

DVM2110A: Health, Education Perspectives in International Development



Introduction to the Concept of Health, Global Health, and Determinants of Health

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NOTE: Information is taken or modified from
the sources written at the bottom of slides

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Topics to be Covered

- State of the World's Health
- Defining "Health": Health, Disease, Illness, and Determinants of Health
- Measuring Health
- Public Health & Population Health
- Global Health & International Health
- Other important concepts:
epidemiological transition, double burden of disease, 10/90 health research gap, brain drain, health-related quality of life





Global Health and Development

Pre-test! I love tests!



Source:



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Life expectancy at birth increased globally by _____ since 1990:

- a. 5 years
- b. 6 years
- c. 7 years
- d. 8 years
- e. 10 years



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Source: World Health Organization, 2014,
http://www.who.int/features/factfiles/global_burden/facts/en/

What is the leading cause of death in the world?



- a. cardiovascular diseases
- b. cancer
- c. respiratory infections
- d. road/traffic accidents
- e. HIV/AIDS



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Source: World Health Organization, 2014,
http://www.who.int/features/factfiles/global_burden/facts/en/index3.html

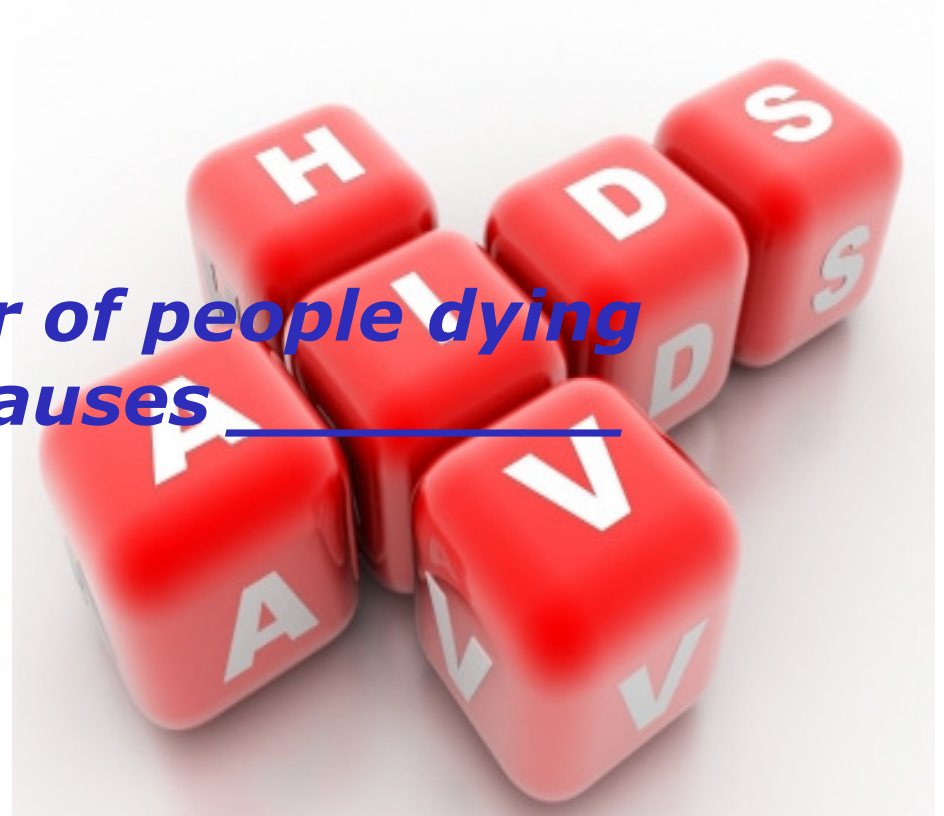
Most HIV/AIDS deaths occur in Asia.



- a. True
- b. False

Globally, the number of people dying from AIDS-related causes from 2005 to 2012.

- a. increased
- b. decreased



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Source: World Health Organization, 2014,
http://www.who.int/features/factfiles/global_burden/facts/en/index4.html

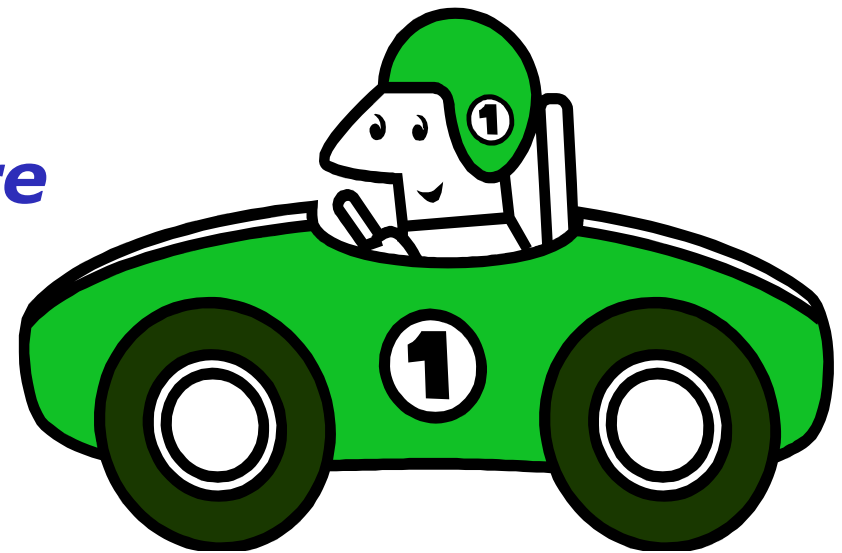


Nearly _____ people die from road traffic crashes every day.

- a. less than 5,000
- b. more than 5,000

Road traffic injuries are projected to _____.

- a. rise
- b. decline



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Source: World Health Organization, 2014,
http://www.who.int/features/factfiles/global_burden/facts/en/index9.html

Rate your health 😊 ☹️ ...

In general, how would you rate your health:

- 1) ... excellent?
- 2) ... very good?
- 3) ... good?
- 4) ... fair?
- 5) ... poor?

**SELF-REPORTED
HEALTH STATUS**

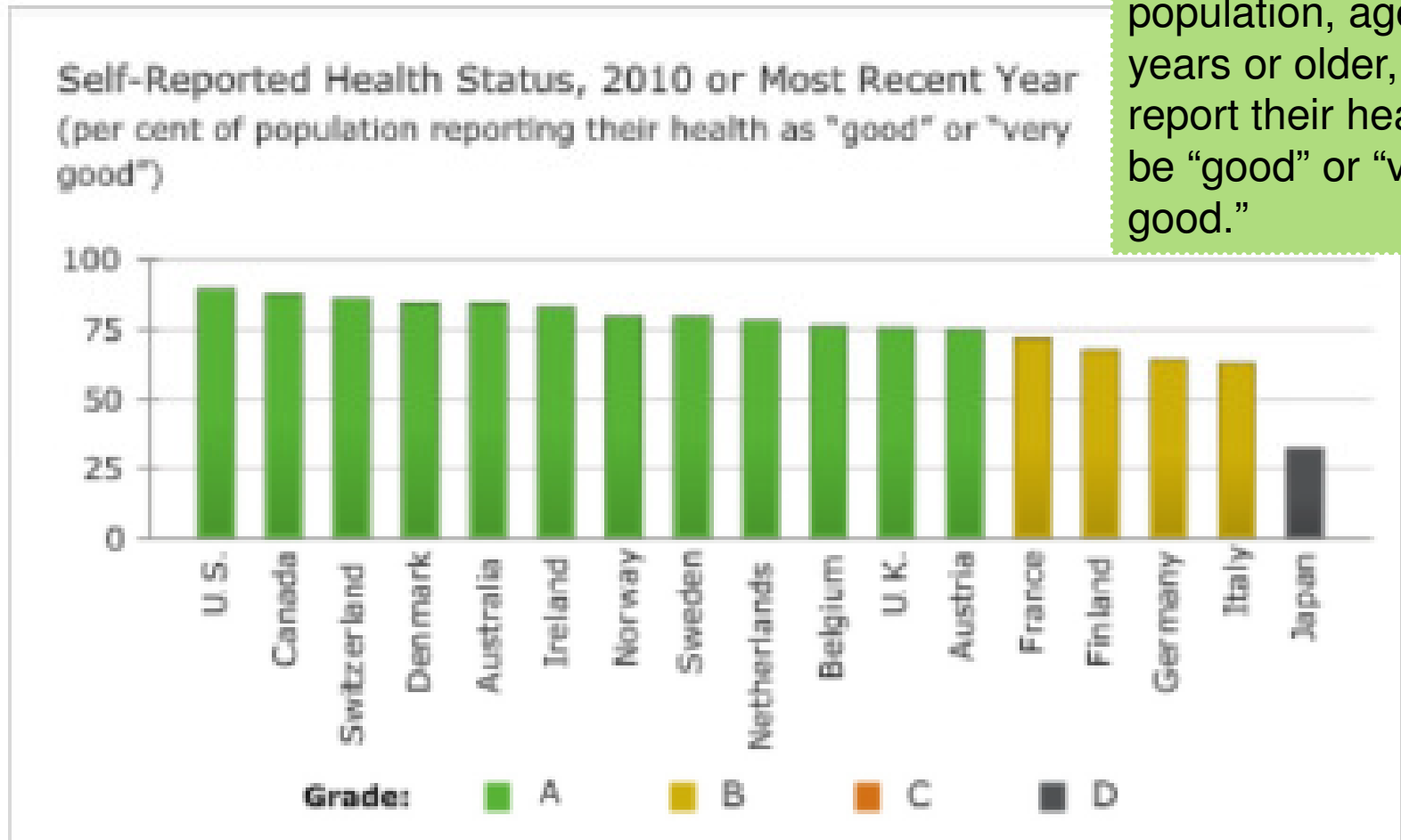


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Source: The Conference Board of Canada, 2012
<http://www.conferenceboard.ca/hcp/details/health/self-reported-health-status.aspx>

Self-Reported Health Status

Self-Reported Health Status: The percentage of the population, aged 15 years or older, who report their health to be “good” or “very good.”



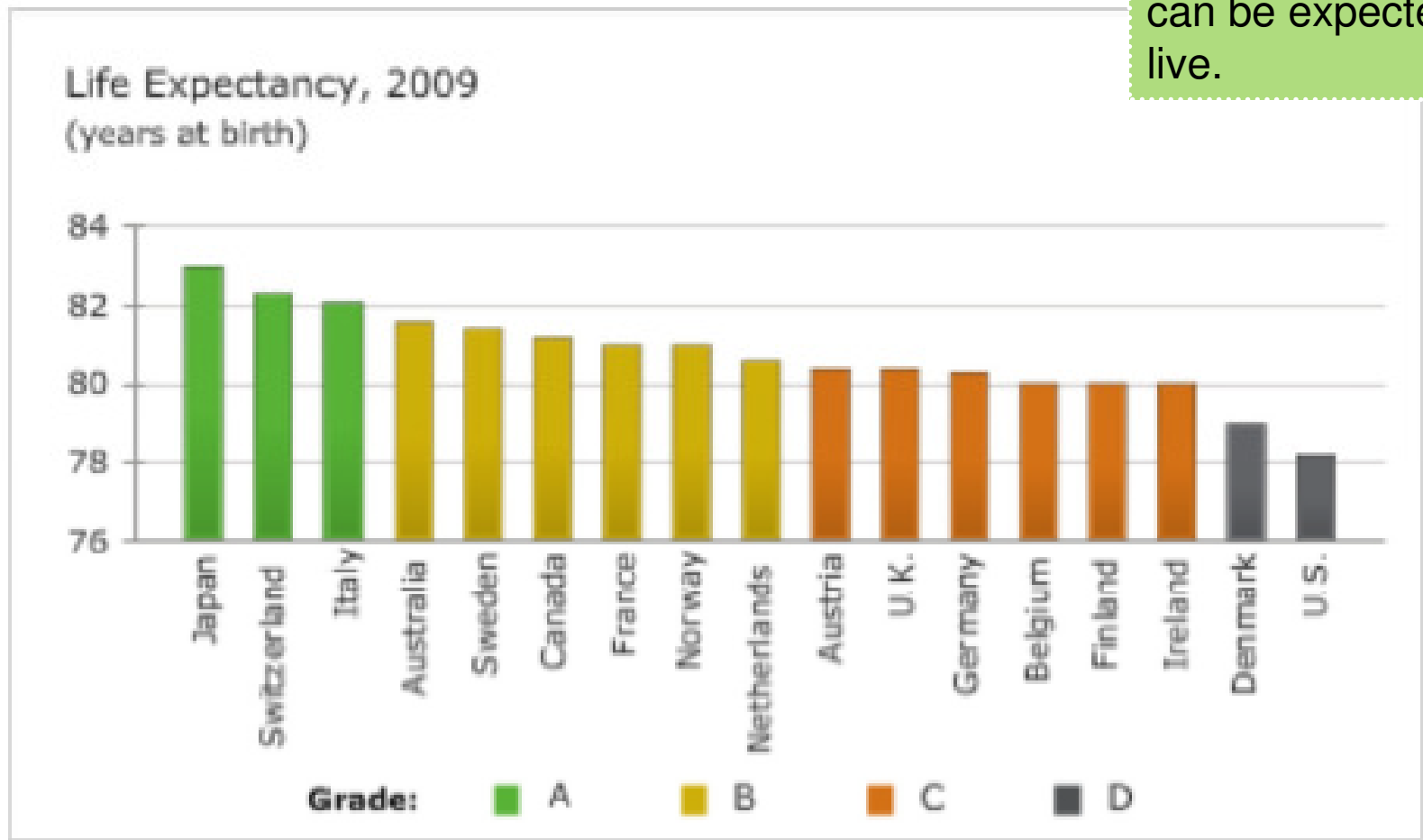
Source: The Conference Board of Canada, 2012
<http://www.conferenceboard.ca/hcp/details/health/self-reported-health-status.aspx>



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...but life expectancy

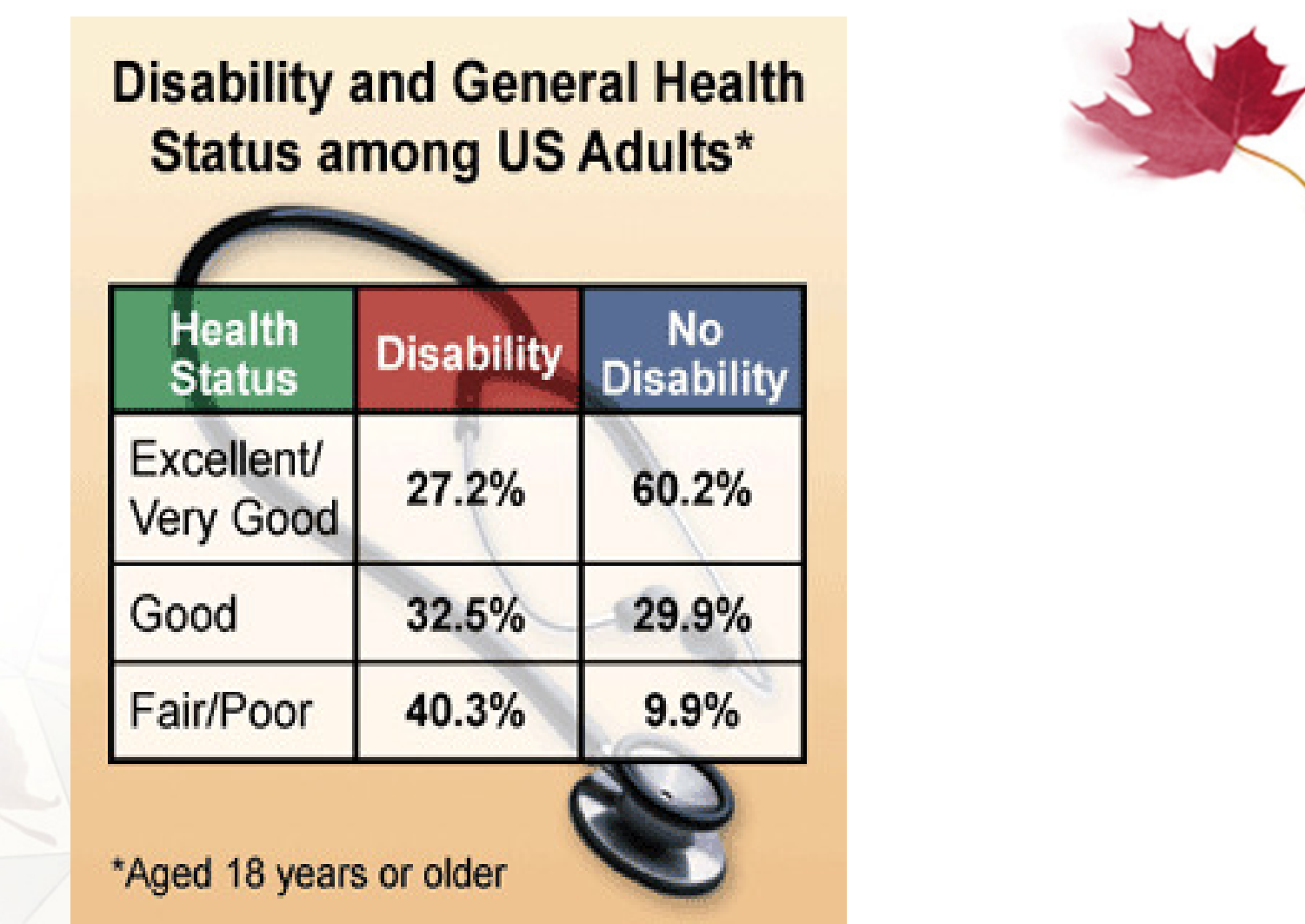
Life Expectancy:
The average number of years a person can be expected to live.



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Source: The Conference Board of Canada, 2012
<http://www.conferenceboard.ca/HCP/Details/health/life-expectancy.aspx>

Disability and General Health Status among US Adults*



Health Status	Disability	No Disability
Excellent/ Very Good	27.2%	60.2%
Good	32.5%	29.9%
Fair/Poor	40.3%	9.9%

*Aged 18 years or older



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Source: Racial/Ethnic Disparities in Self-Rated Health Status among Adults with and Without Disabilities — United States, 2004–2006. MMWR 2008;57(39);1069-1073.
<http://www.cdc.gov/Features/dsDisabilityAndHealthStatus/>

This part of the survey deals with various aspects of %your/FNAME's% health. I'll be asking about such things as physical activity, social relationships and health status. By health, we mean not only the absence of disease or injury but also physical, mental and social well-being.
INTERVIEWER: Press <Enter> to continue.



I'll start with a few questions concerning %your/FNAME's% health in general. In general, would you say %your/his/her% health is:
INTERVIEWER: Read categories to respondent.

- 1 ... excellent?
- 2 ... very good?
- 3 ... good?
- 4 ... fair?
- 5 ... poor?

Compared to one year ago, how would you say %your/his/her% health is now? Is it:
INTERVIEWER: Read categories to respondent.

- 1 ... much better now than 1 year ago?
- 2 ... somewhat better now than 1 year ago?
- 3 ... about the same?
- 4 ... somewhat worse now than 1 year ago?
- 5 ... much worse now than 1 year ago?

Source: Canadian Community Health Survey, 2000-2001



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Measuring Health & Health Status Indicators



Quantitative metrics

(e.g., life expectancy, morbidity, mortality, etc)

Qualitative assessments

(e.g., nature of suffering, daily experiences, etc)

- **Health status indicator:** A directly measurable variable that reflects the health status of the population – can be measured in terms of presence or absence of these factors.

– e.g., _____



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Source: Benatar & Upshur, 2011, Global Health and Global Health Ethics; Last, 2007, A Dictionary of Public Health



What is “health”?

“A state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity.” (WHO, 1946)

“The extent to which an individual or a group is able to realize aspirations and satisfy needs, and to change or cope with the environment; health is a resource for everyday life, not the objective of living; it is a positive concept, emphasizing social and personal resources as well as physical capabilities.” (WHO, 1984)



Source: World Health Organization (WHO)



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Defining Illness - Germ-Theory or Biomedical Perspective



- **Acute Illness:** A disease with an abrupt or rapid onset and usually a short duration (e.g., infection; exacerbation of symptoms associated with chronic conditions)
- **Chronic Illness:** A health condition that is long-lasting (typically, exists for 6 months or longer) and needs to be managed on a long-term basis (e.g., diabetes, arthritis)
- **Terminal Illness:** An active and progressive disease with no reasonable chance of cure (e.g., advanced cancer, Amyotrophic Lateral Sclerosis)

Defining Disease, Illness, Sickness - Sociological Perspective



- **Disease:** Based on a medical diagnosis which locates a problem in specific organs or body systems, and is treated through biomedical treatments
- **Illness:** The subjective/personal experience of a diseased state or a person who acknowledges s(he) does not feel well
- **Sickness:** The social actions taken by a person as a result of an illness or a disease (e.g., taking medication, visiting doctor, resting)



Illness

- The subjective sensation of experiencing a diseased state.
- You may have a disease, but not feel ill from it (e.g., HIV-positive individuals)

Photo: Whitaker, 2012,
http://www.slideshare.net/funmi_portfolio/african-american-women-with-breast-cancer



Source: Last, 2007, A Dictionary of Public Health

Communicable (Infectious) and Non-Communicable Diseases



- **Infectious diseases** are caused by pathogenic microorganisms (bacteria, viruses, parasites or fungi); can spread, directly or indirectly, from one person to another
 - approximately half of all deaths caused by infectious diseases annually can be attributed to: **tuberculosis, malaria, AIDS**
- **Non-communicable diseases** are chronic diseases often of long duration and slow progression; are not passed from person to person
 - four main types account for 80% of all NCD deaths:
 - i) cardiovascular diseases (heart attacks, stroke),**
 - ii) cancers, iii) chronic respiratory diseases (COPD, asthma), and iv) diabetes**



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Source: World Health Organization

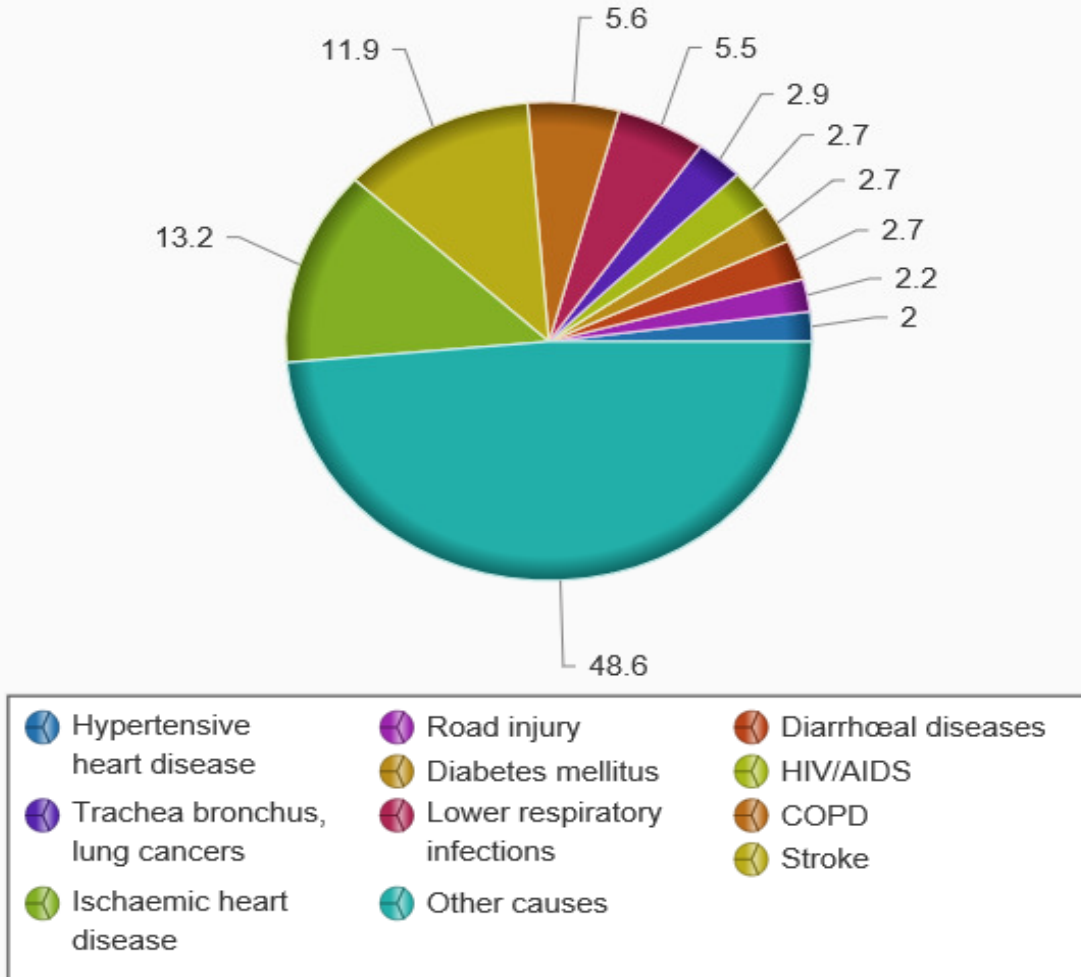
http://www.who.int/topics/infectious_diseases/en/

Also see: <http://www.infoplease.com/ipa/A0903696.html> ;

<http://www.who.int/mediacentre/factsheets/fs355/en/>



The 10 leading causes of death in the world by percentage



Source: World Health Organization,

Life Expectancy & Health



**Hans Rosling's 200
Countries, 200 Years, 4
Minutes - The Joy of Stats
- BBC Four (4:47)**

<https://www.youtube.com/watch?v=jbkSRLYSojo>



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Current State of the World's Health

- **Chronic Hunger and Water Shortage** : 842 million suffer from chronic hunger, and By 2025 water scarcity is expected to affect more than 1.8 billion people.
- **Infectious Disease and Access to Medicines:** Half of all deaths caused by infectious diseases annually can be attributed to three diseases—tuberculosis, malaria, and AIDS (WHO, 2013); and 1/3 of the world's population has no regular access to medicines (WHO, 2011).
- **Maternal and Child Health:** 800 women die every day from preventable causes related to pregnancy and childbirth, and almost 7 million children die annually before the age of 5 years (nearly half of these deaths occur within the first month of life) (IDRC, 2014).

Source: United Nations Development Programme, 2014, Human Development Report 2014, <http://hdr.undp.org/en/2014-report/download>



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Cont'd

- **Africa – Sub-Saharan Africa:** Most affected region in the world; maternal mortality ratio is 474 deaths per 100,000 live births; has the highest number of people living with HIV—24.7 million, three countries—Nigeria, South Africa and Uganda—account for 48% of all new HIV infections (UNAIDS, 2014).

"Funding for global health has reached approximately \$30 billion per year, and the United States provides at least one third of this total."



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Source: United Nations Development Programme, 2014, Human Development Report 2014, <http://hdr.undp.org/en/2014-report/download> ; De Cock et al., 2013, *The New Global Health*

“Health for All”

World health report Executive summary

Achieving health for all

In 1977, the World Health Assembly decided that the main social target of governments and of WHO should be the attainment by all the people of the world by the year 2000 of a level of health that would permit them to lead a socially and economically productive life. In other words, as a minimum, all people in all countries should have at least such a level of health that they are capable of working productively and of participating actively in the social life of the community in which they live. The third evaluation of progress in implementing the Global Strategy for Health for All by the year 2000 (carried out in 1997) has shown significant improvements worldwide both in health status and in access to health care. Increasing numbers of Member States are carrying out monitoring and evaluation of their health-for-all strategies at specified intervals; for the first evaluation in 1985, 147 out of 166 Member States reported, at least with respect to the global indicators. In 1997, 158 out of 191 Member States did so, although some indicators were more widely covered than others - e.g. 90% of countries reported on immunization, but only 30% on access to local health services.



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Source:

http://www.who.int/whr/1998/media_centre/executive_summary6/en/



Millennium Development Goals (MDGs)

1. Eradicate poverty and hunger
2. Achieve universal primary education
3. Promote gender equality & empower women
4. Reduce child mortality
5. Improve maternal health
6. Combat HIV/AIDS, malaria, and other diseases
7. Ensure environmental sustainability
8. Develop global partnerships for development
(to achieve these goals)



What is public health?



World Health
Organization

a centre

Publications

Countries

Programmes

About WHO

Trade, foreign policy, diplomacy and health



Public Health

Public health refers to all organized measures (whether public or private) to prevent disease, promote health, and prolong life among the population as a whole. Its activities aim to provide conditions in which people can be healthy and focus on entire populations, not on individual patients or diseases. Thus, public health is concerned with the total system and not only the eradication of a particular disease.

Source: World Health Organization, 2014,
<http://www.who.int/trade/glossary/story076/en/>



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What is **global public health**?



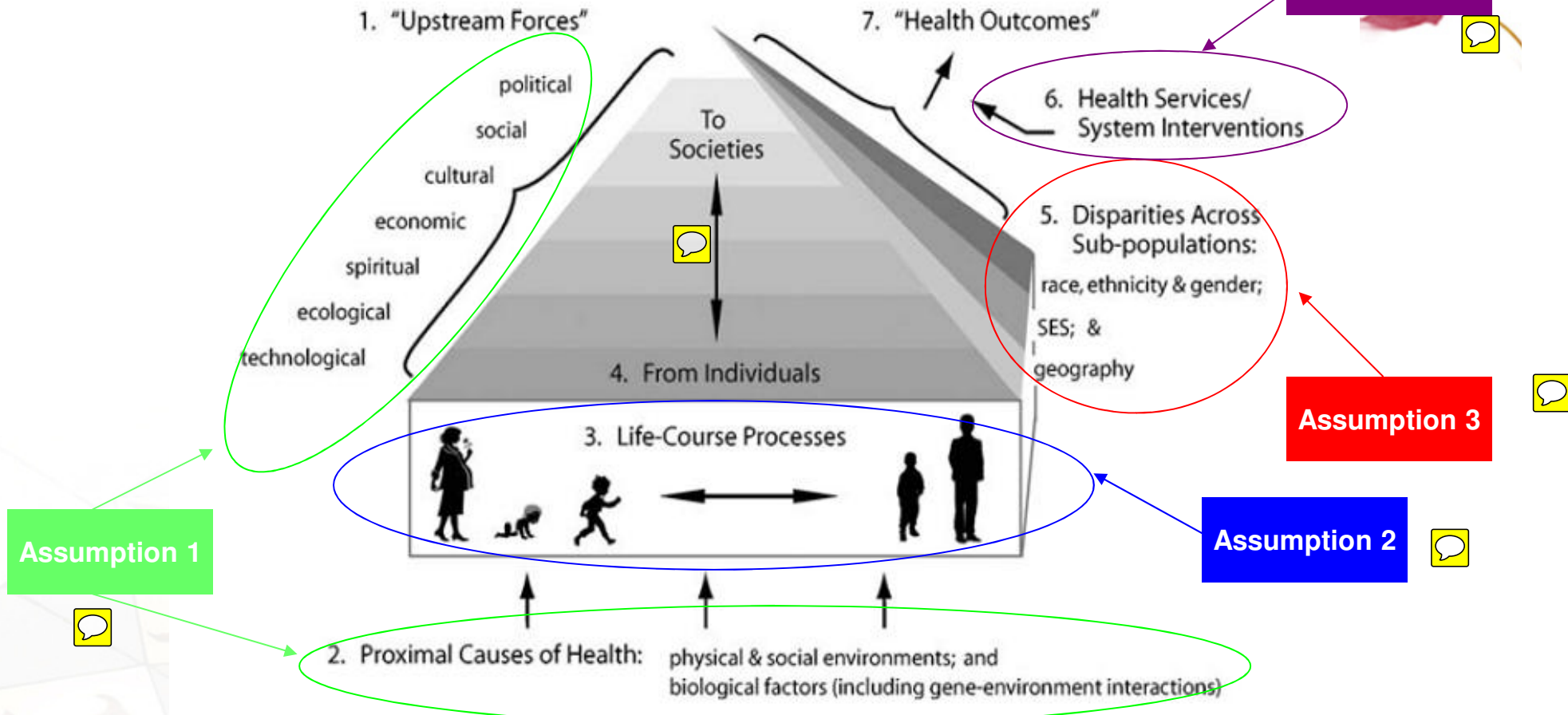
The term global public health recognizes that, as a result of globalization, forces that affect public health can and do come from outside state boundaries and that responding to public health issues now requires attention to cross-border health risks, including access to dangerous products and environmental change.

Source: World Health Organization, 2014,
<http://www.who.int/trade/glossary/story076/en/>



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Population Health Framework: The Pyramid



V. Etches, J. Frank, E. DiRuggerio, and D. Manuel. (2006). Measuring population health: a review of indicators. *Annual Review of Public Health*, Volume 27, pp. 29-55.



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Source: Etches et al., 2006, Measuring Population Health



What is **global health**?

Global health is the science and art of preventing disease, prolonging life and promoting physical and mental health through organized global efforts for the maintenance of a safe environment, the control of communicable disease, the education of individuals and whole populations in principles of personal hygiene and safe living habits, the organization of health care services for the early diagnosis, prevention and treatment of disease, and attention to the societal, cultural and economic determinants of health that could ensure a standard of living and education for all that is adequate for the achievement and maintenance of good health.



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Source: Benatar & Upshur, 2011, Global Health and Global Health Ethics, p. 14

What is **international health**?

International Health is defined as the health practices, policies, systems, and organizations often aimed at addressing the health issues of people living in poor, low-income, or developing countries; often emphasizes public health concerns, and activities such as foreign aid, humanitarian assistance and volunteerism.



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Source: Global Health Education Consortium:
<http://globalhealtheducation.org/Pages/GlobalvsInt.aspx>
Global Health Action:
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2852240/>



5 Metaphors of Global Health



1. Global health as foreign policy
2. Global health as security
3. Global health as charity
4. Global health as investment
5. Global health as public health








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Source: Benatar & Upshur, 2011, Global Health and Global Health Ethics

Health and Wealth Disparities Globally



The 85 richest people in the world have the same wealth as the 3.5 billion poorest people.

- Extreme health disparities exist within and between countries.
 - between low, middle, and high-income countries
 - between the rich and poor within high-income nations (e.g., US)
 - between populations (e.g., Aboriginals, rural/urban) 
- Inequality in health and education has been _____ .
- _____  has the highest inequality in health outcomes, and _____  has the highest inequality in education.
- Small increases in per capita income (i.e.  up to about US \$5,000) tend to be associated with substantial gains in health.

"Wealthier is healthier"



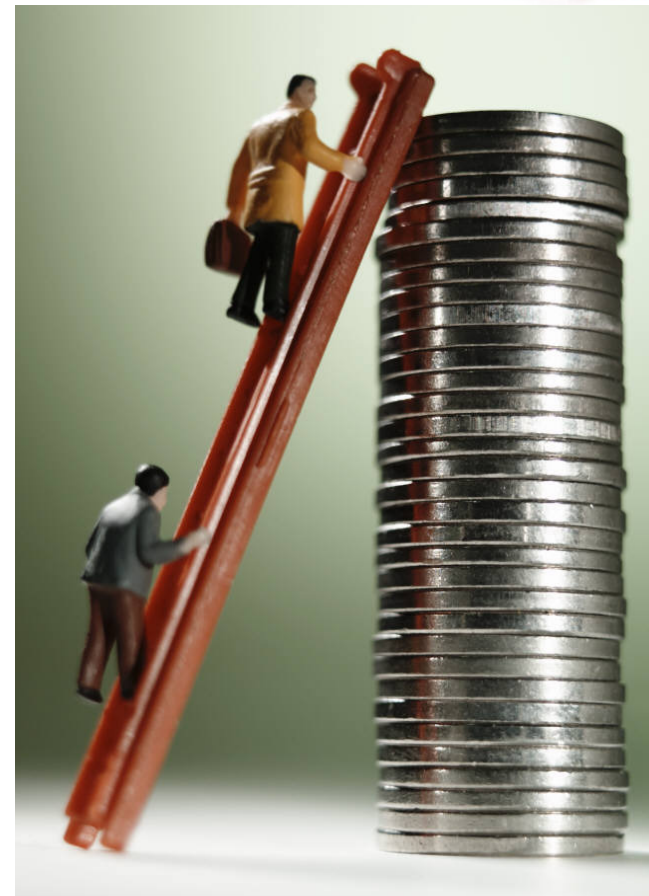
Source: United Nations Development Programme, 2014, Human Development Report 2014, <http://hdr.undp.org/en/2014-report/download> ; De Cock et al., 2013, The New Global Health ; Schrecker, 2012, Development and Health

Development Perspective of Health



Given the correlation between wealth, power, and health, development policy should focus on maximizing the rate of economic growth in the expectation that improvements in health will follow, sooner or later.

But the full picture regarding health and social inequalities and inequities is much more complicated. To be continued...



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Source: Schrecker, 2012, Development and health in *Introduction to International Development: Approaches, Actors, and Issues*



Demographic Transition and Epidemiological Transition

- As countries become more industrialized or developed and their economy changes from low to high per capita income, there is a corresponding transition from:
 - high fertility and high mortality TO
low fertility and low mortality
- infectious diseases (e.g., tuberculosis) TO
degenerative, chronic or non-communicable diseases (e.g., cancer, cardiovascular diseases)



Double Burden of Disease and Urbanization

Despite issues of malnourishment, undernutrition, and hunger in developing countries, there is a rapid increase in overweight persons and obesity in many low- to middle-income countries (where people are beginning to consume more “empty calorie and chemically processed foods”), resulting in an increased risk of non-communicable diseases as well (e.g., diabetes, cardiovascular diseases).





Coca-Cola advertising in Senegal
The diffusion of the Coca Cola logo all over the world, also in developing countries is one of the symbols of the globalization process.



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Source: Photo: EPFL/LASUR/NCCR-NS, Senegal, 2002,
http://www.glopp.ch/A3_popup/en/html/popups_popup_3_1a.html?olatraw=true



10/90 Health Research Gap

"10 percent or less of the world's health research spending is directed to the conditions that account for 90 percent of the global burden of disease."

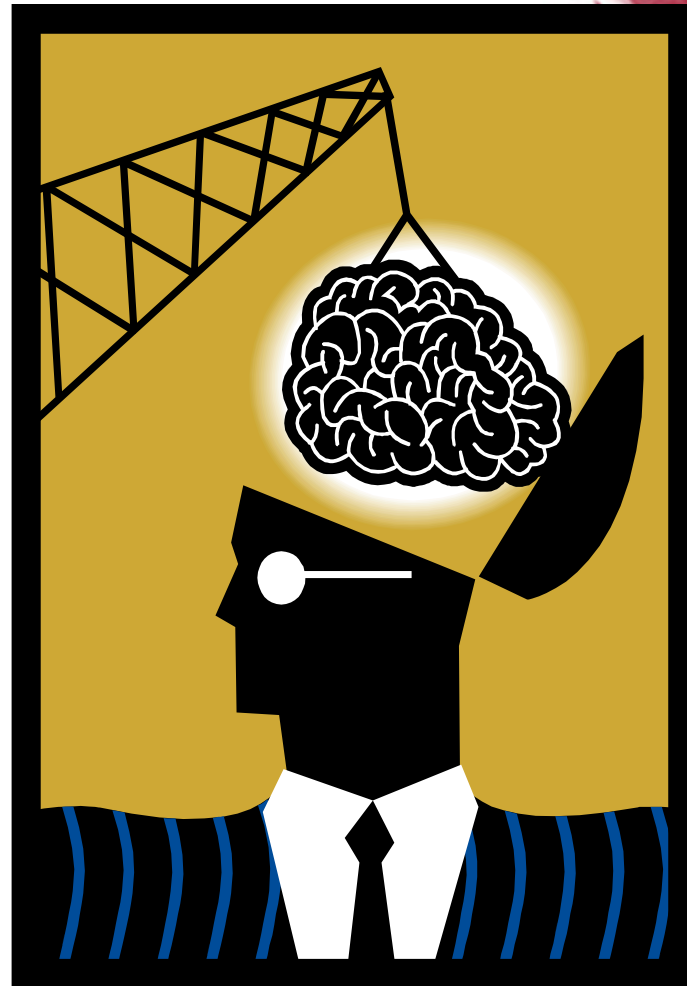


Source: Schrecker, 2012, Development and health



Brain Drain...

“Brain drain is defined as the migration of health personnel in search of the better standard of living and quality of life, higher salaries, access to advanced technology and more stable political conditions in different places worldwide.”



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Source: Dodani & LaPorte, 2005, Brain drain from developing countries: how can brain drain be converted into wisdom gain?



Determinants of Health



- Determinants of health are factors that influence the health of individuals and populations
 - includes biological and genetic factors, social factors, physical environment, health care system factors, political factors, etc
- The study of population health involves studying the multiple determinants of health and the manner in which they can be affected to improve population health outcomes



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Source: Public Health Agency of Canada

<http://www.phac-aspc.gc.ca/ph-sp/determinants/index-eng.php#What>

Key Determinants of Health



1. Income and Social Status
2. Social Support Networks
3. Education and Literacy
4. Employment / Working Conditions
5. Social Environments
6. Physical Environments
7. Personal Health Practices and Coping Skills
8. Healthy Child Development
9. Biology and Genetic Endowment
10. Health Services
11. Gender
12. Culture



Applying Knowledge of the Determinants of Health



- We can work together to improve health (individuals and communities)
- Public health interventions typically target one or more determinants of health
- Interventions include information, policies, and programs
- Interventions designed to produce health outcome(s)
- Can have multiple outcomes: positive behaviour change, reduction in diseases/conditions and risk factors, fewer injuries, improve well-being and health-related quality of life, and reduce health disparities and inequities





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Source: Determinants of Health: A Framework for Reaching Healthy People 2020 Goals

http://www.youtube.com/watch?v=5Lul6KNIw_8



Population Health Approach

- Focus on the root causes of a problem
- Evidence to support the strategy to address the problem(s)
- Finding flexible and multidimensional solutions for complex problems
- Efforts to prevent the problem
- Efforts to improve the health status of the whole society, while considering the special needs and vulnerabilities of sub-populations 
- Focus on partnerships and intersectoral cooperation
- Public involvement and community participation 



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Source: Public Health Agency of Canada

<http://www.phac-aspc.gc.ca/ph-sp/determinants/index-eng.php#What>

Health-Related Quality of Life (HRQOL)



“On the individual level, this includes physical and mental health perceptions and their correlates—including health risks and conditions, functional status, social support, and socioeconomic status. On the community level, HRQOL includes resources, conditions, policies, and practices that influence a population’s health perceptions and functional status. The construct of HRQOL enables health agencies to legitimately address broader areas of healthy public policy around a common theme in collaboration with a wider circle of health partners, including social service agencies, community planners, and business groups.”

