15.232 Business Model Innovation: Global Health in Frontier Markets

Class 1
Introduction
Challenges in reaching scale
Business models

Anjali Sastry Fall 2013

Today's plan

- Welcome! Meet the team
- CFW
 - their business format franchise model
 - role of scale
- Intro to Global Health (in about 15 minutes....)
- Course overview
 - initial assignment
 - mini case study
- Coming up
 - Readings and case for Tuesday
 - Assignment due Thursday 12 September
 - More on you, the project, and teams on Tuesday

CFW

5 minute video

http://www.youtube.com/watch?feature=player_detailpage&v=_oKFv-LL-tU#t=109

- what challenges is CFW designed to address?
- how does CFW address these challenges?

WHAT'S CFW'S BUSINESS MODEL?

The CFW Business Format and Operations

Photo of CFW Clinic removed due to copyright restrictions. See p. 12: "Saving Lives in Africa through Business Format Franchising." Children and Family Welfare Shops.

- A standardized franchise system with training and compliance programs
- Assists franchisees to perform consistently
- Regulates all important functions in the operation of a clinic (especially quality)
- The CFW brand
- Rented storefronts
- Limited menus of authorized services and products
- Easily accessible to patients and customers

Business Format Franchise Organizations Pass the Three Point Test

From ExxonMobil, to Marriott, to Dunkin' Donuts, franchise organizations

- Standardize the business format and operations to ensure consistent quality throughout their networks
- Scale geometrically to thousands of locations serving millions of people each year
- Achieve economies of scale so that the larger they grow the lower the cost to serve each person

Board of Directors – Executive Committee

- Board of Directors with combined total of over 100 years of franchising experience
- Jim Amos CEO, Tasti D-Lite, LLC; Chairman Emeritus, Mail Boxes, Etc.; Former Chairman, International Franchise Association
- Sid Feltenstein Founder & Former Chairman, Sagittarius Brands; Former Chairman, International Franchise Association
- Steve Greenbaum President & CEO of Post Net, a large franchise system from America with more than 200 locations in Southern Africa; Former Chairman, International Franchise Association
- Scott Hillstrom Chairman, The HealthStore Foundation®; Managing Director,
 Premier Mounts
- R. Eric McCarthey
 —Former VP Commercial Execution Group, The Coca-Cola Company
- Michael Seid Managing Director and Founder, Michael H. Seid & Associates, world's leading franchise consulting firm whose clients include Exxon, 7-11, McDonalds, and many of the world's top franchise companies

Screenshot of HealthStore Foundation Statistics for Kenya removed due to copyright restrictions. See http://www.cfwshops.org/statistics.html.

for more information

- http://www.globalgiving.org/projects/franchise-clinics-for-malaria-in-africa/updates/?pageNo=0
- http://www.cfwshops.org/index.html
- contact course team for paper by Michael Seid on business format franchising for social impact

Are scale, health for the most vulnerable and business viability inherently contradictory?

Photo removed due to copyright restrictions.

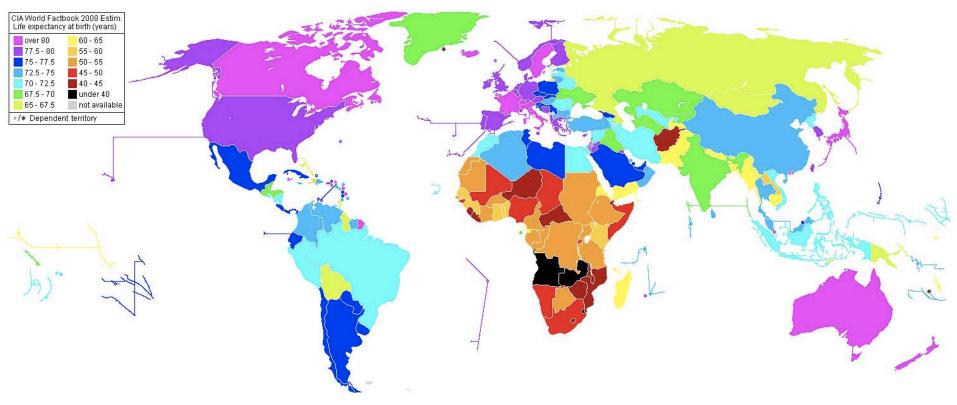
what is global health?

Global health takes on health problems that cross national boundaries, traditionally focusing on those that impose the greatest burden in resource-limited settings. To address the challenges, the field now encompasses a broad range of disciplines. Proponents have argued that it should account for "cultural identities, political organizations, transnational corporations, civil society movements and academic institutions" (Frenk 2010), along with populations.

Recent reframings of global health place interdependence at the center. If the origins and effects of many of today's biggest health problems cross national borders, then global health should be less concerned with geographical location or stage of development, and more concerned with the ways in which health issues are interconnected. This new definition of global health thus aligns with calls for multilateral collaboration and learning that flow both ways across state, sector, and socioeconomic boundaries, and for recognizing "the many contributions of both resource-rich and resource-scarce nations" (Fried et al, 10). In fact, some argue that global health is (or should be) "collaborative trans-national research and action for promoting health for all" (Beaglehole & Bonita, 10). Others note that acknowledging interrelationships requires equity to factor into solutions (Frenk, 10; Piot & Garnett, 10).

Source: Sastry 2011

How long will you live?



Life expectancy at birth 2008 estimates. CIA - The World Factbook, 2008 via Wikimedia Commons. License: CC-BY-SA. This content is excluded from our Creative Commons license. For more information, see http://ocw.mit.edu/help/faq-fair-use/.

Article and interactive map:

http://www.dailymail.co.uk/news/article-2240855/How-does-nation-rank-world-map-life-expectancy.html#ixzz2dy9R5IDx

What's the response?

UN Millennium Goals

- Goal 1: Eradicate extreme hunger and poverty
- Goal 2: Achieve universal primary education
- Goal 3: Promote gender equality and empower women
- Goal 4: Reduce child mortality
- Goal 5: Improve maternal health
- Goal 6: Combat HIV/AIDS, Malaria and other diseases
- Goal 7: Ensure environmental sustainability
- Goal 8: Develop a global partnership for development

IMPLEMENTATION GAP

Global health delivery failures

Mothers to Mothers program courtesy USAID Kenya via Flickr. License: CC-BY-NC.



Intervention

ARVs for PMTCT
Reduce HIV
transmission by 40%

ITNs for Malaria Prevention

Reduce infant mortality by 23%

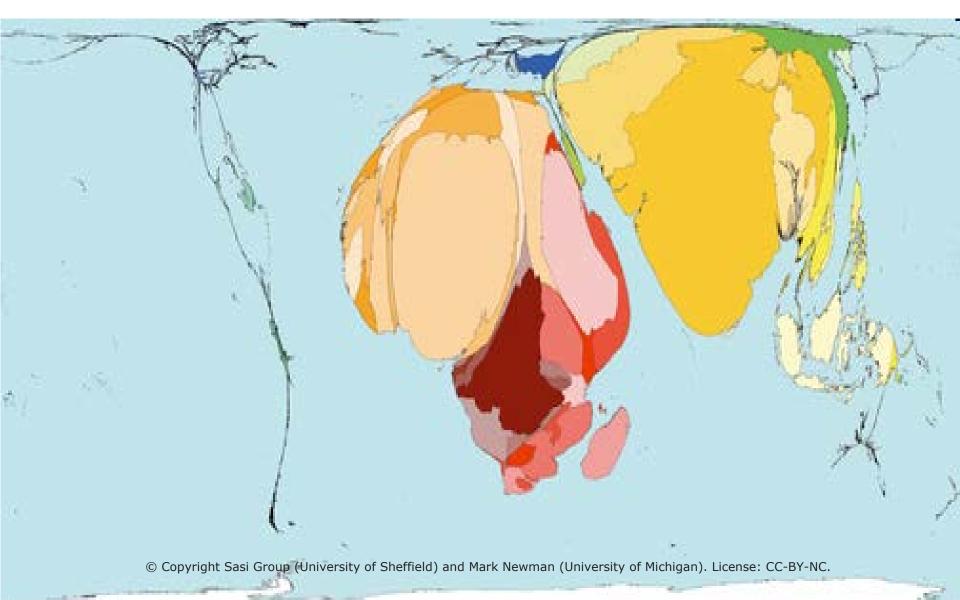
Implementation

9% coverage of women overall and 50% of women who test positive in a clinic are given ARVs for PMTCT

Only 24% of children in endemic areas sleep under nets

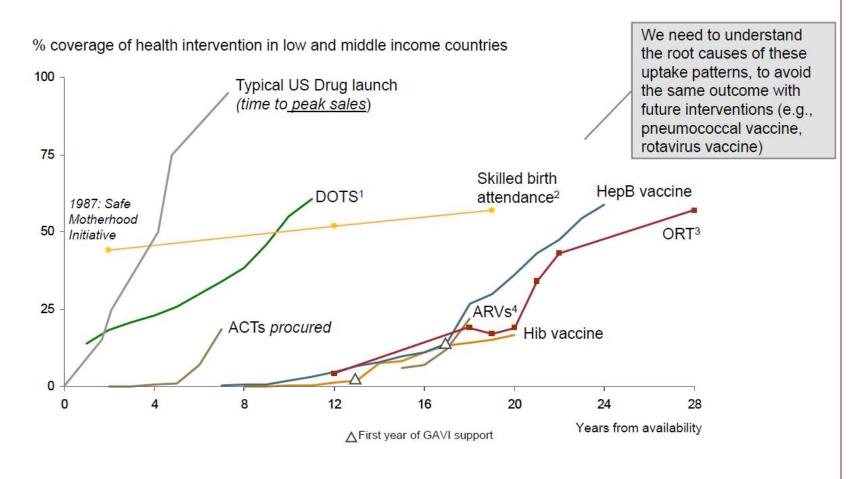
Bed with mosquito netting courtesy Joi Ito via Flickr. License: CC-BY.

Vaccine-Preventable Deaths



Critical health interventions have historically faced slow uptake and low coverage

Gaps in coverage fall disproportionately on the poor, and amplify inequity



^{1.} DOTS represents a new model to deliver older technologies (drugs), so uptake is faster than completely new interventions. 2. Skilled birth attendance is an ancient intervention, but its introduction is measured from 1987, when the Safe Motherhood Initiative was launched. Skilled birth attendance is considerably lower in Sub-Saharan Africa, where it is only 44%.3. Average of 49 countries reporting ORS rates 1999-2005, weighted by population under 15 years old. 4. NRTIs were first approved in 1987, which is used as the start date. NNRTIs were approved in 1997 while PIs were approved in 1995. 6 million people are estimated to need ARVs. 5. ACT coverage is overstated as numbers represent only those procured, not those properly administered. Source: WHO/UNICEF; World Bank; BCG analysis

2008 data, courtesy of the Bill & Melinda Gates Foundation. Used with permission.

BURDEN OF DISEASE

Top 10 Causes of Death, Years of Life Lost from Premature Death, Years Lived with Disability, and Disability-Adjusted Life-Years (DALYs) in the United States, 2010. Table removed due to copyright restrictions. See p. 450, Murray, C. J. L., M. D., D. Phil, and A. D. Lopez, Ph. D. "Measuring the Global Burden of Disease." *NEJM* 369 (2013): 448-57.

Quantifying the Burden of Disease from mortality and morbidity

Disability-Adjusted Life Year (DALY)

Definition

- One DALY can be thought of as one lost year of "healthy" life. The sum of these DALYs across the population, or the burden of disease, can be thought of as a measurement of the gap between current health status and an ideal health situation where the entire population lives to an advanced age, free of disease and disability.
- DALYs for a disease or health condition are calculated as the sum of the Years of Life Lost (YLL) due to premature mortality in the population and the Years Lost due to Disability (YLD) for incident cases of the health condition:

Calculation

• The YLL basically correspond to the number of deaths multiplied by the standard life expectancy at the age at which death occurs. The basic formula for YLL (without yet including other social preferences discussed below), is the following for a given cause, age and sex: YLL = N x L

where:

N = number of deaths

L = standard life expectancy at age of death in years

Because YLL measure the incident stream of lost years of life due to deaths, an incidence perspective is also taken for the calculation of YLD. To estimate YLD for a particular cause in a particular time period, the number of incident cases in that period is multiplied by the average duration of the disease and a weight factor that reflects the severity of the disease on a scale from 0 (perfect health) to 1 (dead). The basic formula for YLD is the following (again, without applying social preferences):

where:

I = number of incident cases

DW = disability weight

L = average duration of the case until remission or death (years)

Global DALYs Caused by the 25 Leading Diseases and Injuries in 1990 and 2010. Table removed due to copyright restrictions. See p. 451, Murray, C. J. L., M. D., D. Phil, and A. D. Lopez, Ph. D. "Measuring the Global Burden of Disease." *NEJM* 369 (2013): 448-57.

Screenshot removed due to copyright restrictions. See http://www.healthmetricsandevaluation.org/gbd/visualizations/country.

once you know DALYs, you can draw on it in many different ways



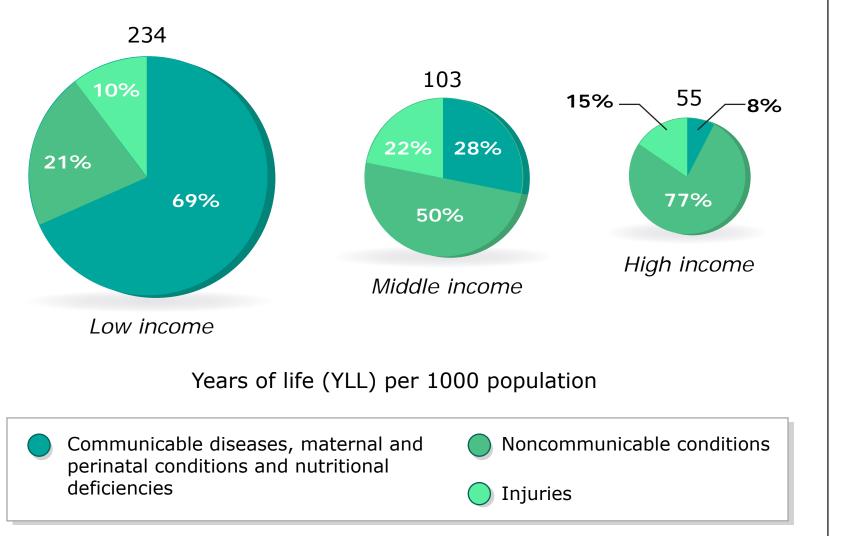


Image by MIT OpenCourseWare.

Source data: World Health Organization. "World Health Statistics 2010." WHO Press, 2011, pg. 60.

Age distribution of burden of disease by country income group, 2004

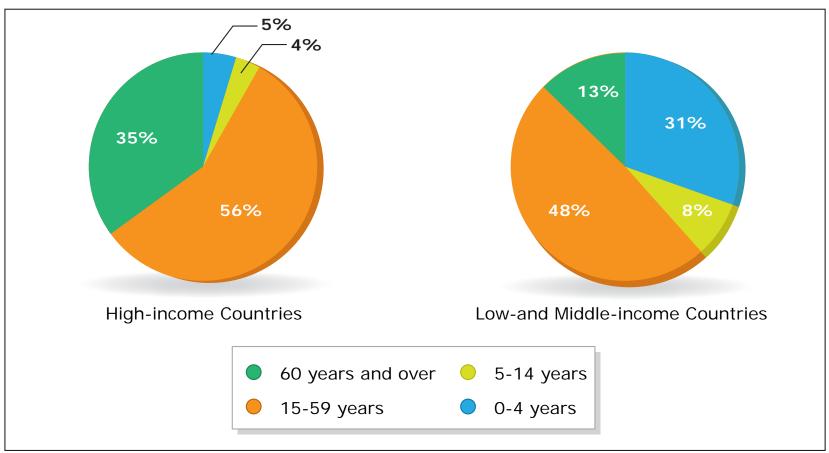
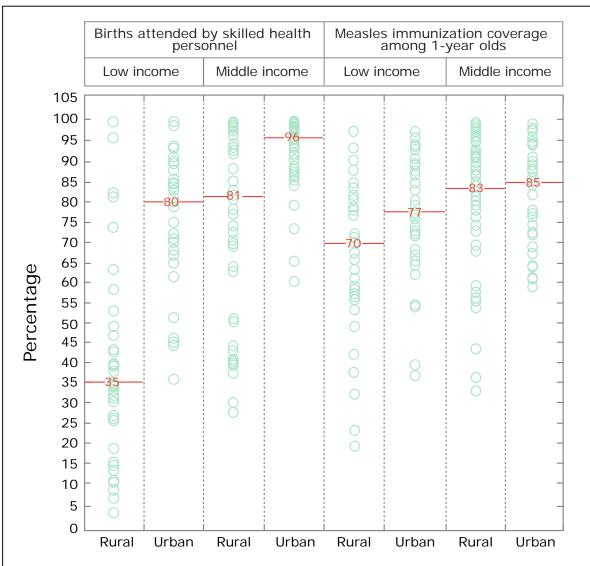


Image by MIT OpenCourseWare.

Source data: World Health Organization. "The Global Burden of Disease, 2004 Update." WHO Press, 2004, pg. 42.

Urban-rural differences, 2000-2008



Urban-rural differences in the coverage of skilled attendant at birth and measles immunization in low-income and middle-income countries-2000-2008.

WORLD HEALTH STATISTICS

Image by MIT OpenCourseWare.

Source data: World Health Organization. "World Health Statistics 2010." WHO Press, 2011, pg. 142.

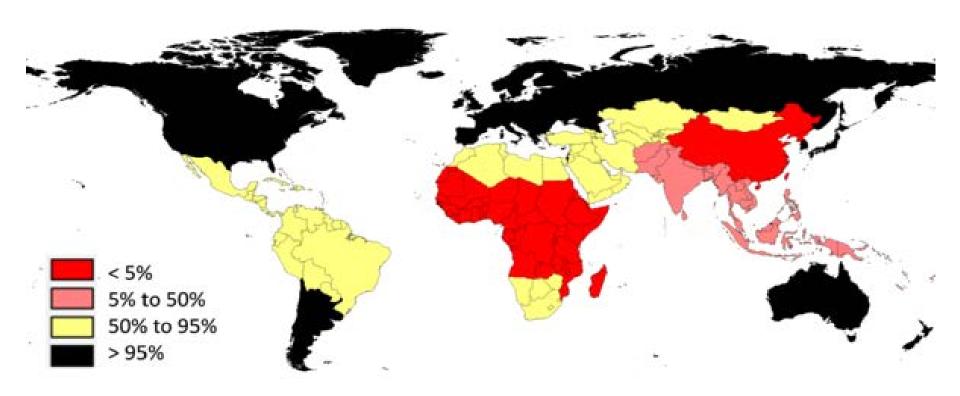
WHO, 2010

By country income levels

Leading causes of burden of disease (DALYs), countries grouped by income, 2004. Table removed due to copyright restrictions. See World Health Organization. "The Global Burden of Disease, 2004 Update." WHO Press, 2004, pg. 44.

Civil registration coverage of cause of death (%), 2005-2011. Map removed due to copyright restrictions. See http://gamapserver.who.int/mapLibrary/Files/Maps/Global_CivilRegistrationDeaths_2005_2011.png.

Proportions of deaths covered by vital registration (by GBD-2010 regions)



Courtesy Byass, P., et al. 2013. License CC-BY. http://www.plosmedicine.org/article/info:doi/10.1371/journal.pmed.1001477.

Byass P, de Courten M, Graham WJ, Laflamme L, et al. (2013) Reflections on the Global Burden of Disease 2010 Estimates. PLoS Med 10(7): e1001477. doi:10.1371/journal.pmed.1001477

We've touched on diagnosis. But what is needed to treat or prevent?

HEALTHCARE IS MISSING NEEDED INPUTS

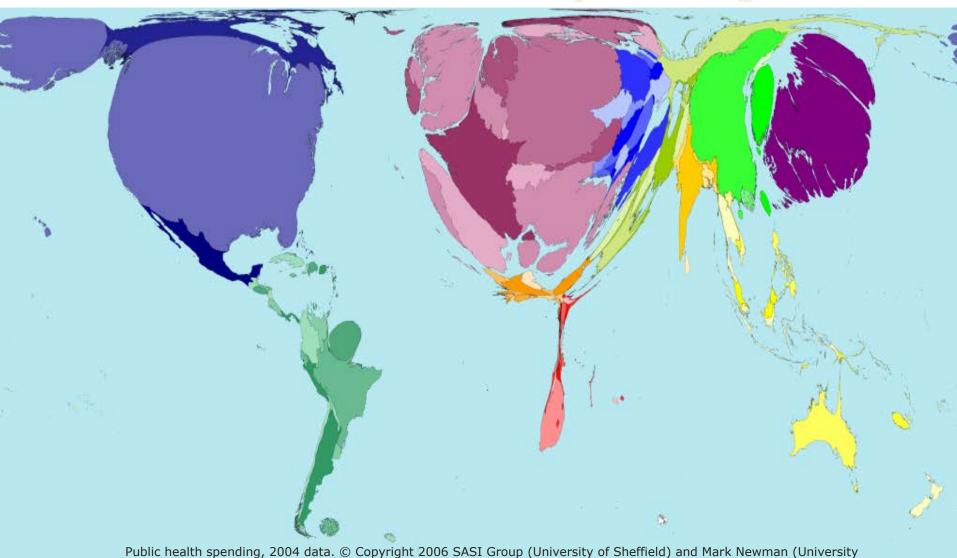
Doctors per person

- In Massachusetts? 4.69 (nonfederal) per 1,000
- In Malawi? 0.02

Infographic removed due to copyright restrictions. Source: EuroRSCG Amsterdam, Netherlands. "Doctors of the World, Netherlands: Perspective."

IS IT ABOUT ECONOMIC INPUTS?

Public Health Spending



of Michigan). Used with permission. For high res images, see: http://www.worldmapper.org/map_list.html.

Health Expenditure Per Capita (PPP; International \$, 2010)

World map depicting health expenditure per capita removed due to copyright restrictions.

Source: Kaiser Family Foundation. "Health Expenditure Per Capita (PPP; International \$)."

Quick detour to look a the US

Infographic removed due to copyright restrictions.

Source: Kane, Jason. "Health Costs: How the U.S. Compares With Other Countries." October 22, 2012. *PBS Newshour The Rundown* (blog).

Infographic removed due to copyright restrictions.

Source: Kane, Jason. "Health Costs: How the U.S. Compares With Other Countries."

October 22, 2012. PBS Newshour The Rundown (blog).

Infographic removed due to copyright restrictions.

Source: Kane, Jason. "Health Costs: How the U.S. Compares With Other Countries." October 22, 2012. *PBS Newshour The Rundown* (blog).

Table removed due to copyright restrictions. Health Status of the United States and Rank among the 29 Other OECD Member Countries. See p. 1222, Schroeder, S.A., M.D. "We Can Do Better -- Improving the Health of the American People." *NEJM* 357 (2007): 1221-8.

2011 per capita spending on health (PPP Int \$)

Low-Income Countries

- Government spending:\$27
- Total spending: \$68

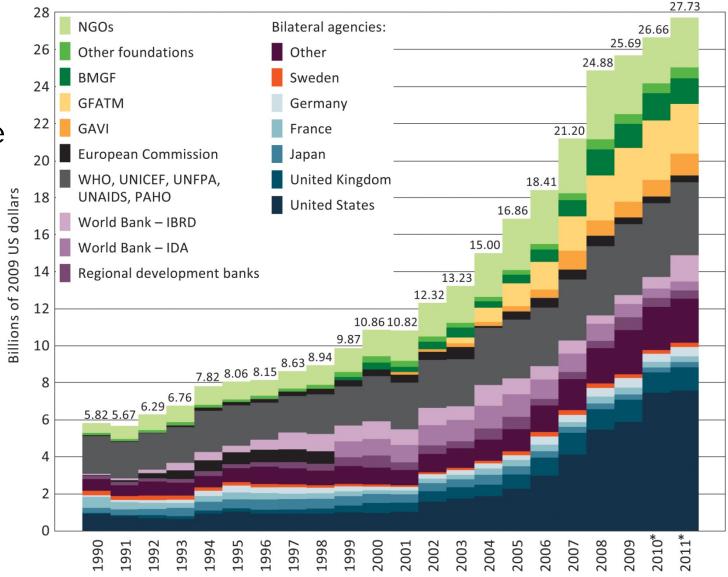
High-Income Countries

- Government spending: \$3,240
- Total spending: \$5,384

Comparing the US and Malawi

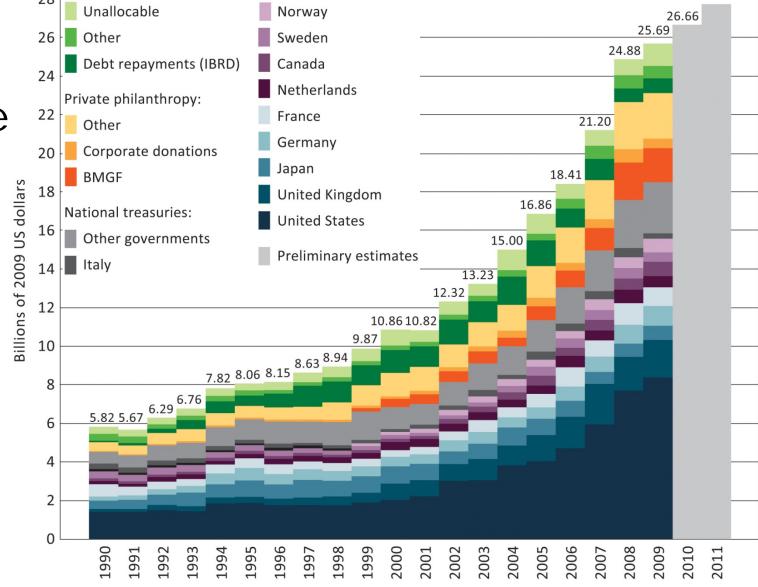
	Malawi	US		
% GDP on health	9.1	15.2		
Percapita hlth spend (PPP \$)	49	7,164		
Pvt spend as % of total	39.4	52.2		
Children/woman	5.5	2.1		
Gross nat'l income per capita (PPP \$)	760	45,640		
% population living on under PPP\$1/day	73.9	-		
Note 2008 & 2009 data. Source: http://www.who.int/whosis/whostat/2011/en/index.html				

DAH by channel of assistance 1990 to 2011



Institute for Health Metrics and Evaluation (IHME). Financing Global Health 2011: Continued growth as MDG deadline approaches. Seattle, WA: IHME, University of Washington, 2012. Available at http://www.healthmetricsandevaluation.org/news-events/multimedia/presentation/financing-global-health-2011-continued-growth-mdg-deadline-appro/. Used with permission.





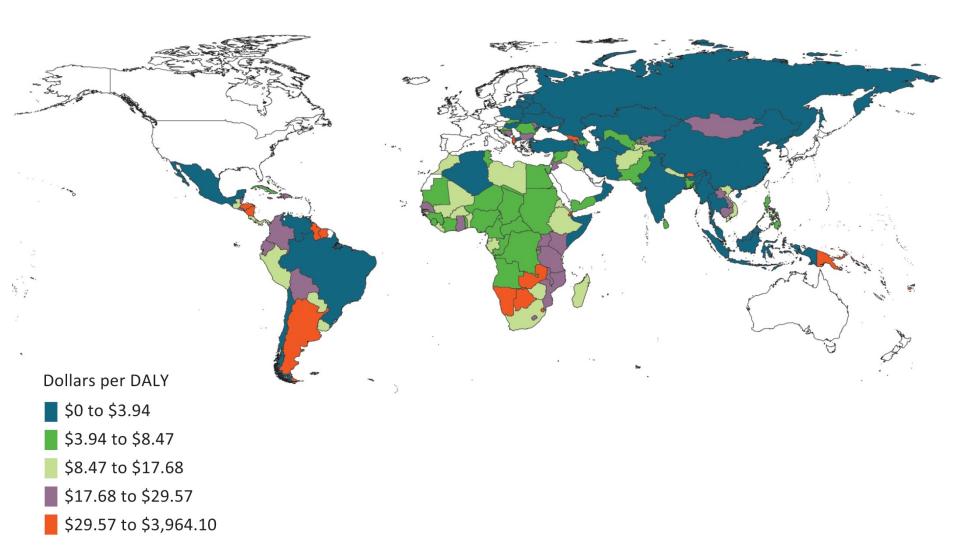
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Top 15 NGOs in overseas health expenditure, 2005 to 2008

Rank		Overseas health expenditure, adjusted	Overseas health expenditure, unadjusted	Overseas expenditure, unadjusted	Percent of revenue from private sources	Percent of revenue from in-kind contributions
1	Population Services International	1,265.14	1,265.21	1,347.93	14	0
2	Food For The Poor	706.83	2,557.64	4,196.77	97	89
3	Catholic Relief Services	665.51	670.36	2,306.70	40	1
4	Management Sciences for Health	581.94	581.94	585.98	0	0
5	PATH	501.23	505.97	518.54	90	1
6	United Nations Foundation	466.08	497.42	637.84	91	8
7	World Vision	355.80	472.89	3,178.42	76	30
8	Pathfinder International	324.45	325.97	325.99	23	1
9	Elizabeth Glaser Pediatric AIDS Foundation	318.02	319.47	322.54	18	1
10	MAP International	293.96	1,398.24	1,398.67	100	97
11	Brother's Brother Foundation	274.88	1,460.07	2,011.33	100	99
12	Academy for Educational Development	265.03	267.44	1,060.58	12	1
13	Save the Children	246.24	254.86	1,428.72	53	4
14	CARE	241.20	241.92	2,370.40	27	0
15	Project HOPE	229.16	547.28	595.38	91	71

Institute for Health Metrics and Evaluation (IHME). Financing Global Health 2011: Continued growth as MDG deadline approaches. Seattle, WA: IHME, University of Washington, 2012. Available at http://www.healthmetricsandevaluation.org/news-events/multimedia/presentation/financing-global-health-2011-continued-growth-mdg-deadline-appro/. Used with permission.

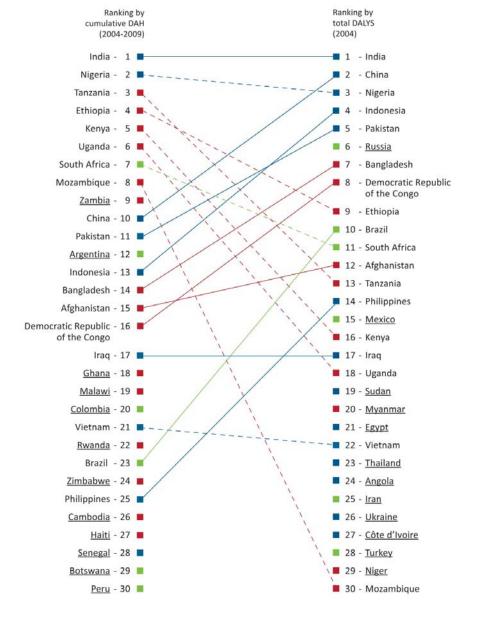
Total DAH per all-cause DALY, 2004 to 2009



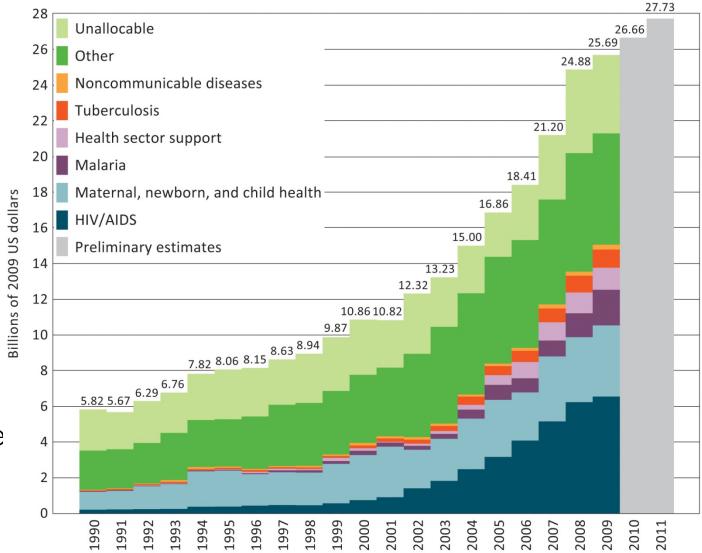
Institute for Health Metrics and Evaluation (IHME). Financing Global Health 2011: Continued growth as MDG deadline approaches. Seattle, WA: IHME, University of Washington, 2012. Available at http://www.healthmetricsandevaluation.org/news-events/multimedia/presentation/financing-global-health-2011-continued-growth-mdg-deadline-appro/. Used with permission.

Top 30 country recipients of DAH, 2004 to 2009, compared with top 30 countries by all-cause burden of disease, 2004

- Upper-middle-income countries
- Lower-middle-income countries
- Low-income countries



DAH for HIV-AIDS; maternal, newborn, and child health; malaria; health sector support; TB; and noncommunicable disease



Institute for Health Metrics and Evaluation (IHME). Financing Global Health 2011: Continued growth as MDG deadline approaches. Seattle, WA: IHME, University of Washington, 2012. Available at http://www.healthmetricsandevaluation.org/news-events/multimedia/presentation/financing-global-health-2011-continued-growth-mdg-deadline-appro/. Used with permission.

CAVEAT: Spending does not equal health outcomes See gapminder!

Now go watch this!

Reducing child mortality – a moral and environmental imperative

[15 minutes run time] September 27, 2010

Many countries are making good progress towards MDG4 and it's time to stop talking about Sub-Saharan Africa as one place.

So, it's not all bad news—and Rosling makes stats and data compelling!

maternal death

Chance of dying in childbirth

- in Boston
 - 1 in 4,800
- In Burundi
 - 1 in 16
- in Austria
 - 1 in 21,500
- world
 - 1 in 92

A women's lifetime risk of dying from pregnancy-related complications:

Niger: 1 in 7

Ireland: 1 in 48,000

WHAT IS MOST NEEDED?

MORE MONEY, MORE MEDS, MORE HEALTH WORKERS, MORE DOCS

CLEVER NEW TECHNOLOGIES

NEW APPROACHES, SMARTER
OPERATIONAL MODELS, BETTER
DESIGN, BETTER SYSTEMS, BETTER
PATIENT EXPERIENCE, MORE
PREVENTION

what do we see when we get it right?

Fewer stockouts

Lower cost of care

Less loss to follow up

Better use of primary (vs. secondary, tertiary) care

Spread and scale up of what works

Innovations and inventions that deliver real value to patients

start here for WHO data

- http://www.who.int/features/factfiles/global_burden/facts/en/index.html Ten key global health facts from the World Health Organization--go here to check your basic knowledge
- http://www.who.int/gho/en/ Global Health Observatory is WHO's portal for data and analyses for monitoring the global health situation. Includes data repository, statistical reports, and more. Many of the items below are linked here too.
- http://gamapserver.who.int/mapLibrary/app/searchResults.aspx Map gallery
- http://www.who.int/healthinfo/morttables/en/index.html WHO Mortality Database:
 Tables, sources of data, definition of "underlying cause of death", cause-of-death classification.
- http://www.who.int/whosis/whostat/en/index.html WHO's annual World Health Statistics reports present the most recent health statistics for the 193 Member States.
- http://www.who.int/healthinfo/global_burden_disease/en/index.html Global Burden of
 Disease analysis provides a comprehensive and comparable assessment of mortality and
 loss of health due to diseases, injuries and risk factors for all regions of the world. The
 overall burden of disease is assessed using the disability-adjusted life year. includes
 documentation of methods and data sources (but also see IHME)
- http://www.who.int/mediacentre/factsheets/en/ handy starting point for all sorts of factsheets.
- http://www.who.int/publications/en/ for publications and reports. The World Health Report is their annual report and expert assessment of global health including statistics.
 - Report focuses on a particular theme every year: Health Systems Financing in 2011.

Some more data sources

- http://data.worldbank.org/topic/health
- https://www.cia.gov/library/publications/the-world-factbook/
- http://www.dcp2.org/page/main/Home.html The Disease Control Priorities Project is an ongoing effort to assess disease control priorities and produce evidence-based analysis and resource materials to inform health policymaking in developing countries.
- http://globalhealth.kff.org/ Kaiser Family Foundation's US Global Health Policy portal offers the latest data and information on the US role in global health along with useful background information and overviews.
- http://www.globalhealth.gov/ The United States Department of Health and Human Services'
 Office of Global Affairs promotes the health and well-being of Americans and of the world's
 population by advancing global strategies and partnerships and working with US agencies in the
 coordination of global health policy. Look for links to non-communicable diseases including
 HIV/AIDS, malaria, and tuberculosis, as well as maternal and child health.
- http://www.un.org/en/globalissues/health/ the United Nations' starting point on global health provides a good introductory overview.
- http://www.cdc.gov/globalhealth/ The United States Centers for Disease Control works with international organizations in more than 60 countries on a variety of focus areas; look for information on focal diseases and medical conditions via their "programs and topics" link: http://www.cdc.gov/globalhealth/programs/.
- http://www.healthmetricsandevaluation.org/tools/data-visualizations The IHME conducts impactful studies of funding flows and disease burdens.
- http://www.gapminder.org/
- http://www.worldmapper.org/textindex/text_index.html
- http://www.measuredhs.com/

Great places to learn more

- http://blogs.plos.org/globalhealth/about/
- http://www.pbs.org/newshour/topic/globalhealth/
- http://www.theguardian.com/global-development-professionalsnetwork/global-health Global Development Professionals Network
- http://www.bvgh.org/Biopharmaceutical-Solutions/Global-Health-Primer.aspx BIO Ventures for Global Health is a non-profit organization which aims to accelerate the development of novel drugs, vaccines, and diagnostics coming from the biotechnology industry that address the unmet medical needs of the developing world. Their Global Health Primer is designed to inform industry research and development to spur innovations that are desperately needed for neglected tropical diseases.
- http://www.scidev.net/global/health/ This site is a good source for news related to science and development. Use the "Health" dropdown to research the latest news on specific disease areas.

....WE CAN'T ASSESS BUSINESS MODELS FOR SCALE AND SUSTAINABILITY WITHOUT KNOWING SOME BASICS

learn more about a selected global health need via your first assignment, due in a week.

about this course

Date	Торіс	Case	Readings [optional]	Due
00/05	Intro to global health; Challenges in reaching scale; Business models	CFW shops (PBS video)	Kim & Bradach Rottenburg & Morris [Magretta] [Bradach]	
09/10	Cooperative approaches as growth strategies In-class rapid mixer	Hello Healthcare* (Ivey case)	Guest Johnson, Christensen & Kagerman	
3 09/12 Th	Operations; Other growth strategies	Riders for Health* (Stanford case); optional videos	Yadav, Stapleton & Van Wassenhove	2-page individual managerial briefing paper Team selection
4 09/17 Tu	Business thinking, innovation, and scale	Avahan India AIDS Initiative (GHD case)	Kim, Porter & Farmer Porter [Porter] [Sgaier et al] [Rhatigan et al]	
5 09/19 Th	Public-private collaboration	SMS For Life A* (IMD case)	Kania & Kramer [Hanleybrown, Kania & Kramer] [Sekhri, Feachem & Ni] [Jakobsen, Wang & Mwaka]	
6 09/24 Tu	Philanthropy	ТВА	Gupta Other TBA [Murphy]	Team memo on value measure, value chain & value proposition
7 09/26 Th	Systems thinking	Aravind (TED video)	Rangan & Thulasiraj	
	Franchise models	Living Goods* (ICMR case) Other TBA	Beck, Deedler & Miller Other TBA [Pindyk] [Bishai et al]	Draft Executive Summary & Deck
9 10/03 Th	Organizational sustainability and scale	Narayana Hrudayalaya A* (HBS case)	Prahalad & Mashelkar	Meet with TA to review Executive Summary & Deck
10/00	Presentations & expert response, discuss links to learning & innovation theme	Mini-case executive summaries	Milway & Saxton Seelos & Mair	
11	Presentations & expert response, discuss transfer / reverse innovation theme	Mini-case executive summaries	Govindrajan & Trimble* Onie, Farmer & Behfouz [dePasse & Lee] [frugal innovation collection]	
12	Wrap-up	TBA	ТВА	Updated Final Exec

mini case study

ColaLife (Zambia and elsewhere)

Embrace (India and global)

Medicall Home (Mexico and US)

Medic Mobile (South Africa and global)

ADDOs / MSH (Tanzania)

SughaVazhvu (India)

D-tree International (Tanzania and elsewhere)

Blue Star (various locations)

Aprofe (Ecuador)

Vecna Cares (US and global)

LifeNet (Burundi)

Clinics4all (South Africa and elsewhere)

The Access Project (Rwanda)

Past studies:

pro mujer, Bolivia, Nicaragua, Peru, Mexico, Argentina sana mobile, US based, in Phillippines and elsewhere

World Health Partners, India

Hygeia Community Health Plan, Nigeria

HealthPoint Services, India

Jaipur Foot, India

Magrabi Hospitals, Saudi Arabia, Egypt, Yemen

Arogya Parivar, India

Maternova, US-based, global

MedPlus Clinics, India

options for team mini case studies

Heart Institute of the Caribbean (Jamaica)

Nyaya Health (Nepal)

Smile Train (India)

Sproxil (Nigeria)

Living Goods (Uganda)

Mi Farmacita Nacional (Mexico)

Village Health Works (Burundi)

Shining Hope for Communities (Kenya)

LifeBox (US/UK based, global)

Penda Health (Kenya)

Jacaranda (Kenya)

Vaatsalya Hospitals (India)

VisionSpring (US-based, global)

start on your assignment today!

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