Global Health: opportunities to make a difference

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What is Global Health?

Global Health

“...an area for study, research, and practice that places a priority on improving health and achieving equity in health for all people worldwide. Global health emphasizes transnational health issues, determinants, and solutions, involves many disciplines within and beyond the health sciences, and promotes interdisciplinary collaboration; and is a synthesis of population based prevention with individual-level clinical care.”
Why care about global health?

• Regardless of any definitions, in its broadest sense, global health is about making the world a healthier place.
  • Each of us can choose to make a contribution here, regardless of our discipline, training, or specialization.

• There is an ethical imperative to ensure basic health as a fundamental right for all – but this is far from reality for millions

• Globalization has truly made the world flatter, and communication tools & travel have shrunk distances/time

• Health is tightly linked with economic and social development in a highly interdependent world
We have seen big gains in global health...
We have seen big gains in global health...

PROGRESS AGAINST POLIO

http://edition.cnn.com/2015/08/19/health/nigeria-polio-eradication-vaccine/index.html#b08g25t20w15
But inequities and disparities persist
300,000 mothers and 6 million children die around the time of birth, largely in poorer countries.
DESPITE PROGRESS, THE LIFETIME CHANCE OF A WOMAN DYING AS A RESULT OF PREGNANCY IS SUBSTANTIAL AND FAR GREATER IN LOWER INCOME SETTINGS

Global Malaria Burden

- Estimated that a child in Africa has between 1.6 and 5.4 episodes of malaria / year
Global TB Incidence

Highest rates in Africa, linked to high rates of HIV infection
~80% of HIV+ TB cases in Africa
TB incidence rates in Nunavut, 2001-2011
Inequities underlie major differences in disease burden
The 10 leading causes of death by country income group (2012)

Top 10 causes of death in low-income countries 2012

- Lower respiratory infections: 91
- HIV/AIDS: 65
- Diarrhoeal diseases: 53
- Stroke: 52
- Ischaemic heart disease: 39
- Malaria: 35
- Preterm birth complications: 33
- Tuberculosis: 31
- Birth asphyxia and complications: 29
- Protein energy malnutrition: 27

Top 10 causes of death in high income countries 2012

- Ischaemic heart disease: 156
- Stroke: 95
- Trachea, bronchus, lung: 49
- Alzheimer disease and other dementias: 42
- COPD: 31
- Lower respiratory infections: 31
- Colon rectum cancers: 27
- Diabetes mellitus: 20
- Hypertensive heart disease: 20
- Breast cancer: 16

Figure 2: The risk transition. Over time, major risks to health shift from traditional risks (e.g. inadequate nutrition or unsafe water and sanitation) to modern risks (e.g. overweight and obesity). Modern risks may take different trajectories in different countries, depending on the risk and the context.
Traditional risks still dominate in many populations

• 36 per cent of the world’s population – 2.5 billion people – lack improved sanitation facilities, and 768 million people still use unsafe drinking water sources.
  • Despite 6 billion mobile-phone subscriptions, only 4.5 billion people have access to a flush toilet.

• Nearly a third of young children are malnourished in India
Poor Sanitation in India May Afflict Well-Fed Children With Malnutrition

By GAVIN HARRIS | JULY 15, 2014

SHEOHAR DISTRICT, India — He wore thick black eyeliner to ward off the evil eye, but Vivek, a tiny 1-year-old living in a village of mud huts and diminutive people, had nonetheless fallen victim to India’s great scourge of malnutrition.

His parents seemed to be doing all the right things. His mother still breast-fed him. His family had six goats, access to fresh buffalo milk and a hut filled with hundreds of pounds of wheat and potatoes. The economy of the state where he lives has for years grown faster than almost any other. His mother said she fed him as much as he would eat and took him four times to doctors, who diagnosed malnutrition. Just before Vivek was born, in this green landscape of small plots and grazing water buffalo near the Nepali border, the family even got electricity.

Poor Sanitation Linked to Malnutrition in India

New research on malnutrition, which leads to childhood stunting, suggests that a root cause may be an abundance of human waste polluting soil and water, rather than a scarcity of food.

Sources: Demographic and Health Surveys, USAID (stunting data, latest year available); World Health Organization, Unicef (defecation data, 2012)

Hannah Fairfield/The New York Times

India’s Malnutrition Shame

It requires a far wider spectrum of interventions than mere clinical management.

While India Is Booming, Mothers Go Hungry

In one of the most perplexing public health questions, Indian mothers tend to be less healthy than their counterparts in some of the poorest countries in Africa, a new study has found.
Malnutrition and TB in India

Undernutrition and the incidence of tuberculosis in India: National and subnational estimates of the population-attributable fraction related to undernutrition

ANURAG BHARGAVA, ANDREA BENEDETTI, OLIVIA OXLADE, MADHUKAR PAI, DICK MENCHIES

Nutritional Status of Adult Patients with Pulmonary Tuberculosis in Rural Central India and Its Association with Mortality

Anurag Bhargava, Madhuri Chatterjee, Yogesh Jain, Biswamirtha Chatterjee, Anju Kataria, Madhavi Bhargava, Raman Kataria, Ravi D'Souza, Rachna Jain, Andrea Benedetti, Madhukar Pai, Dick Menzies

Can Social Interventions Prevent Tuberculosis? The Papworth Experiment (1918–1943) Revisited

Anurag Bhargava, Madhukar Pai, Madhavi Bhargava, Ben J. Marais, and Dick Menzies
We really, truly live in a flat, highly interconnected world

"We live in a time when the incubation period of every known human pathogen is longer than the longest intercontinental flight” A Jha, Harvard

http://www.mediacity.fi/blog/keynote-x-media-lab-2013
How a flat world impacts health

Easy transmission of infectious threats and epidemics

Health affects of global climate change and environmental disasters

Immigration, war, and conflicts pose continuous challenges

Trade, communications, and socio-economic development can cause positive and negative health effects
Global spread of H1N1 influenza

Throughout March and April 2009, international air travelers departing from Mexico were unknowingly transporting a novel influenza A (H1N1) virus to cities around the world. In March and April, a total of 2.35 million passengers flew from Mexico to 1018 cities in 164 countries.

Indian Woman With Tuberculosis Sets Off Scare in 3 US States

Diaspora | Press Trust of India | Updated: June 10, 2015 15:18 IST

Sports: India vs Iran
FIFA World Cup Qualifier Live Scores

Movies: Sonam, You Are Not Alone: 10 Bollywood Celebs Trolled on Twitter

Representation Image: (Thinkstock)
“the global response to the rise of new pathogens has continued to be limited, uncoordinated, and dysfunctional. From SARS to MERS, H5N1 to H1N1 to H7N9, the story has been similar. Poor nations are unable to detect new diseases quickly and bring them swiftly under control. Rich nations generally show only marginal interest in outbreaks until the microbes seem to directly threaten their citizens, at which point they hysterically overreact. Governments look after their own interests, cover up outbreaks, hoard scarce pharmaceutical supplies, prevent exports of life-saving medicines, shut borders, and bar travel.”
Panic over Ebola

WHO asks Canada to justify visa ban for residents of Ebola-affected countries

HELEN BRANSWELL
TORONTO — The Canadian Press
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The World Health Organization has asked Canada to justify its decision to limit travel to this country from the West African countries combating Ebola.

The federal government announced Friday it would not issue new travel visas for residents or citizens of countries with widespread and persistent Ebola transmission. As well, it has put a halt on the processing of permanent residency visas for people from those countries.
Health effects of climate change

Air pollution is not a problem confined to some countries


How have countries responded?

Alma Ata, MDGs, and now SDGs
The primary health care movement

Alma Ata, 1978

The International Conference on Primary Health Care calls for urgent action by all governments, all health and development workers, and the world community to protect and promote the health of all the people of the world by the year 2000.
MDGs: 2000 - 2015

1. Eradicate extreme poverty and hunger
2. Achieve universal primary education
3. Promote gender equality and empower women
4. Reduce child mortality
5. Improve maternal health
6. Combat HIV/Aids, malaria and other diseases
7. Ensure environmental sustainability
8. Develop a global partnership for development
On September 25th 2015, 193 world leaders will commit to 17 Global Goals to achieve 3 extraordinary things in the next 15 years. End extreme poverty. Fight inequality & injustice. Fix climate change.

http://www.globalgoals.org/
While globalization poses major challenges, it also offers exciting opportunities...
How can you have a global health impact?
Education/expertise can help make an impact

• Medicine?

• Public health?

• Nursing?

• Allied health sciences?

• Engineering?

• Management/MBA? Law?

• Basic science research?
Global health goes well beyond medical/clinical care... and several players need to be involved
HPV vaccine: discovery to scale-up
International health: old paradigm
Global health: new paradigm
Life-saving innovations can come from everywhere...
Odón device
Oral rehydration salts
Kangaroo mother care
Training lay health workers to treat childhood pneumonia
So, no matter what specific field you pursue and where you work, you can make an impact!
Ingredients for success in global health

• **Excellence**: You have to excel in your chosen field

• **Optimism** is a key quality – you need to believe that you *can* make a difference.

• **Perseverance** is another critical quality – it is not easy to improve health in many resource-poor settings, and we need to be in it for the long haul.

• **Team work** is obviously crucial. Large scale impact can never be achieved by individuals.
William Foege, MD, MPH
Emeritus Presidential Distinguished Professor of International Health
Rollins School of Public Health
Senior Fellow, Bill and Melinda Gates Foundation

"What Makes Global Health and the People Who Practice It Special?"
Thank you

http://www.mcgill.ca/globalhealth/