis, methods to determine plasma HIV RNA, clinical trial data, and availability of new drugs point to the need for new approaches to treatment. Therapy is recommended based on $CD4^+$ cell count, plasma HIV RNA level, or clinical status. Preferred initial drug regimens include nucleoside combinations; at present protease inhibitors are probably best reserved for patients at higher progression risk. For treatment failure or drug intolerance, subsequent regimen considerations include reasons for changing therapy, available drug options, disease stage, underlying conditions, and concomitant medication(s). Therapy for primary (acute) infection, high-risk exposures to HIV, and maternal-to-fetal transmission are also addressed. Therapeutic approaches need to be updated as new data continue to emerge.

JAMA. 1996;276:146-154

From Brown University School of Medicine, Providence, RI (Dr Carpenter); the University of Miami (Fla) School of Medicine (Dr Fischl); Harvard Medical School, Boston, Mass (Drs Hammer and Hirsch); The International AIDS Society–USA, San Francisco, Calif (Ms Jacobsen); Stanford (Calif) University Medical Center (Dr Katzenstein); St Paul's Hospital, Vancouver, British Columbia (Dr Montaner); University of California San Diego, and San Diego Veterans Affairs Medical Center (Dr Richman); the University of Alabama at Birmingham (Dr Saag); the University of Colorado School of Medicine, Denver (Dr Schooley); AIDS Research Consortium of Atlanta (Ga) (Dr Thompson); Istituto Superiore di Sanità, Rome, Italy (Dr Vella); Hôpital Bichat-Claude Bernard, X. Bichat Medical School, Paris, France (Dr Yeni); and the University of California San Francisco (Dr Volberding).

Financial disclosures appear at the end of this article.

Reprints: International AIDS Society–USA, 353 Kearny St, San Francisco, CA 94108

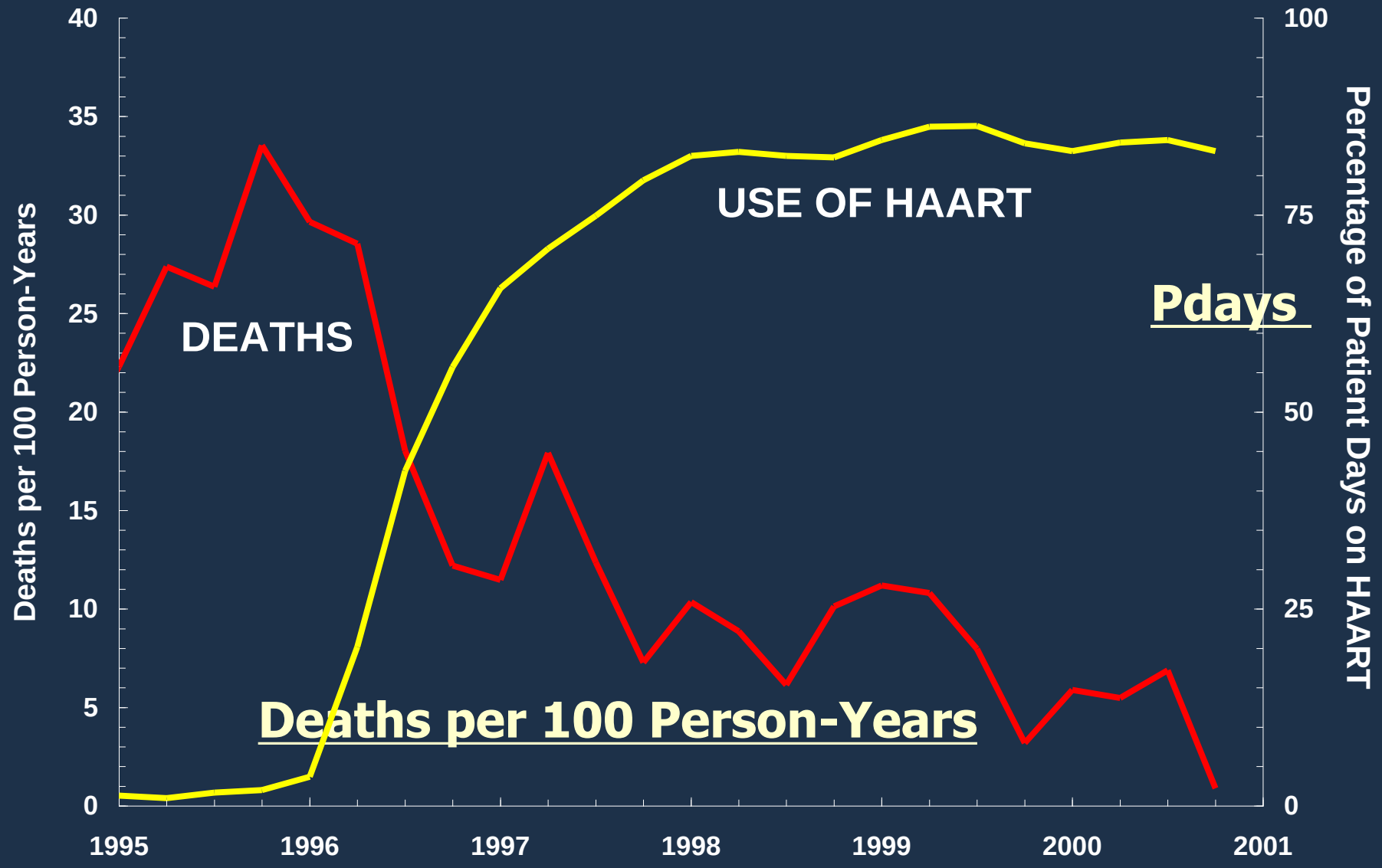
IMPORTANT ADVANCES in understanding the biology and treatment of human immunodeficiency virus (HIV) infection have occurred during the past 18 months. As a result, new scientifically sound approaches to therapy have been developed that offer new options for persons with HIV infection. The relevant recent advances fall into 4 major categories: (1) a better understanding of the replication kinetics of HIV throughout all stages of disease; (2) the development of assays to determine the viral load in individual patients; (3) the availability of several new effective drugs; and (4) the demonstration that combination therapy is more effective than zidovudine monotherapy.

In light of these advances, the recommendations of earlier state-of-the-art guidelines[1,2] are no longer applicable to clinical decision making in 1996. Therefore, an international panel of clinical investigators experienced in HIV patient care was selected and convened by the International AIDS Society–USA to develop current recommendations for the clinical management of HIV-infected individuals.

The panel addressed 4 central questions about antiretroviral therapy: when to initiate therapy, which types of drugs to use, when to change therapy, and which types of drugs to use when a change in therapy is indicated. In addition, the treatment of primary HIV infection, prevention of vertical transmission, and postexposure prophylaxis were addressed. The recommendations are not solely based on the results of controlled clinical trials with well-defined clinical endpoints. Developing clinical guidelines in the HIV field at this time requires an approach firmly anchored in data from controlled, double-blind clinical trials when available, but must also include information from trials in progress and available virologic and immunologic endpoint data, as well as extrapolations from studies of the pathophysiology of HIV infection. Clinical decisions must be made for best use of up to 8 available antiretroviral drugs, at a time when long-term studies with clinical endpoints have been completed for only a few possible combinations.

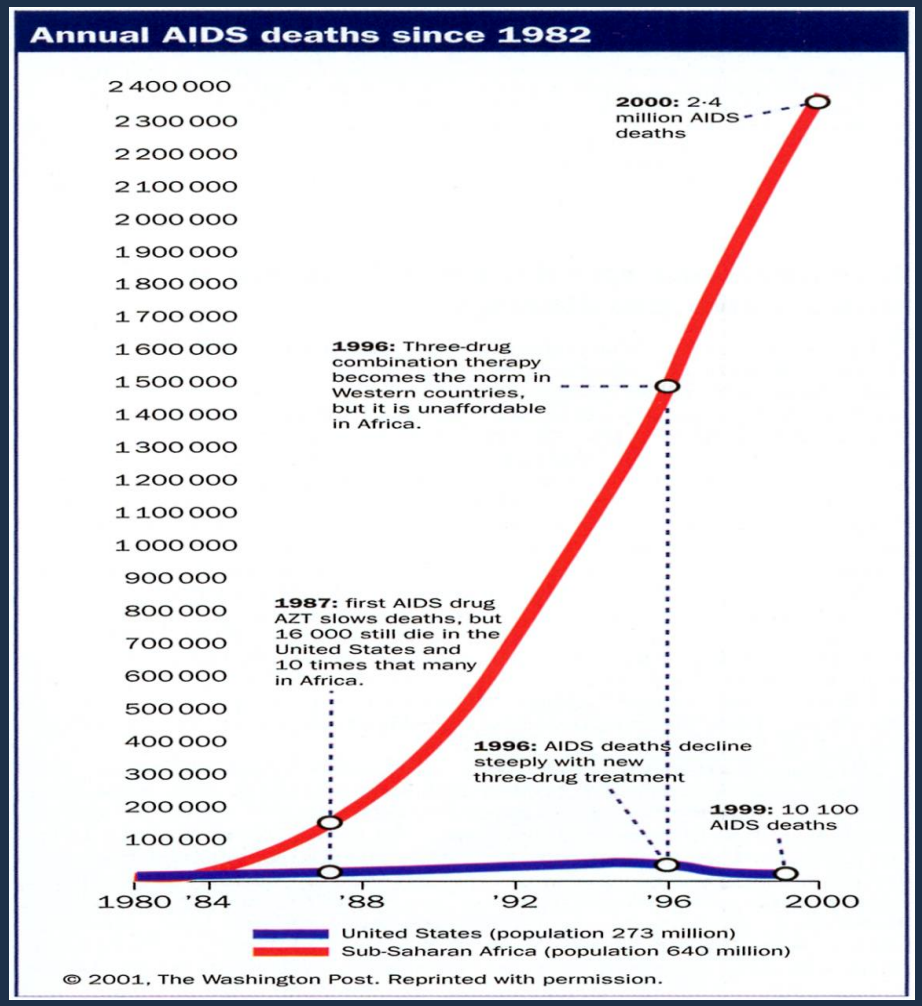
The recommendations herein reflect the panel's agreement on the importance of plasma HIV RNA measurements for predicting risk of clinical progression as well as of the recent demonstration from clinical trials of combination therapies that reductions in plasma HIV RNA

Mortality vs. HAART Utilization



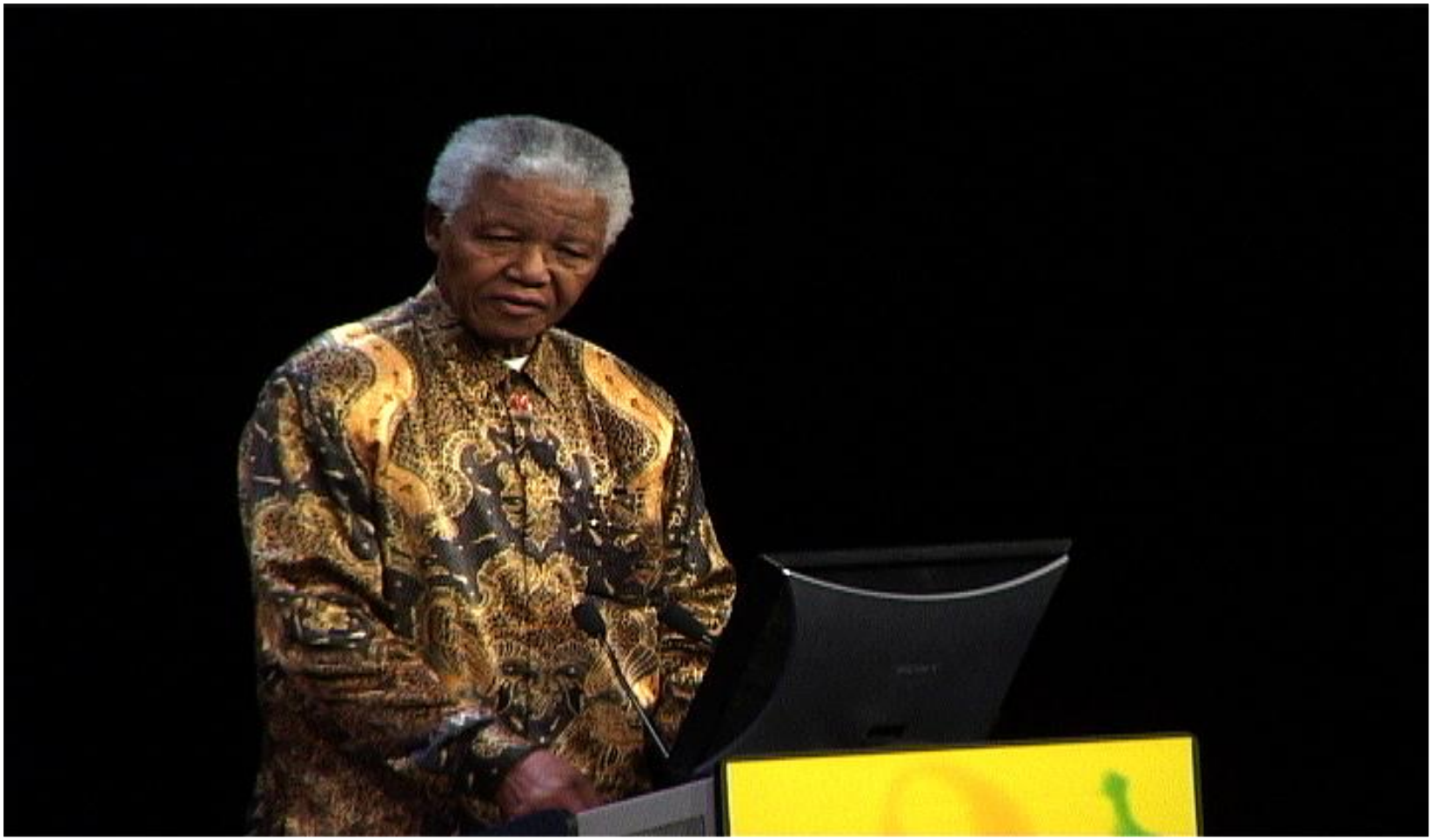
Palella F et al, HOPS Study

YEAR 2000: difference in mortality between the rich north and the poor south

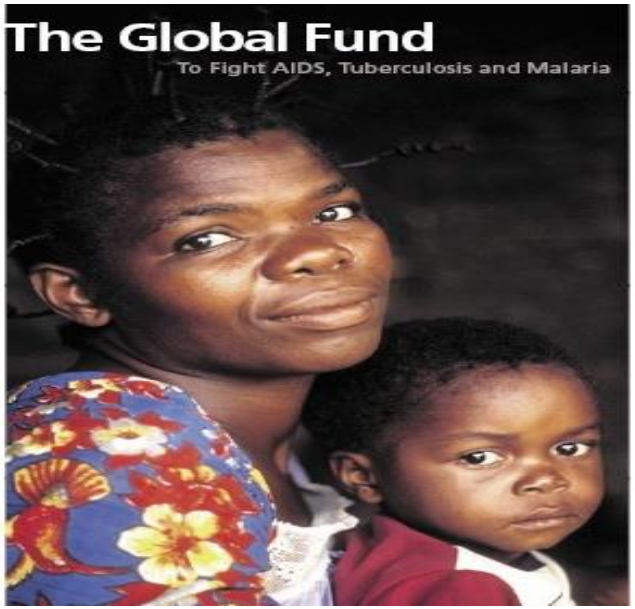


International AIDS Society
Stronger Together Against HIV

World AIDS Conference - DURBAN, *2000*



INNOVATIVE FINANCING

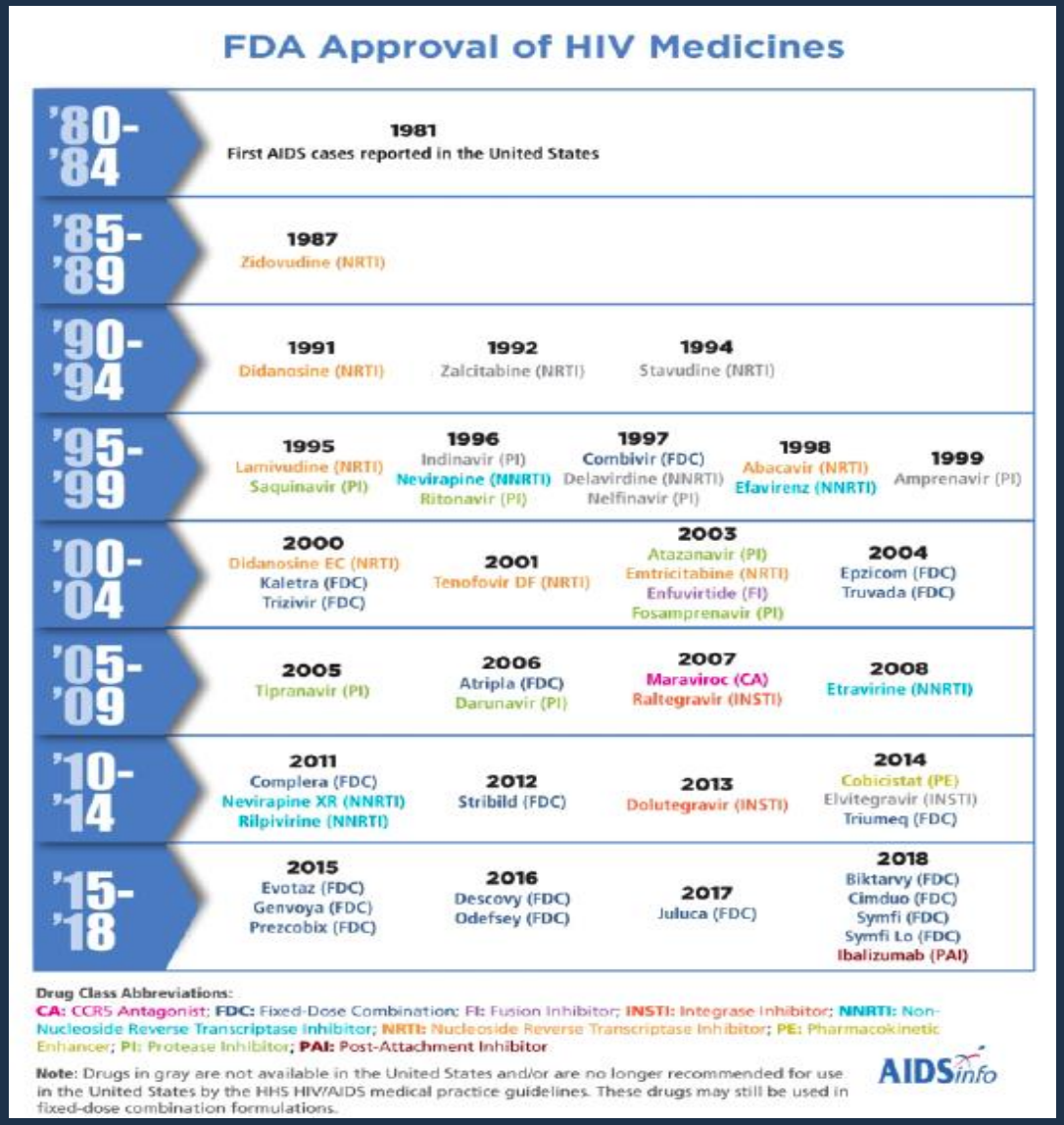


PEPFAR

U.S. President's Emergency Plan for AIDS Relief

COMMUNITY MOBILIZATION

PHARMACEUTICAL INNOVATION 1987 → 2018

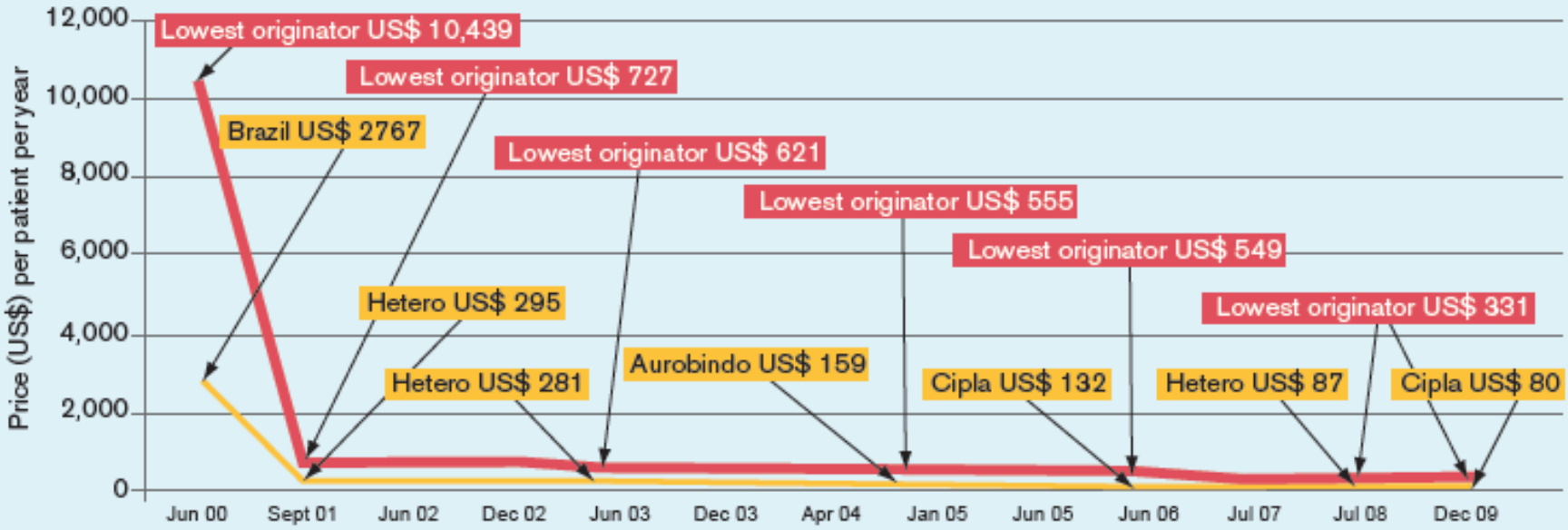


DRUG PRICING INNOVATION

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



Source: Extract from MSF, *Untangling the Web of Price Reductions*, January 2010 at http://www.msfaccess.org.

WORLD TRADE ORGANIZATION

WT/MIN(01)/DEC/1
20 November 2001

(01-5859)

MINISTERIAL CONFERENCE
Fourth Session
Doha, 9 - 14 November 2001

MINISTERIAL DECLARATION

Adopted on 14 November 2001

- **"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".**

HEALTH CARE INNOVATION

1. **Integrated models of care:**

→ from HIV, to HIV + TB, to HIV + TB + HIV Co-morbidities to HIV + TB + Co-Morbidities + Chronic Diseases (NCDs)

2. **Differentiated Models of Care:**

→ client-centered approach,.

→ this model could easily also be applied to NCD care

Health care worker-managed group

Client-managed group

Chapter 3:

The future of Global Health

What is Global Health ?

A multisectoral area for study, research, and action that places a priority on 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.

Advancing global health and strengthening the HIV response in the era of the Sustainable Development Goals: the International AIDS Society—*Lancet* Commission

Linda-Gail Bekker, George Alleyne, Stefan Baral, Javier Cepeda, Demetre Daskalakis, David Dowdy, Mark Dybul, Serge Eholie, Kene Esom, Geoff Garnett, Anna Grimsrud, James Hakim, Diane Havlir, Michael T Isbell, Leigh Johnson, Adeeba Kamarulzaman, Parastu Kasaie, Michel Kazatchkine, Nduku Kilonzo, Michael Klag, Marina Klein, Sharon R Lewin, Chewe Luo, Keletso Makofane, Natasha K Martin, Kenneth Mayer, Gregorio Millett, Ntobeko Ntusi, Loyce Pace, Carey Pike, Peter Piot, Anton Pozniak, Thomas C Quinn, Jurgen Rockstroh, Jirair Ratevosian, Owen Ryan, Serra Sippel, Bruno Spire, Agnes Soucat, Ann Starrs, Steffanie A Strathdee, Nicholas Thomson, Stefano Vella, Mauro Schechter, Peter Vickerman, Brian Weir, Chris Beyrer

Published Online July 19, 2018 http://dx.doi.org/10.1016/S0140-6736(18)31070-5

Executive summary

Inspired by unprecedented improvements in human health and development in recent decades, our world has embarked on a quest that only a generation ago would have been considered unreachable—achieving sustainable health and development for all. Improving the health and wellbeing of the world's people is at the core of the Sustainable Development Goals (SDGs), reflected in targets that call for ending the epidemics of AIDS, tuberculosis, and malaria; achieving enormous improvements in maternal and child health; and tackling the growing burden of non-communicable diseases (NCDs). Attaining universal health coverage is the means by which these ambitious health targets are to be achieved.

Although on their face, the SDGs reflect an unprecedented level of global solidarity and resolve, the trends that increasingly define our world in 2018 are inconsistent with both the sentiments that underlie the SDGs and the ethos that generated such striking health and development gains in recent years. Democracy is in retreat, and in many countries the space for civil society is declining and the human rights environment deteriorating. Official development assistance for health has stalled, as an inward-looking nationalism has in many places supplanted recognition of the need for global collaboration to address shared challenges. The loss of momentum on global health ignores the urgent need to strengthen health systems to address the steady growth of NCDs, which now account for seven of ten deaths worldwide.

Recent trends in the HIV response are especially concerning. Although the number of new HIV infections and AIDS-related deaths have markedly decreased since the epidemic peaked, little progress has been made in reducing new infections in the past decade. Without further reductions in HIV incidence, a resurgence of the epidemic is inevitable, as the largest ever generation of young people age into adolescence and adulthood. Yet where vigilance and renewed efforts are needed, there are disturbing indications that the world's commitment is waning. Allowing the HIV epidemic to rebound would be catastrophic for the communities most affected by HIV and for the broader field of global health. If the world cannot follow through on HIV, which prompted such an extraordinary global mobilisation, hopes for achieving the ambitious health aims outlined in the SDGs will inevitably dim.

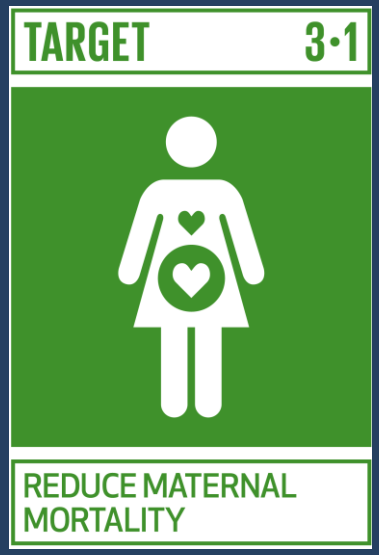
At this moment of uncertainty for the future of the HIV response and for global health generally, the International AIDS Society and *The Lancet* convened an international

Key messages

- The HIV pandemic is not on track to end, and the prevailing discourse on ending AIDS has bred a dangerous complacency and may have hastened the weakening of global resolve to combat HIV
- Existing HIV tools and strategies are insufficient, and although dramatic gains can be made through maximizing existing prevention and treatment strategies, the HIV pandemic is likely to remain a major global challenge for the foreseeable future
- Tens of millions of people will require sustained access to antiretroviral therapy for decades to come, vigilance will be needed to prevent a resurgence of the epidemic as the largest-ever generation of young people age into adolescence and young adulthood, and intensified efforts are required to address HIV among populations and settings that are being left behind
- Allowing the pandemic to rebound after achieving such remarkable progress would not only increase the human and financial costs of HIV, but it would potentially demoralise the global health field and diminish support for similarly ambitious global health undertakings
- A rejuvenated global effort on HIV is essential; to renew and strengthen the global HIV response, the world's impressive commitment to the scaling up of HIV treatment services must be matched by a similarly robust commitment to expanded access to HIV prevention
- The HIV response must make common cause with the broader global health field to herald a new era of global solidarity for health, and specific action is urgently needed to respond to the rapidly rising health toll associated with non-communicable diseases, including taking health into account in the development of public policies of all kinds. HIV services should, where feasible, be integrated with broader health services, in co-located sites where possible, with the aim of improving both HIV-related and non-HIV-specific health outcomes; greater integration of HIV and global health must preserve and build on key attributes of the HIV response, including participatory community and civil society engagement and an ironclad commitment to human rights, gender equality, and equitable access to health and social justice
- The new era of global health solidarity should focus on the development of robust, flexible, people-centred health systems to end communicable diseases, develop effective measures to address the steady rise of non-communicable diseases, achieve universal health coverage, provide coordinated services tailored to the needs of health service users, and effectively address the social and structural determinants of health

The Sustainable Development Goals and SDG #3

SDG 3 - TARGETS



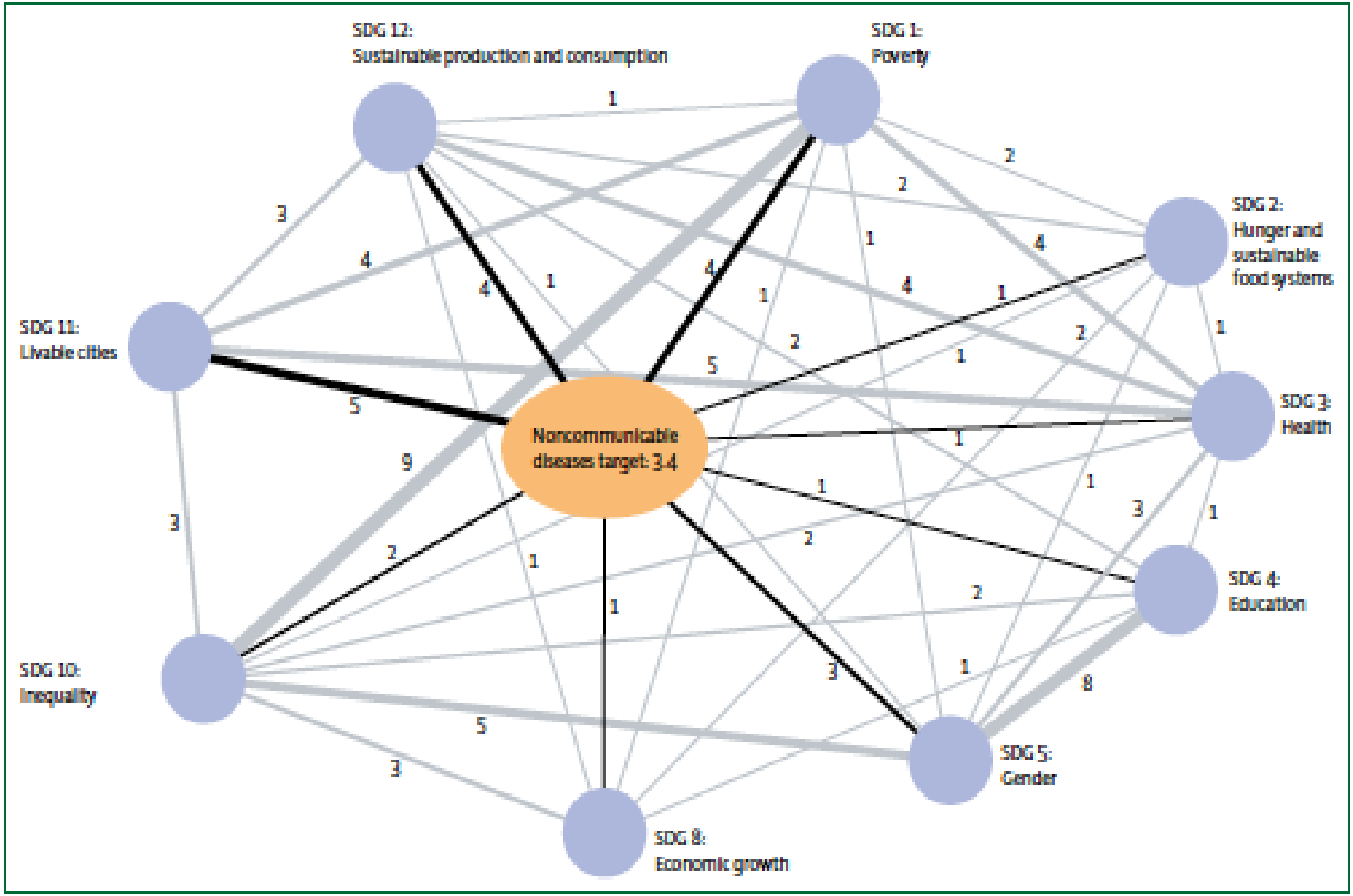


Figure 2: Links between nine SDGs and NCD target 3·4

The black lines connecting the SDGs show the strength of relationships between SDGs, based on a count of common keywords in each SDG target and indicator. SDG=Sustainable Development Goal. NCD=non-communicable diseases. Adapted from LeBlanc 2015.[8]

- **500 million people worldwide lack health care, including access to essential medicines, vaccines, diagnostics, medical devices, and health technologies that prevent and treat diseases**

- **Where innovation exists, access is often hindered by economic constraints, which leads to needless deaths or pushes entire families into poverty simply for accessing the health services they need.**

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

Vella S, Wilson D. Access to medicines: lessons from the HIV response. Lancet HIV. 2017 Apr;4(4):e147-e149. doi: 10.1016/S2352-3018(17)30052-8.

UNITED NATIONS SECRETARY-GENERAL'S HIGH-LEVEL PANEL ON ACCESS TO MEDICINES

Promoting Innovation and Access

medicines • vaccines • diagnostics • health technologies

A New Deal to Close the Gap in Health Innovation and Access

The rising costs of health technologies and the lack of new tools to tackle health problems like disease outbreaks and antimicrobial resistance is a growing problem. Catalyzing innovation, especially for rare diseases, diseases of the poor, and the development of new antibiotics has proven very difficult without market incentives.

The twin challenges of innovation and access constrain health outcomes and hinder social and economic development in rich and poor countries.

The Imbalance Between Human Rights, Intellectual Property Rights and Public Health Objectives is Leaving People Behind

Implement Additional Models for R&D Funding

Where there no market incentives, the costs of R&D must be delinked from the end prices of health technologies so that the governments and companies that invest in innovation can be fairly rewarded, and at the same time, people who need medicines can access them at a fair price. By supplementing the existing market driven system with innovative finance mechanisms, we can increase investment in needed technologies.

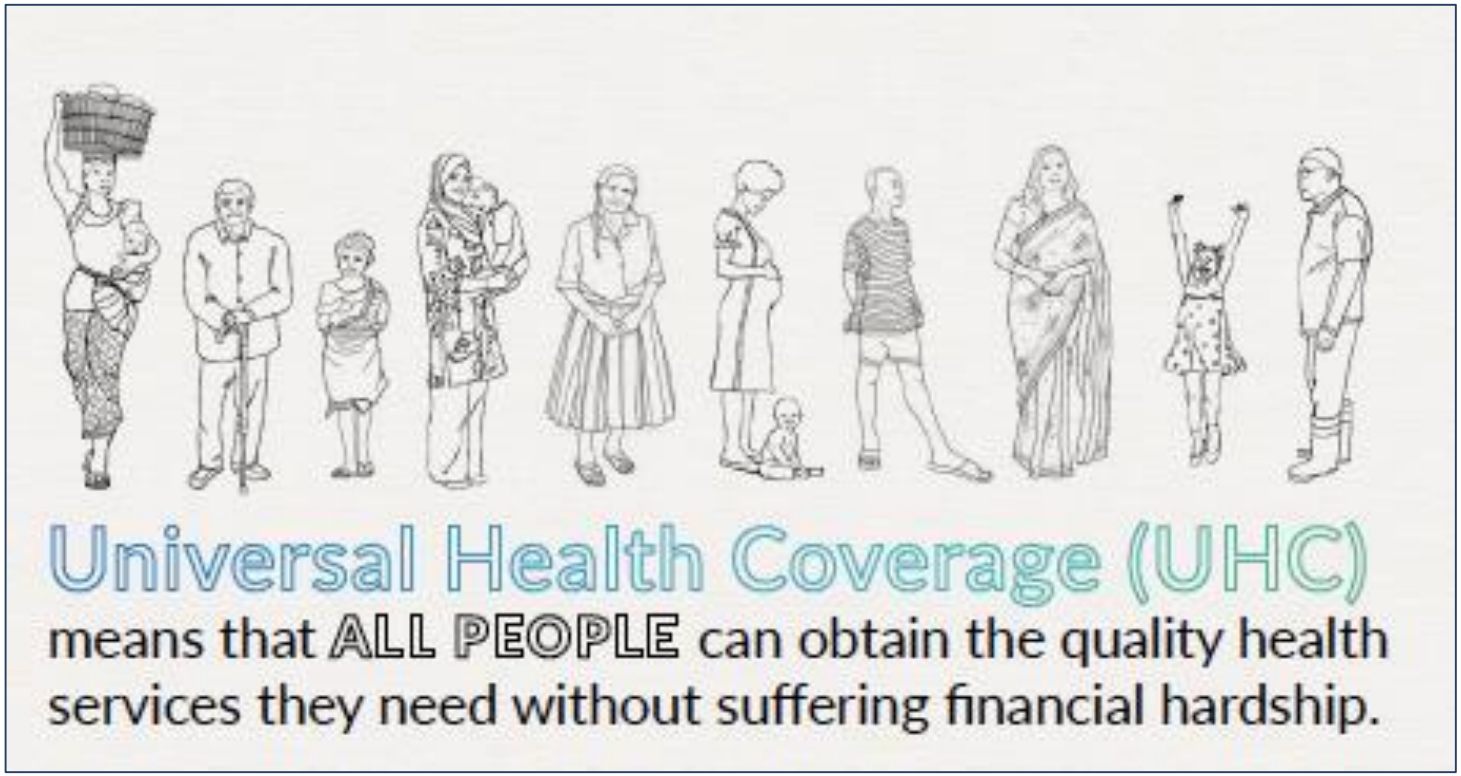
Public-Private Partnerships and Product Development Partnerships (PDPs)

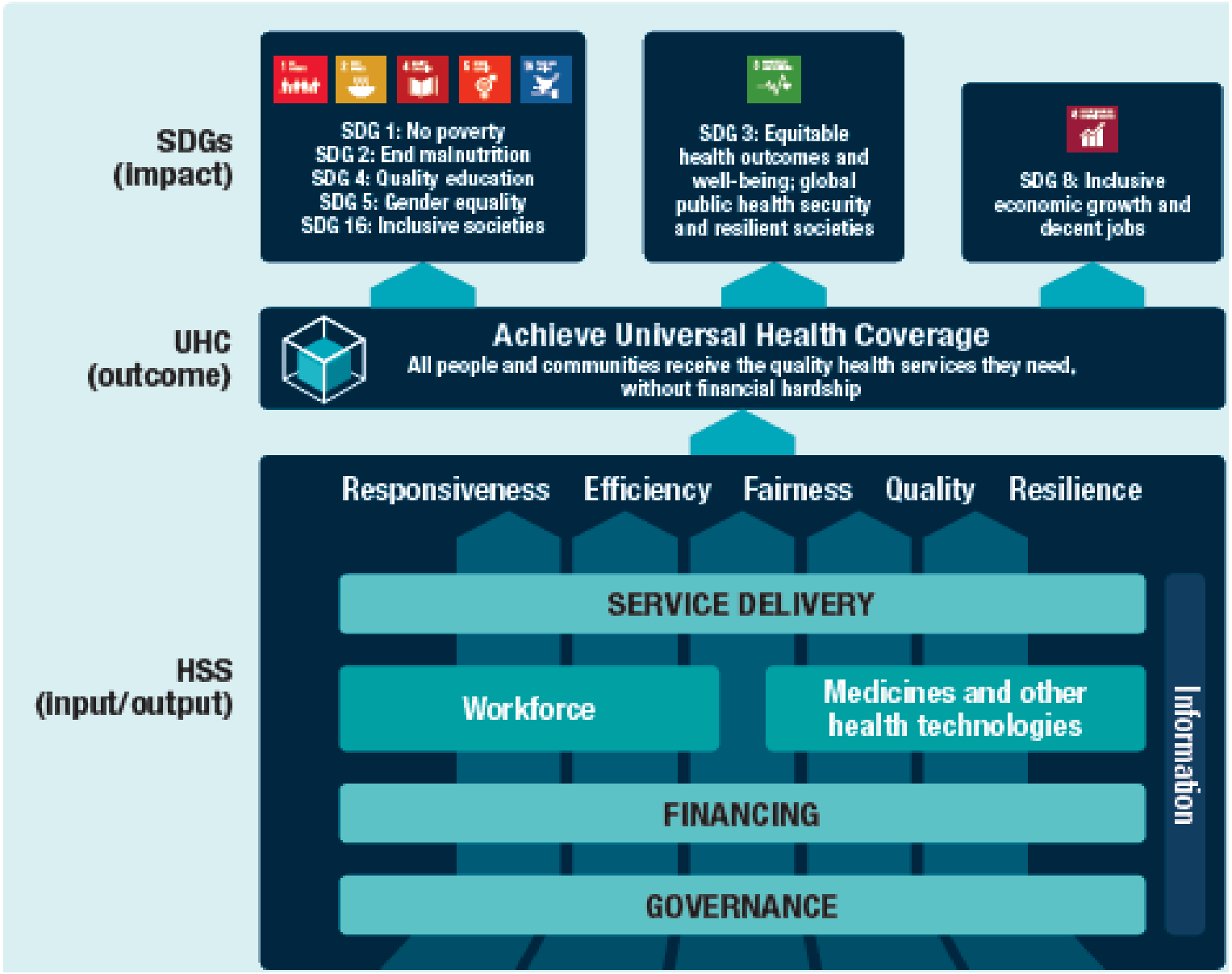
Sharing the resources and strengths of the private and public sectors can accelerate innovation and allow investments to be made in health technologies that may lack a clear market incentive.

Grants and Prizes

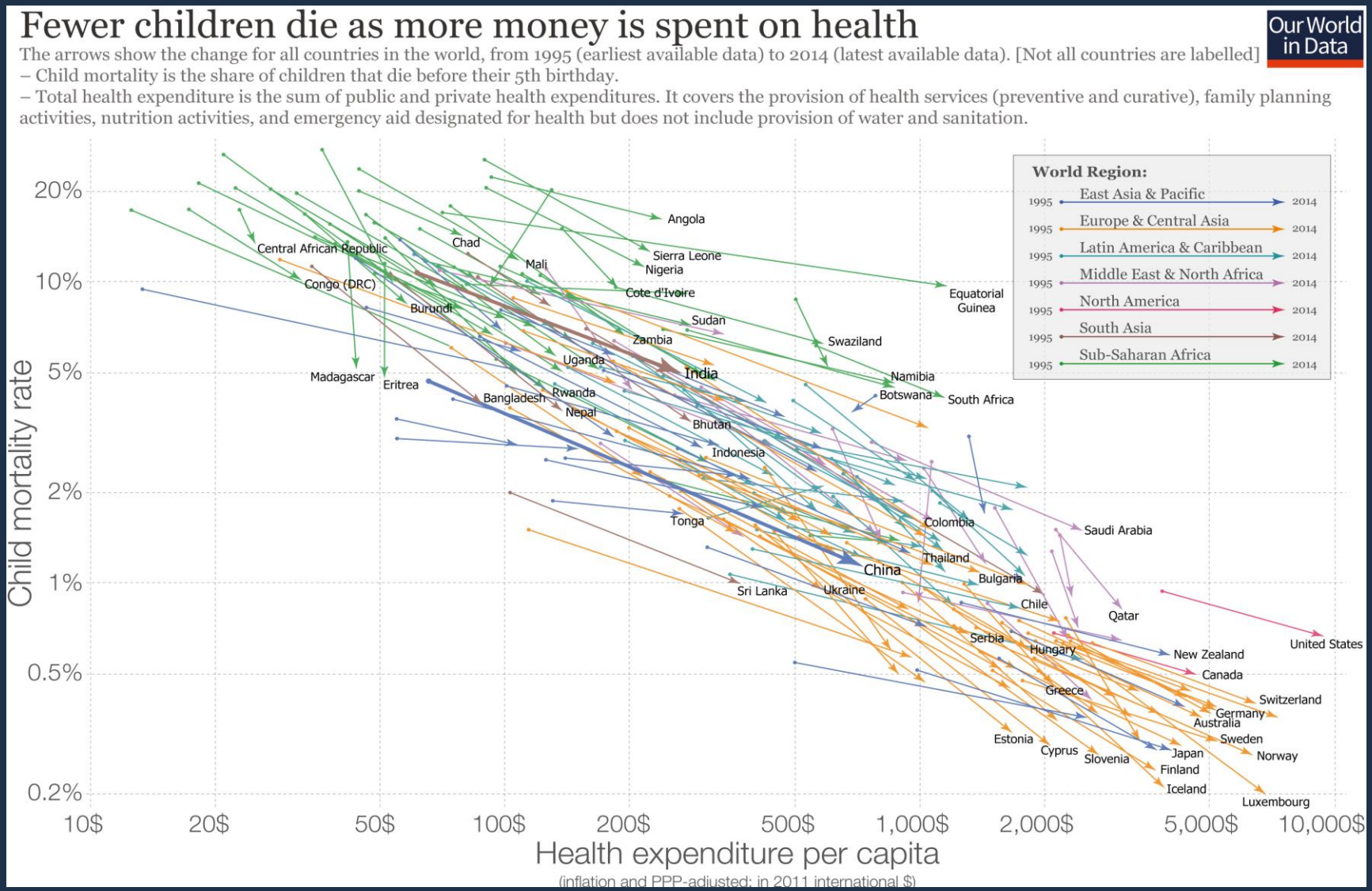
Upfront contributions can lower the risks of investing in health technologies for diseases that affect people with low purchasing power. Rewards for projects that have reached certain milestones can incentivize investments on more economically ambitious or ambiguous ventures.


TARGET 3·8
ACHIEVE UNIVERSAL HEALTH COVERAGE


Universal Health Coverage (UHC)
means that ALL PEOPLE can obtain the quality health services they need without suffering financial hardship.


SDGs
(Impact)
SDG 1: No poverty
SDG 2: End malnutrition
SDG 4: Quality education
SDG 5: Gender equality
SDG 16: Inclusive societies
SDG 3: Equitable health outcomes and well-being; global public health security and resilient societies
SDG 8: Inclusive economic growth and decent jobs
UHC
(outcome)
Achieve Universal Health Coverage
All people and communities receive the quality health services they need, without financial hardship
HSS
(Input/output)
Responsiveness
Efficiency
Fairness
Quality
Resilience
SERVICE DELIVERY
Workforce
Medicines and other health technologies
FINANCING
GOVERNANCE
Information

Investing in Health is very cost-effective

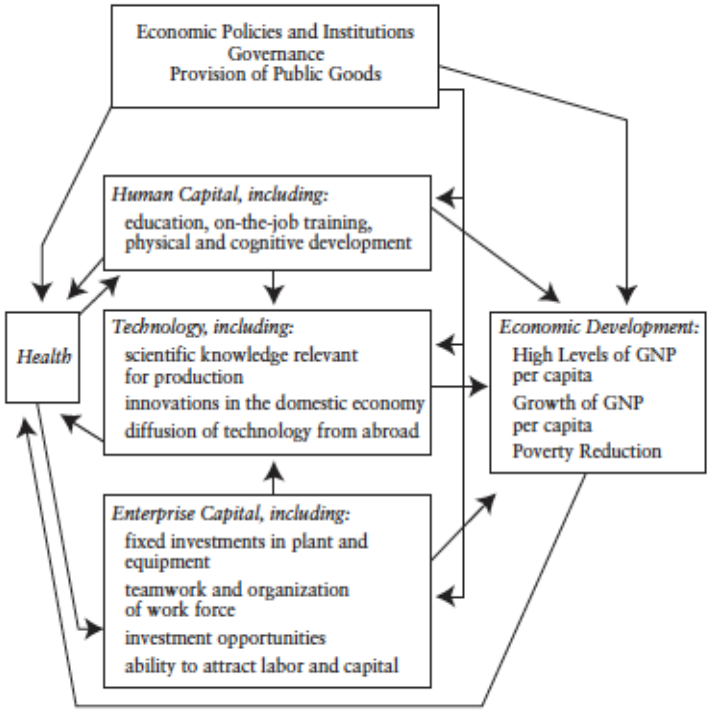


Macroeconomics and Health: Investing in Health for Economic Development

Report of the Commission on Macroeconomics and Health

Presented by Jeffrey D. Sachs, Chair
to Gro Harlem Brundtland,
Director-General of the
World Health Organization
on 20 December 2001

Figure 1. Health as an Input into Economic Development



The Challenge of Financing Global Health:

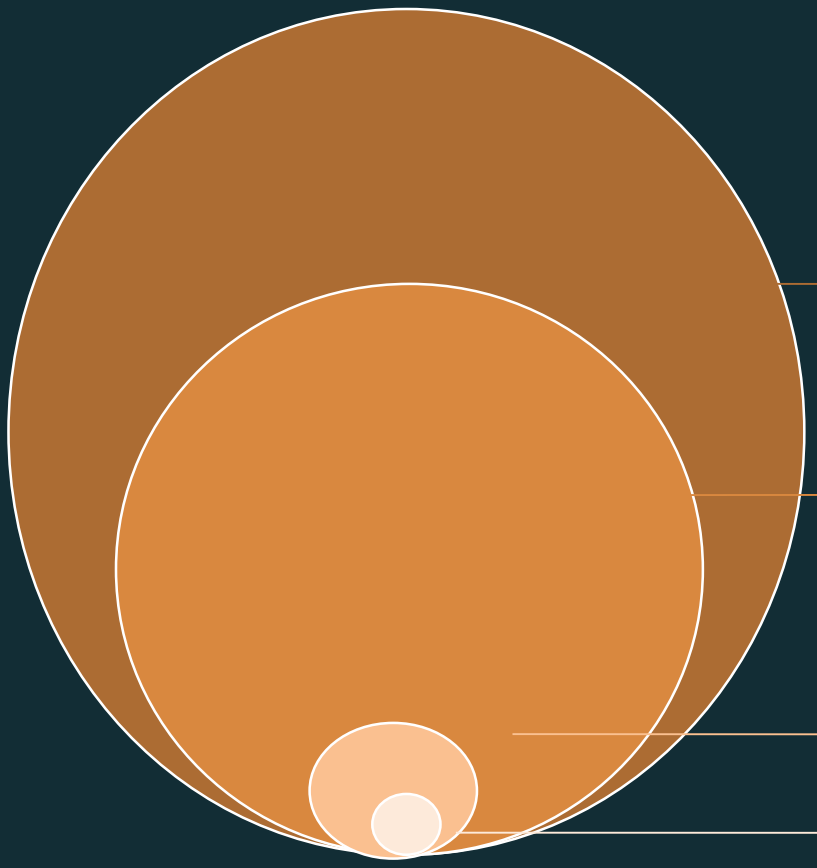
competing with emerging new priorities

financial crisis, conflict situations,

migration, security,

natural and human-made disasters

Lets be honest: the World is rich



Notional value of global financial markets
> 70 times the value of world GDP

World GDP
$78 trillions

Global Health Response needs
$ 134 - 371 billions

Global Fund needs
$ 13 billions - 5th replenishment

We know *how* to get the money

- ☑ Decrease military expenditures
- ☑ Regulatory measures for curbing financial speculation & illegal capital flows;
- ☑ Regulation of tax havens
- ☑ Progressive tributary instruments for redistribution of wealth
- ☑ *Financial Transaction Taxes to invest in sustainable development*

We know *how* to get the money

- ☑ Regulatory measures for curbing financial speculation & illegal capital flows;
- ☑ Regulation of tax havens
- ☑ Progressive tributary instruments for redistribution of wealth
- ☑ *Financial Transaction Taxes to invest in sustainable development*

Advancing global health and strengthening the HIV response in the era of the Sustainable Development Goals: the International AIDS Society—*Lancet* Commission

Linda-Gail Bekker, George Alleyne, Stefan Baral, Javier Cepeda, Demetre Daskalakis, David Dowdy, Mark Dybul, Serge Eholie, Kene Esom, Geoff Garnett, Anna Grimsrud, James Hakim, Diane Havlir, Michael T Isbell, Leigh Johnson, Adeeba Kamarulzaman, Parastu Kasaie, Michel Kazatchkine, Nduku Kilonzo, Michael Klag, Marina Klein, Sharon R Lewin, Chewe Luo, Keletso Makofane, Natasha K Martin, Kenneth Mayer, Gregorio Millett, Ntobeko Ntusi, Loyce Pace, Carey Pike, Peter Piot, Anton Pozniak, Thomas C Quinn, Jurgen Rockstroh, Jirair Ratevosian, Owen Ryan, Serra Sippel, Bruno Spire, Agnes Soucat, Ann Starrs, Steffanie A Strathdee, Nicholas Thomson, Stefano Vella, Mauro Schechter, Peter Vickerman, Brian Weir, Chris Beyrer

Published Online
July 19, 2018
http://dx.doi.org/10.1016/S0140-6736(18)31070-5

Executive summary

Inspired by unprecedented improvements in human health and development in recent decades, our world has embarked on a quest that only a generation ago would have been considered unreachable—achieving sustainable health and development for all. Improving the health and wellbeing of the world's people is at the core of the Sustainable Development Goals (SDGs), reflected in targets that call for ending the epidemics of AIDS, tuberculosis, and malaria; achieving enormous improvements in maternal and child health; and tackling the growing burden of non-communicable diseases (NCDs). Attaining universal health coverage is the means by which these ambitious health targets are to be achieved.

Although on their face, the SDGs reflect an unprecedented level of global solidarity and resolve, the trends that increasingly define our world in 2018 are inconsistent with both the sentiments that underlie the SDGs and the ethos that generated such striking health and development gains in recent years. Democracy is in retreat, and in many countries the space for civil society is declining and the human rights environment deteriorating. Official development assistance for health has stalled, as an inward-looking nationalism has in many places supplanted recognition of the need for global collaboration to address shared challenges. The loss of momentum on global health ignores the urgent need to strengthen health systems to address the steady growth of NCDs, which now account for seven of ten deaths worldwide.

Recent trends in the HIV response are especially concerning. Although the number of new HIV infections and AIDS-related deaths have markedly decreased since the epidemic peaked, little progress has been made in reducing new infections in the past decade. Without further reductions in HIV incidence, a resurgence of the epidemic is inevitable, as the largest ever generation of young people age into adolescence and adulthood. Yet where vigilance and renewed efforts are needed, there are disturbing indications that the world's commitment is waning. Allowing the HIV epidemic to rebound would be catastrophic for the communities most affected by HIV and for the broader field of global health. If the world cannot follow through on HIV, which prompted such an extraordinary global mobilisation, hopes for achieving the ambitious health aims outlined in the SDGs will inevitably dim.

At this moment of uncertainty for the future of the HIV response and for global health generally, the International AIDS Society and *The Lancet* convened an international

Key messages

- The HIV pandemic is not on track to end, and the prevailing discourse on ending AIDS has bred a dangerous complacency and may have hastened the weakening of global resolve to combat HIV
- Existing HIV tools and strategies are insufficient, and although dramatic gains can be made through maximizing existing prevention and treatment strategies, the HIV pandemic is likely to remain a major global challenge for the foreseeable future
- Tens of millions of people will require sustained access to antiretroviral therapy for decades to come, vigilance will be needed to prevent a resurgence of the epidemic as the largest-ever generation of young people age into adolescence and young adulthood, and intensified efforts are required to address HIV among populations and settings that are being left behind
- Allowing the pandemic to rebound after achieving such remarkable progress would not only increase the human and financial costs of HIV, but it would potentially demoralise the global health field and diminish support for similarly ambitious global health undertakings
- A rejuvenated global effort on HIV is essential; to renew and strengthen the global HIV response, the world's impressive commitment to the scaling up of HIV treatment services must be matched by a similarly robust commitment to expanded access to HIV prevention
- The HIV response must make common cause with the broader global health field to herald a new era of global solidarity for health, and specific action is urgently needed to respond to the rapidly rising health toll associated with non-communicable diseases, including taking health into account in the development of public policies of all kinds. HIV services should, where feasible, be integrated with broader health services, in co-located sites where possible, with the aim of improving both HIV-related and non-HIV-specific health outcomes; greater integration of HIV and global health must preserve and build on key attributes of the HIV response, including participatory community and civil society engagement and an ironclad commitment to human rights, gender equality, and equitable access to health and social justice
- The new era of global health solidarity should focus on the development of robust, flexible, people-centred health systems to end communicable diseases, develop effective measures to address the steady rise of non-communicable diseases, achieve universal health coverage, provide coordinated services tailored to the needs of health service users, and effectively address the social and structural determinants of health

Beyond the silos: integrating HIV and global health

Published Online
July 19, 2018
http://dx.doi.org/10.1016/S0140-6736(18)31466-1

See Online/Comment
http://dx.doi.org/10.1016/S0140-6736(18)31434-X and
http://dx.doi.org/10.1016/S0140-6736(18)31441-7

See Online/The Lancet Commissions
http://dx.doi.org/10.1016/S0140-6736(18)31070-5

This week, we publish a new International AIDS Society (IAS)–*Lancet* Commission report: Advancing global health and strengthening the HIV response in the era of the Sustainable Development Goals.[1] Under the leadership of past IAS President, Chris Beyrer, and current IAS President, Linda-Gail Bekker, this Commission engaged an international group of experts in HIV and across other global health domains to examine the future of the AIDS response in the context of a more integrated global health and sustainable development agenda.

The Commission has several key findings. First, the HIV/AIDS community made a serious error by pursuing "the end of AIDS" message. As the Commission shows so clearly, the world is not on track to end AIDS. Although at the peak of the epidemic the incidence of HIV infections began to decrease and AIDS-related mortality fell, there has been no meaningful progress in reducing new infections during the past decade. With 20·9 million people on antiretroviral therapy,[2] the reality is that there is a large community of people today living with HIV. In 2015–16, an estimated 36·7 million to 38·8 million people were living with HIV worldwide.[1] This community will continue to increase in size and, as the burdens of infectious and non-communicable diseases converge, they will need special attention and care throughout their lives.

Second, as the global community revitalises efforts on HIV, more of the same is not enough. In terms of HIV/AIDS funding, current trends point to a worrying decline. A study by the Institute for Health Metrics and Evaluation found that between 2000 and 2015, US$562·6 billion was spent on HIV/AIDS worldwide.[3] Global HIV/AIDS spending peaked at $49·7 billion in 2013, and fell to $48·9 billion in 2015.[3] Development assistance for HIV/AIDS reached its peak in 2012, at $12·0 billion, but has since declined by almost a quarter.[3] This finding is in stark contrast with the upward growth in development assistance for HIV/AIDS between 2000 and 2012.[3] Given how many low-income and middle-income countries are dependent on development assistance for health to fight HIV/AIDS, further reductions will make these countries even more vulnerable in the longer term. Also, it is time to question the notion of AIDS exceptionalism. The Commission acknowledges the exceptionalist approach to HIV might not be sustainable. We strongly agree, and would go further. The AIDS exceptionalism message is now hurting the AIDS response, not helping it.

Third, and perhaps most importantly, it is now time to end the siloed and vertical response to AIDS, and, in the words of the Commission, to "make common cause with the global health field".[1] That conclusion raises many questions about the existing instruments to address the AIDS epidemic—namely, UNAIDS, the Global Fund to Fight AIDS, Tuberculosis and Malaria, and the US President's Emergency Plan for AIDS Relief (PEPFAR). We invite these major institutions that are instrumental in driving the AIDS response to reconsider their purpose and their future. We encourage their respective leaderships to reassess their missions and to move towards a broader global health purpose, while at the same time sharpening their commitments to HIV/AIDS. With an upcoming replenishment in 2019, the Global Fund should continue to push hard for extra funding for HIV/AIDS. But the Global Fund should also think about how to broaden its response to include wider aspects of global health. This approach would support the idea that investing in the AIDS response is a means to building stronger health systems, getting to universal health coverage, and deepening access to services beyond HIV/AIDS.

UNAIDS has made an exceptionally important contribution to the AIDS response. But it is now mired in a leadership controversy and an investigation into its workplace culture.[4,5] On the grounds that no crisis should

The concept of “public goods”

non exclusive: anyone can use them

non competitive: their use will not limit others to use them

Progress of medicine and essential medicines should be considered as global public goods and be accessible to all humans living on our planet

Thank you

stefano.vella@iss.it

CENTRO NAZIONALE PER LA **SALUTE GLOBALE**

ITALIAN CENTER FOR GLOBAL HEALTH