Dimensions of Global Health

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Francis Barchi MS, MBE

DFCM - September - 2010
HAIR MIGRATION PATTERN OF THE MALE PROFESSORIAT.

-5 YEARS B.T. (BEFORE TENURE)
10-20 YEARS A.T. (AFTER TENURE)
BRIEF FLIRTATION WITH FACIAL HAIR DURING GRAD SCHOOL

WWW.PHDCOMICS.COM
Global Health - Jefferson

- Global Health Working Group
- Inventory of current activities
- Courses
- Certificate Global Health
- ER – Global Health Fellowship
PROJECTS

• Education
  – AIDS/HIV
  – Nutrition
  – Prenatal
  – Family Planning
• EWB - Sanitation
• Malnutrition
• Income Generation
• Mushroom Project
• Elderly Visits
• Survey
• Continuity

Meeting about the projects with the Health Group.

Jen with some of the children.
Jamaica
Botswana
Immigrant and Refugee Health

• Center for Refugee Health
• Karin, Iraq, Eritrea, Nepal, Cuba, Haiti

67 Languages = Philadelphia School District; 87 in Upper Darby

GLOBAL Philadelphia
PBH 514 - Objectives

COURSE DESCRIPTION

• Introduces students to global health as a multi-dimensional concept shaped by biological, behavioral, societal and environmental processes.
COURSE LEARNING OBJECTIVES

• Key public health concepts
• The determinants of health and risk factors for conditions of importance to global health.
• The burden of disease in various regions of the world
• The multi-directional links between health and social and economic factors.
• The fundamental analytical tools needed to make a critical assessment of the health status of people in various countries
• The key actors in global health
• Future challenges in global health.
Why Study Global Health

• There has been important progress in life expectancy ... yet ....
• 10,000 babies die every day in the world before they are four weeks old
• 529,000 women a year die in childbirth
• More than 750,000 children die every year of measles
• 1.6 million people die in the world every year of TB

Why should we care?
We Should Care Because

- Diseases do not respect boundaries
- There are ethical and justice issues
- Health and disease are closely linked with economic and social development
- Global security and “freedom” are dependent on health
Additional Reasons to Study Global Health

• Health disparities
• Link between health and development
• Nature of many global health concerns
• Need for different sectors to work together
• To learn about low-cost but highly effective interventions
America’s Commitment

http://www.globalhealth.gov/index.html
http://www.pepfar.gov/ghi/index.htm
Alma-Alta: 30 years on: revolutionary, relevant, and time to revitalize

Definitions

• Health

• Public Health

• Global Health – the application of the principles of public health to health problems and challenges that transcend national boundaries and to the complex array of global and local forces that affect them
Critical Global Health Concepts

• The determinants of health
• The importance of culture to health
• The global burden of disease
• Risk factors
Additional Concepts of Importance

• The demographic and epidemiological transitions

• The organization and functions of health systems

• Links between health and education, and health, equity, poverty, and development
Key Terms

• Developed and developing countries

• Classification of low-income, lower and upper middle-income, and high-income countries

• World Bank regions

• The Millennium Development Goals
Selected Central Messages

• Health, human development, labor productivity and economic development are linked
• There are a variety of health determinants including genetic make-up, sex, social status, income, education, knowledge of health behaviors
• Great progress in health in the last 50 years, but progress has been uneven and large gaps remain
• There are enormous disparities in health
• Countries can achieve high levels of health, even without high levels of income.
Commission on Social Determinants of Health

http://www.who.int/social_determinants/en/

Key Themes
WHO

• Commission on Social Determinants of Health
  – Closing the gap in a generation
  – Health equity through action on the social determinants of health
  – “Reducing health inequities is, for the Commission, an ethical imperative. Social injustice is killing people on a grand scale”
WHO

• Commission on Social Determinants of Health

• Three overarching recommendations
  – Improve daily living conditions
  – Tackle the inequitable distribution of power, money and resources
  – Measure and understand the problem and assess the impact of action
Life Expectancy: Where You Live Matters

Where we live dramatically affects our health—for better or for worse. Community attributes—including the availability of safe and healthy housing, access to nutritious food and safe places to exercise—can have a direct impact on our opportunity to lead long and healthy lives.
http://www.ted.com/talks/hans_rosling_shows_the_best_stats_you_ve_ever_seen.html
The Global Burden of Disease

• Causes of death for low- and middle-income countries:
  - Non-communicable diseases (54 %)
  - Communicable diseases (36%)
  - Injuries (10 %)
• Causes of death for high-income countries:
  - Non-communicable diseases (87%)
  - Injuries (7.5 %)
  - Communicable diseases (5.7%)
Deaths and Disease within Countries Vary By

- Gender
- Ethnicity
- Socioeconomic Status
TABLE 2-4 The Ten Leading Causes of the Burden of Disease in Low- and Middle-Income Countries by Region, 2001

<table>
<thead>
<tr>
<th>Region</th>
<th>East Asia and Pacific</th>
<th>Percentage of total DALYs</th>
<th>Europe and Central Asia</th>
<th>Percentage of total DALYs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Cerebrovascular disease</td>
<td>7.5</td>
<td>Ischemic heart disease</td>
<td>15.9</td>
</tr>
<tr>
<td>2.</td>
<td>Perinatal conditions</td>
<td>5.4</td>
<td>Cerebrovascular disease</td>
<td>10.8</td>
</tr>
<tr>
<td>3.</td>
<td>Chronic obstructive pulmonary disease</td>
<td>5.0</td>
<td>Unipolar depressive disorders</td>
<td>3.7</td>
</tr>
<tr>
<td>4.</td>
<td>Ischemic heart disease</td>
<td>4.1</td>
<td>Self-inflicted injuries</td>
<td>2.3</td>
</tr>
<tr>
<td>5.</td>
<td>Unipolar depressive disorders</td>
<td>4.1</td>
<td>Hearing loss, adult onset</td>
<td>2.2</td>
</tr>
<tr>
<td>6.</td>
<td>Tuberculosis</td>
<td>3.1</td>
<td>Chronic obstructive pulmonary disease</td>
<td>2.0</td>
</tr>
<tr>
<td>7.</td>
<td>Lower respiratory infections</td>
<td>3.1</td>
<td>Trachea, bronchus, and lung cancers</td>
<td>2.0</td>
</tr>
<tr>
<td>8.</td>
<td>Road traffic accidents</td>
<td>3.0</td>
<td>8. Osteoarthritis</td>
<td>2.0</td>
</tr>
<tr>
<td>9.</td>
<td>Cataracts</td>
<td>2.8</td>
<td>9. Road traffic accidents</td>
<td>1.9</td>
</tr>
<tr>
<td>10.</td>
<td>Diarrheal diseases</td>
<td>2.5</td>
<td>10. Poisonings</td>
<td>1.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Region</th>
<th>Latin America and the Caribbean</th>
<th>Percentage of total DALYs</th>
<th>Middle East and North Africa</th>
<th>Percentage of total DALYs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Perinatal conditions</td>
<td>6.0</td>
<td>Ischemic heart disease</td>
<td>6.6</td>
</tr>
<tr>
<td>2.</td>
<td>Unipolar depressive disorders</td>
<td>5.0</td>
<td>Perinatal conditions</td>
<td>6.3</td>
</tr>
<tr>
<td>3.</td>
<td>Violence</td>
<td>4.9</td>
<td>Road traffic accidents</td>
<td>4.6</td>
</tr>
<tr>
<td>4.</td>
<td>Ischemic heart disease</td>
<td>4.2</td>
<td>Lower respiratory infections</td>
<td>4.5</td>
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<td>Cerebrovascular disease</td>
<td>3.8</td>
<td>Diarrheal diseases</td>
<td>3.9</td>
</tr>
<tr>
<td>6.</td>
<td>Endocrine disorders</td>
<td>3.0</td>
<td>Unipolar depressive disorders</td>
<td>3.1</td>
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<tr>
<td>7.</td>
<td>Lower respiratory infections</td>
<td>2.9</td>
<td>Congenital anomalies</td>
<td>3.1</td>
</tr>
<tr>
<td>8.</td>
<td>Alcohol use disorders</td>
<td>2.8</td>
<td>Cerebrovascular disease</td>
<td>3.0</td>
</tr>
<tr>
<td>9.</td>
<td>Diabetes mellitus</td>
<td>2.7</td>
<td>Vision disorders, age-related</td>
<td>2.7</td>
</tr>
<tr>
<td>10.</td>
<td>Road traffic accidents</td>
<td>2.6</td>
<td>10. Cataracts</td>
<td>2.3</td>
</tr>
</tbody>
</table>

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<tr>
<th>Region</th>
<th>South Asia</th>
<th>Percentage of total DALYs</th>
<th>Sub-Saharan Africa</th>
<th>Percentage of total DALYs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Perinatal conditions</td>
<td>9.2</td>
<td>HIV/AIDS</td>
<td>16.5</td>
</tr>
<tr>
<td>2.</td>
<td>Lower respiratory infections</td>
<td>8.4</td>
<td>Malaria</td>
<td>10.3</td>
</tr>
<tr>
<td>3.</td>
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<tr>
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<td>7. Tuberculosis</td>
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<tr>
<td>9.</td>
<td>Chronic obstructive pulmonary disease</td>
<td>2.3</td>
<td>9. Pertussis</td>
<td>1.8</td>
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Key Megatrends in the 20\textsuperscript{th} Century

• Overall life expectancy has increased.
• The global fertility rate is at replacement level.
• For the first time, urban populations exceed rural populations.
• Socioeconomic and health disparities between nations and within nations has increased.
FIGURE 2-7 The Demographic Transition: (A) High Fertility/High Mortality; (B) Declining Mortality/High Fertility; (C) Reduced Fertility/Reduced Mortality

FIGURE 2-8 The Burden of Disease by Group of Cause, Percent of Deaths, 2001

Group 1 ≠ Communicable, maternal, and perinatal conditions and nutritional disorders
Group 2 ≠ Non-communicable diseases
Group 3 ≠ Injuries

AVERAGE LOW- AND MIDDLE-INCOME COUNTRIES

Group 3 10%
Group 2 54%
Group 1 36%

HIGH-INCOME COUNTRIES

Group 3 6%
Group 2 87%
Group 1 7%

Disease Burden Distribution by Select World Bank Region, 2001

Percent

Communicable, maternal, perinatal, and nutritional conditions
Noncommunicable diseases
Injuries

E. Asia/Pacific
Europe/Central Asia
Latin America/Caribbean
M. East/N. Africa
High-income countries
World

Note: Numbers are rounded.

Source: Disease Control Priorities in Developing Countries, second edition, 2006, Table 4.1
Disease Burden Distribution by Select World Bank Region, 2001

- **Communicable, maternal, perinatal, and nutritional conditions**
- **Noncommunicable diseases**
- **Injuries**

Note: Numbers are rounded.

Source: *Disease Control Priorities in Developing Countries*, second edition, 2006, Table 4.1
Changing Trends in GBD

- Historically, as nations developed, the root causes of their disease burden changed.

- Perinatal
- Communicable diseases
- Malnourishment

- Non-communicable diseases
- Mental Health
- Injury/Violence

- Pandemics
- Harmful trade
- Harmful habits
The Phenomenon of ‘Mal-development’

- First conceptualized by French sociologist Alain Touraine
- Failed model of development, in which old and new problems co-exist
- Health in developing world today is the quintessential example of mal-development
- Many developing countries now bear the “triple-burden” of disease.
The ‘Triple Burden’ of GBD

1. Maternal mortality, neonatal mortality, malnutrition, diarrheal diseases, malaria, HIV, TB

2. Heart disease, Cancer, Diabetes, Obesity, Depression & Mental Illness, Injury and Violence

3. Tobacco sales and consumption, bad food choices, global pandemics
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diseases
  - Malnourishment

- Pandemics
  - Harmful trade
  - Harmful habits

- Non-communicable
  - diseases
  - Mental Health
  - Injury/Violence
Millennium Development Goals

- Adopted by the United Nations in 2000 as attainable targets by 2015 to respond to the world’s most pressing development challenges.
Significance of MDGs

- They represent the first time that national governments and international organizations acknowledged that progress in national development could be measured by gains in human well-being.
- They encompass a set of universal human values and rights.
- They create an international set of goals toward which national & international actors can aim.
Weaknesses of MDG goals

• Global benchmarks can mask regional, national and intra-national disparities.
• One set of goals may encourage a one-size-fits-all approach in solutions.
• “Top-down goals” may not reflect priorities of individual nations.
How well is the world doing?

• Country-level data

• The ‘Gapminder’
  (Click on Data, then ‘Gapminder’)

How well are your countries doing?
Human Development Index

- Emerged in the 1990s as an alternative development model
- A ‘People First’ Development Approach based on the notion that by enlarging people’s choices, enhancing human capabilities and expanding human freedoms, overall human well-being would be improved.
Issues and Themes in the Human Development Approach

• Social progress
• Economics
• Efficiency
• Equity
• Participation and freedom
• Sustainability
• Human security
How is the world doing?

• 177 countries ranked according to a set of metrics designed to capture core elements of human development.

Main Messages

- A number of factors influence health status
- Risk factors are central to health and to addressing health concerns
- Policy making needs to be data driven
- Cardiovascular disease is now the leading cause of death worldwide
- The poorest countries have a relatively larger burden from communicable diseases than from non-communicable diseases
Key messages

• There is worldwide recognition that human health is fundamentally linked to societal well-being, human rights, and national development.
• Traditional quantitative measures are but one element in assessing the status of human health.
• Measures can mask inter-group differences.