Essentials of Global Health

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A Report

By

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MBA Hospital and Health Management

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COURSE CERTIFICATE

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Bharti Verma

has successfully completed

Essentials of Global Health

an online non-credit course authorized by Yale University and offered through Coursera

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Coursera has confirmed the identity of this individual and their participation in the course.

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Last but not least my parents are also an important inspiration for me. So, with due regards, I express my gratitude to them.

INTRODUCTION

Public Health's Essentials is a rigorous groundbreaking course for public health. The course is meant to introduce the topic of global health in a well-formulated, uncomplicated, and understandable way. The overall course addressed five primary questions: What is it that people get ill, injured and die of; Why they are suffering from these conditions; Which people are affected the most; Why should we concern ourselves with these questions; What can be done to overcome main health problems, At least ideally cost, as quickly as possible and in a sustainable manner. The course's viewpoint was to address global health including, relative to and with a main emphasis on low- and middle-income countries, poor health status and health inequalities. During the course, broad locus was given to health systems problems, health and development partnerships, and health concerns related to global interconnectedness. The lectures explains about the idea of Global health, why it is important for any health professional to understand the meaning and significance of global health.The course was initiated by the introductory dissemination of positive global health changes information: there has been a decline in women dying from pregnancy related causes globally[1]; the growing use of bed nets which actually is Nets treated with long-lasting insecticide has largely contributed in significant decline in Number of cases and deaths from malaria from Malaria globally[2]; receiving drug administration against neglected tropical diseases in sub-Saharan region including wormy and parasitic diseases; the final good news was of polio vaccination, to which substantial progress has been made. The global decline in the polio cases can be seen from 380,000 cases in 1988 to just 33 reported cases in 2018.[3]Meanwhile, there were many health concerns too which were still present as global health issues: There was the estimation of 770000 [570000-1100000] people who died from HIV in 2018 which measured to be 56% less than in 2004 (the catastrophe) and 33% less as compared to 2010 despite of continuous population growth in many countries.[4]; deaths due to tuberculosis, still a great number of deaths due to malaria, burden of maternal mortality deaths in low and middle-income countries, billions of people were found to be infected with tropical diseases and highest number of deaths werefound to be due to cardiovascular disease. An essential of Global Health is a community-based course, a kind of public health policy that has the most cost-effective effects on the most disadvantaged portion of the population. The course shares the knowledge about how it is of utmost importance for all people to prioritize equality in improving health and achieving it.

Also, it requires cooperative action transcending national boundaries. Studying Essentials of Global health is not only beneficial to infer the overall picture of global health status but, to understand ethical perspective of the health system and to understand the cohesion between human productivity with health.

Main global health opportunities and health determinants

Health determinants: They are those factors that very directly influence the health of an individual such as genetic makeup, sex, age, along with those factors which influences the health in an indirect way like the governance of the country, policies of the government and other interventions.

Social Determinants: The conditions in which people are born, develop, work, live, age and a broader collection of forces and structures that form the circumstances of everyday life.

Risk Factors: Any individual's characteristic, feature or visibility that increases the chances and the probability of contracting a disease or accident such as: under-optimal breast feeding leading to multiple baby diseases, tobacco use has a risk factor for cancer; excessive water use has a risk factor for diarrhea and a salt-rich diet as a risk factor for heart disease. There are broadly two types of risk factors: **Intrinsic** and **Extrinsic**, They are fundamental to anything that can not be modified such as age or genetic makeup. While Extrinsic are those modifiable risk factors, regulated like diet or exercise.

The course also encourages students to think and develop an understanding about global health concerns in an intensified manner by analyzing the magnitude of the disease, affectedpopulation group, what are the associated risk factors and social determinants; what are the health, social, and economic repercussions? In a manner, a student should think why they should care about this by finally taking into consideration the cost factor and evidence-based solutions.

The introductory part of the course finally concluded by explaining about MDGs and SDGs, many of which aredirectly and indirectly related to health. The SDGs framework motivated greater concerns for health within countries. There have been different actors also playing their specified roles in global health, these actorsare: individuals, communities, UN agencies, governments, multilateral organizations, and bilateral development organizations.

Roles of these Different Actors: Conduction of researches, making and implementing policies, various health and related program development and implementation, program financing, setting standards, or advocacy.

Examplesof Global Health actors: **WHO**; in a sense a summit of all globalactors who work on health. WHO is majorly accountable in a sense for benchmark setting, for policy making and implementing, for advocacy with others and indulges a substantial funds in researches on variety of global health concerns, **UNICEF;** It isa specialized agency of UN system. The part of the United Nations framework is responsible for health and well-being of children throughout the globe, **UNAIDS;** It is a global organization which is accountable for overseeing the world's efforts towards HIV and AIDS. It engages in quality and standard setting, conducting researches, policy making and implementing, advocacy and provides financial funding, **DIFD**etc.

KEY OBJECTIVES OF THE COURSE:

1. Articulation of main Global Health-related public health issues.
2. Analyzing main Public Health issues from various viewpoints.
3. To research disease burdens in various regions of the world; how this varies by age, gender and location; main risk factors for this burden; and How to reduce the pressure in a cost-effective way.
4. Assessing inequalities in health in particular, as it relates to low-income and disadvantaged people's health problems in low- and middle-income countries.
5. Specification of key public health players and organizations and the way How they work to tackle critical public health problems.
6. Examination of key global health issues expected to emerge in the near future.

LEARNING METHODOLOGY USED IN COURSE:

1. PPTs
2. Videos
3. Readings
4. Quizzes
5. Lectures

Module 2: The Burden of Disease

1. The state of world's Health
2. Demography and Global health
3. The DALYs
4. What do people get sick, disabled, and die from?
5. Key risk factors for deaths and DALYs.

Module 3: Health care services, and health value for money

1. Public Health Value for money
2. The organization of health systems and their goals
3. Expenditure on hygiene, search for UHC and pharmaceuticals

Module 4: Cross-cutting themes in Global Health part-1, Cross-cutting themes in Global Health part-2, Cross-cutting themes in Global Health part-3.

1. Health disparities
2. The Environment & health and climate change & health
3. Nutrition & Public Health
4. Woman wellbeing
5. Child wellbeing
6. Childhood immunization
7. Adolescent health
8. Complex Humanitarian emergencies

Module 5: The causes of sickness and death part-1, Critical causes of illness and death part-2, Critical causes of illness and death part-3.

1. ID and anti-microbial resistance evolving and graduating
2. Human immunodeficiency virus.
3. Tuberculosis (TB)
4. Malaria
5. Neglected tropical diseases
6. Overview of non-communicable diseases, cardiovascular diseases, and diabetes
7. Cancer and diabetes
8. Tobacco and Alcohol
9. Mental Health
10. Injuries

Module 6: Looking forward.

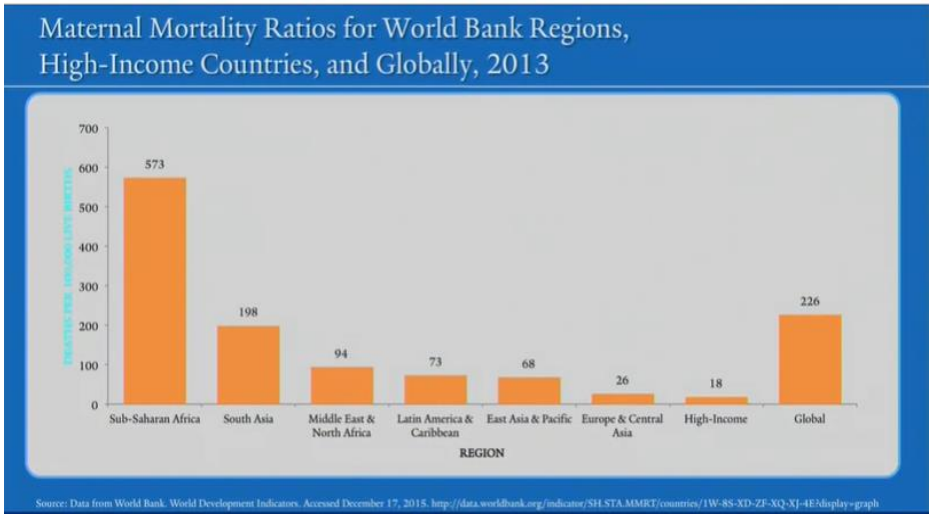
1. Intersectoral ways to improve health
2. Global Medical sciences and innovations
3. Core Future Challenges

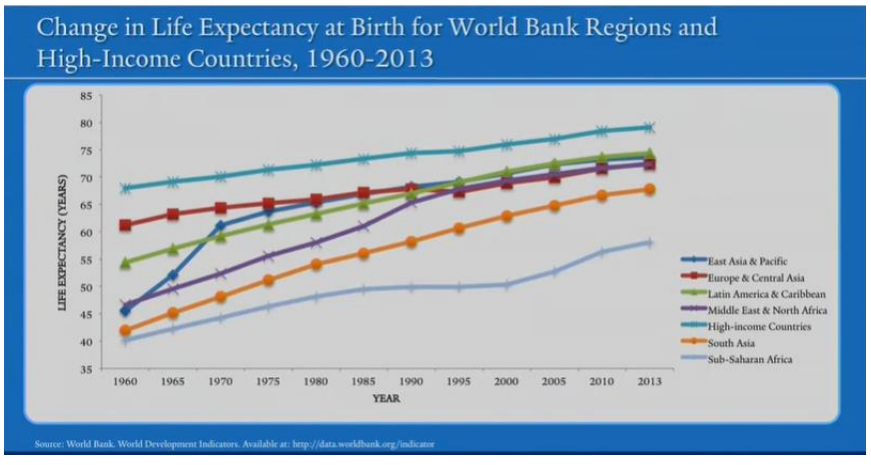
Learnings from the Course:

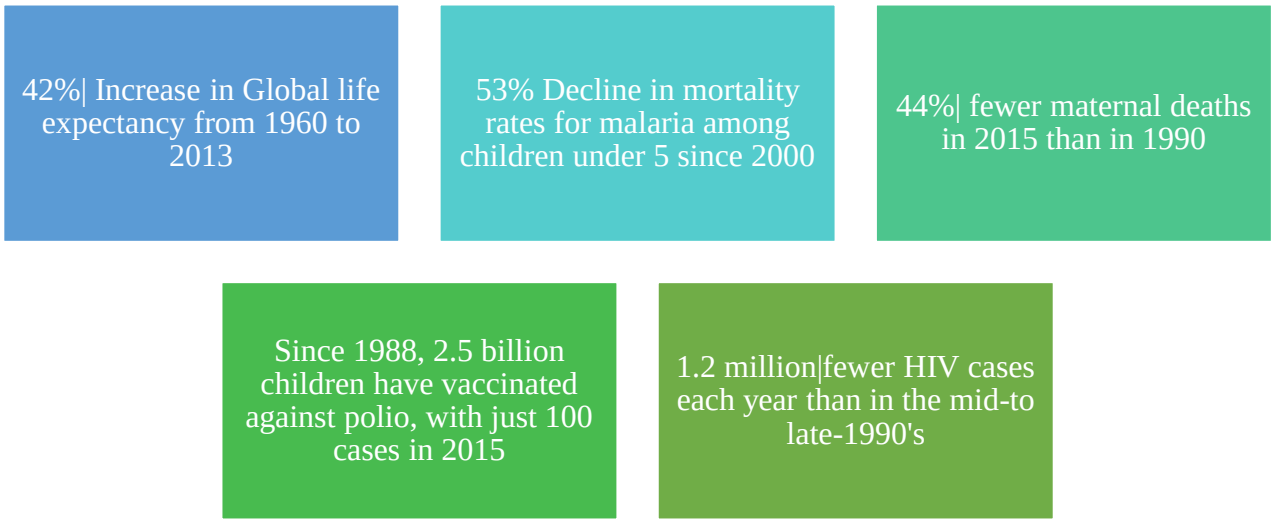
State of World's health: There has been tremendous improvement and progress in the global health over several decades. This has been inferred by measuring the statistics of improved life expectancy in various countries and within the countries. Second, there was a significant decrease in child mortality rates below five, less HIV cases, less Tuberculosis cases etc. Also, large number of children were immunized against polio

through proper drug administration. In spite of the progress, there is still a great part which is left and yet to be achieved. Millions of children below five are still dying, the deaths are still so evident that the number of deaths is still very high on daily basis and those deaths are directly linked to the undernourishment of these babies.

They are not getting sufficient food nor variety in their diet to meet their survival requirement.. Despite reduction in HIV and Tuberculosis cases, still there are millions of new cases of infection every year. The number of deaths from malaria and Tuberculosis has been significantly reduced, yet there are still prominent numbers of malaria and tuberculosis deaths. Since, decades Life expectancy has gone up dramatically worldwide. Yet there's still a big difference in life expectancy in high-income countries than in low-income countries, this significant gap, especially in Africa, remains in some parts of the world, with the greatest gap in sub-Saharan Africa and South Asia. The pattern is quite similar with other health indicators as well. Basically, there are two prominent World Bank regions in particular: Sub-Saharan Africa and South Asia, the health indices of which fall well behind other areas of the world.







Major health indicators: **Life Expectancy, maternal mortality, infant mortality, neonatal mortality, infant mortality, under five child mortality.**

Life Expectancy: The average number of years a newborn baby could expect to live if the current trend in mortality continued for the rest of the newborn's life.

Maternal mortality ratio: The no. of women who die in a given year from complications in pregnancy and childbirth per 100,000 live births.

Neonatal mortality rate: The no. of deaths per 1,000 live births in that year to infants under 28days of age in a given year.

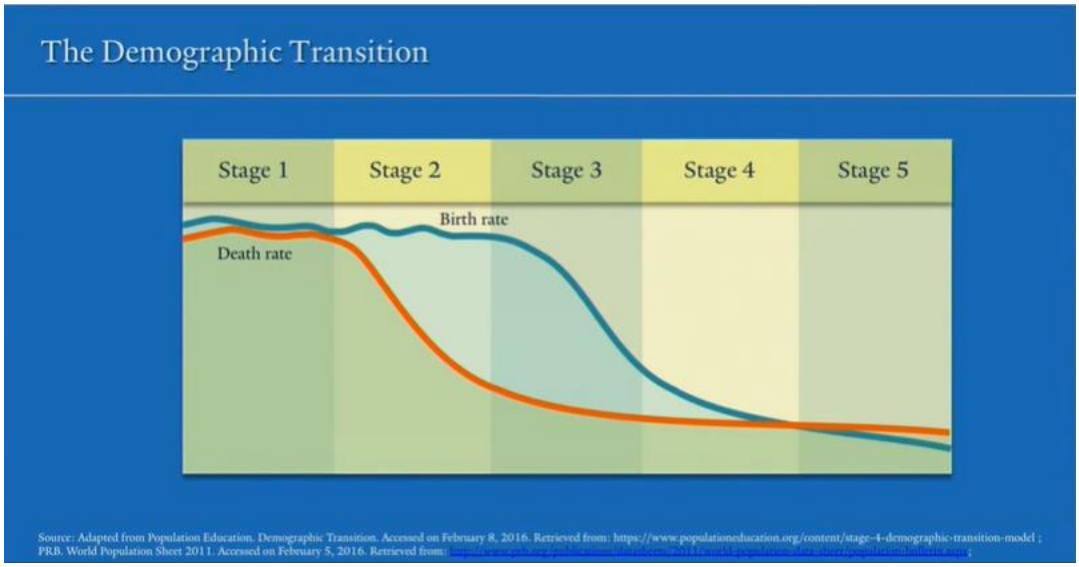
Infant mortality rate: The no. of child deaths less than 1 per 1,000 live births in a given year.

Demography and Global health: Transition model of different countries and basic pattern of low and high birth as well as death rates indicates the progress of family planning programs in different countries. One country with fastest progress in shortest amount of time is **Bangladesh,** the decline was observed not only in the fertility rate but, reduction in maternal mortality rate and child mortality rate was also seen.

The population of the world is growing by about 1 billion by every 12 years and most of this population growth is occurring in low and middle-income countries.

In Niger in West Africa, many families, especially poor in rural areas actually wants to have five to six children. In Italy, most families are happy with 1 child. One reason to explain this

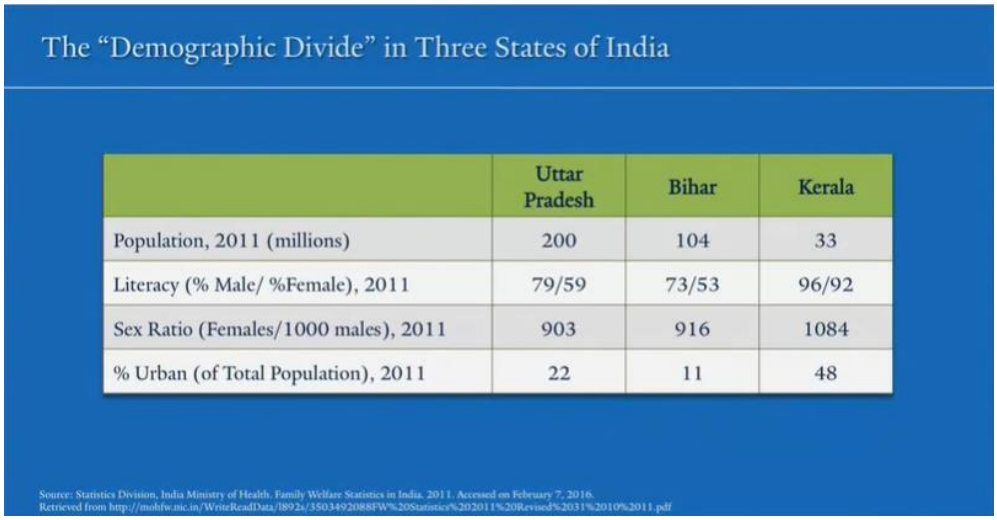
Difference could be due to cultural variations and high child mortality rates. Also, with better nutrition and modernization people are living for more years but, their prolonged living is with disability and not healthy



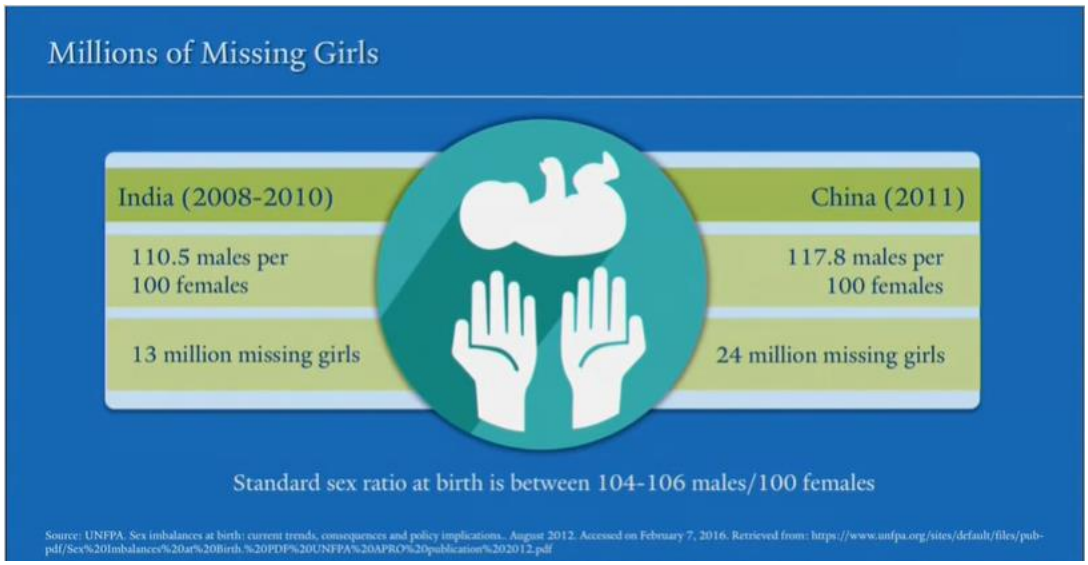
According to UN's projections there'll be relatively less growth in population of the high-income countries as compared to low and middle-income countries. One major reason for this is **"Demographic transition". Demographic transition-** Paradigm shift from high birth rates and high death rates in communities with low education level, minimal technological advancement, to low

Birth rates and low death rates in communities with high educational levels and high technological advancement.

An essential point learnt was that the demographic divide exists not only across countries but, within countries as well.

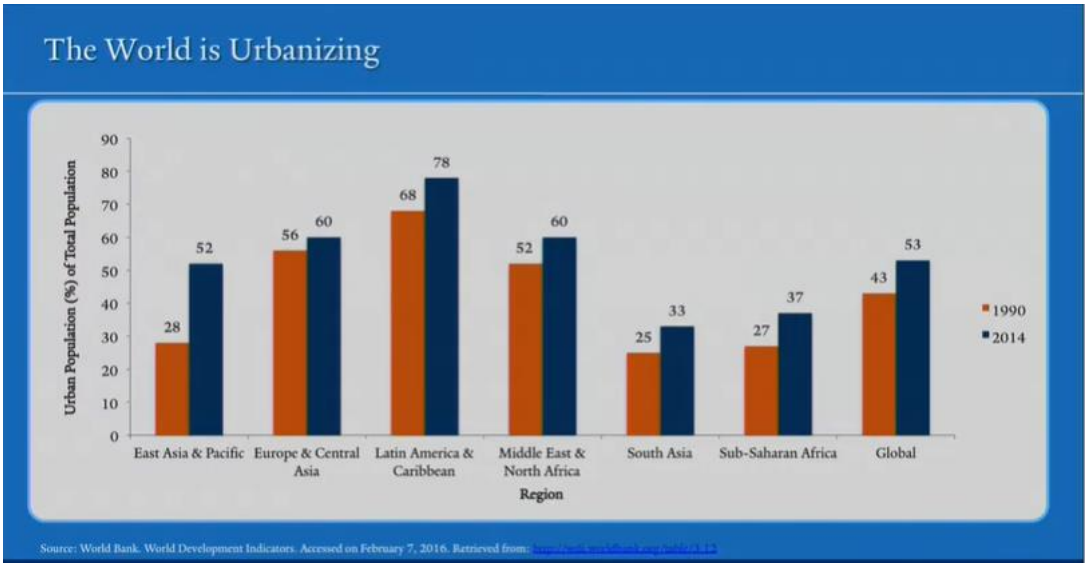


Also, the no. of children that a woman and families of women choose to have. This phenomena of woman's age and no. of children has important relationship with her health as, very young woman with short stature and who haven't received well nourishment throughout her life will definitely give birth to malnourished or weak child. Average of the woman at her first birth is very important both for the health of the child and health of the mother.Mostly in low income countries a woman has comparatively younger ages of first birth than in higher income countries.Another important factor in the global health in regards to demography is; Millions of missing

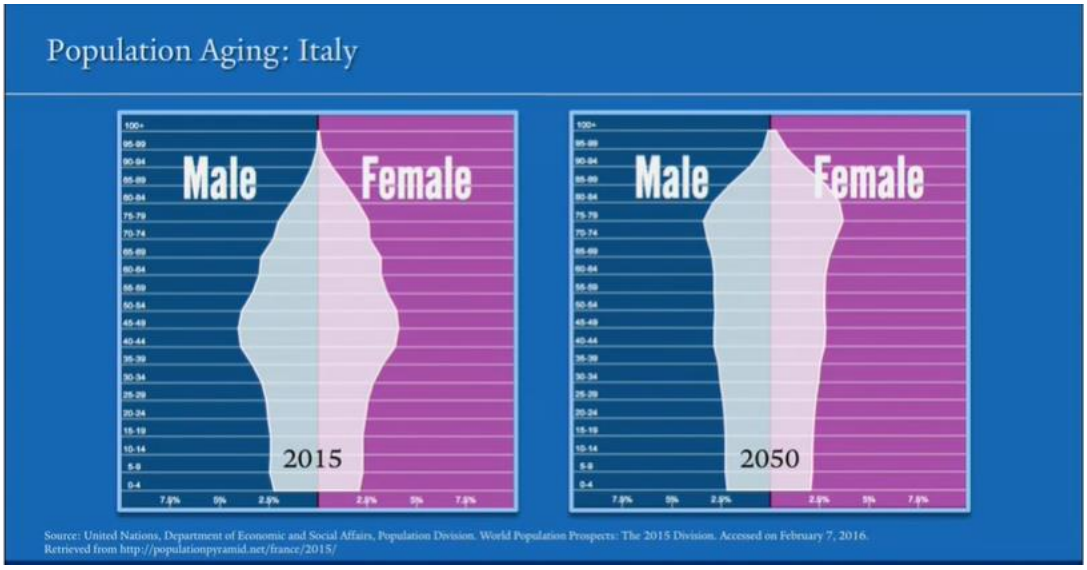


girls. The pattern is particularly seen in India and China, where very skewed ratios between men and women are observed. The major attribute to this is the sex selective abortion that's been occurring in both countries.

Urbanization of the world is another significant demographic factor of substantial importance. And the world is urban now, with its continuation towards urbanization.

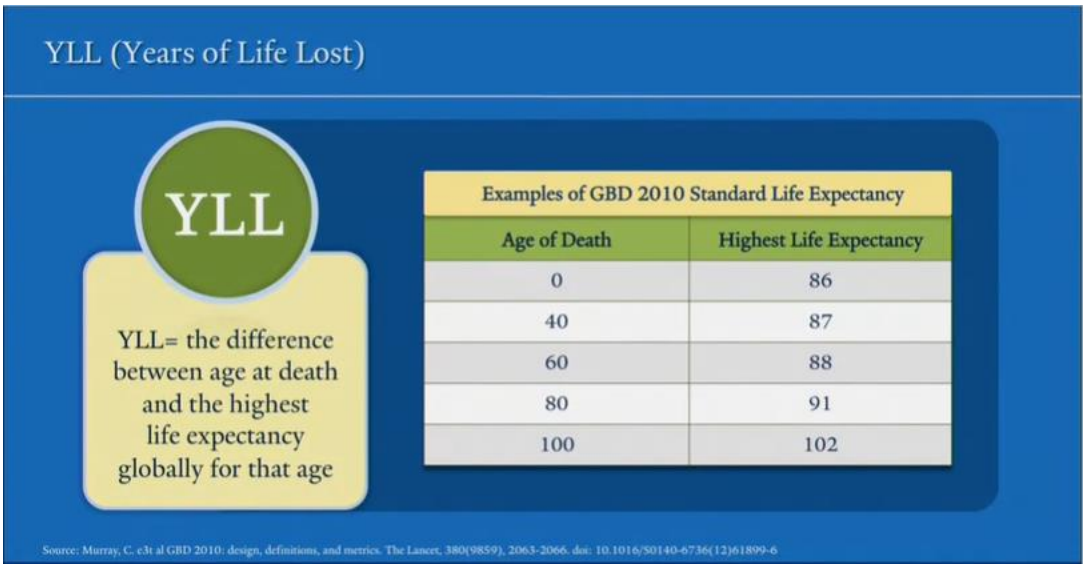


The demographic phenomena or factor that has the most significant impact on health is the factor of population aging. Population pyramids, or distribution of population according to age in Italy has shown.

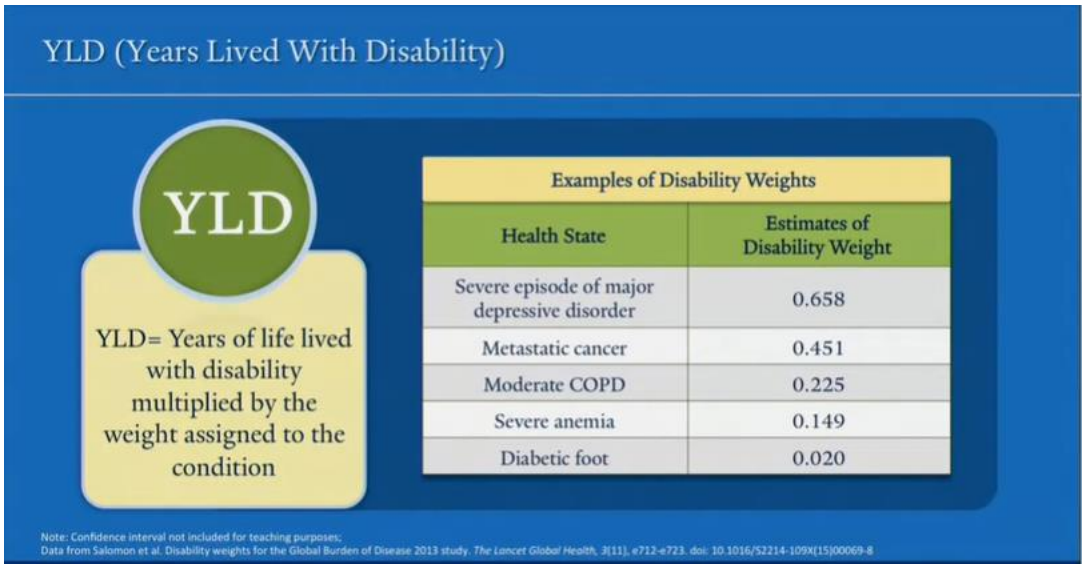


Through this population distribution graph, we can infer that fertility rates in Italy are really low; a potentially larger share of the population is above 65. 24-25% of the total population was above 65 in 2015. According to UN's projections it was projected that about 35% of the population of the Italy will be over 65 in 2050.

The DALYs: A significant factor for calculating disease burden globally. Though, it's not a perfect measure, The DALY comprises of "years of life lost due to premature death" plus "years of life lived with disability".



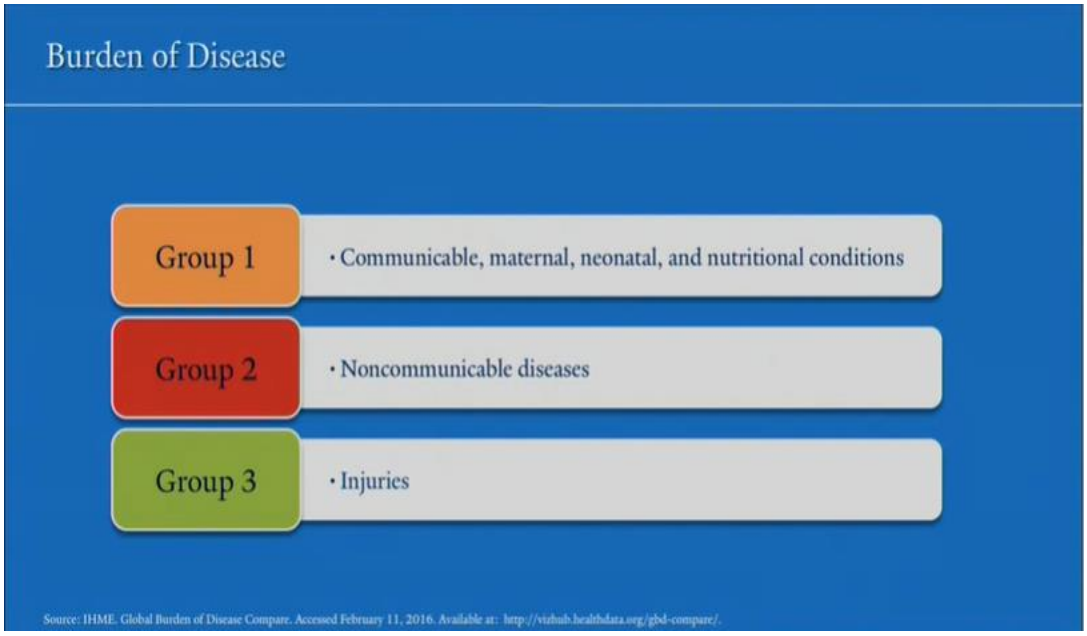
- **YLL (Years of Life Lost):** The difference between age at death and the highest life expectancy globally for that age.



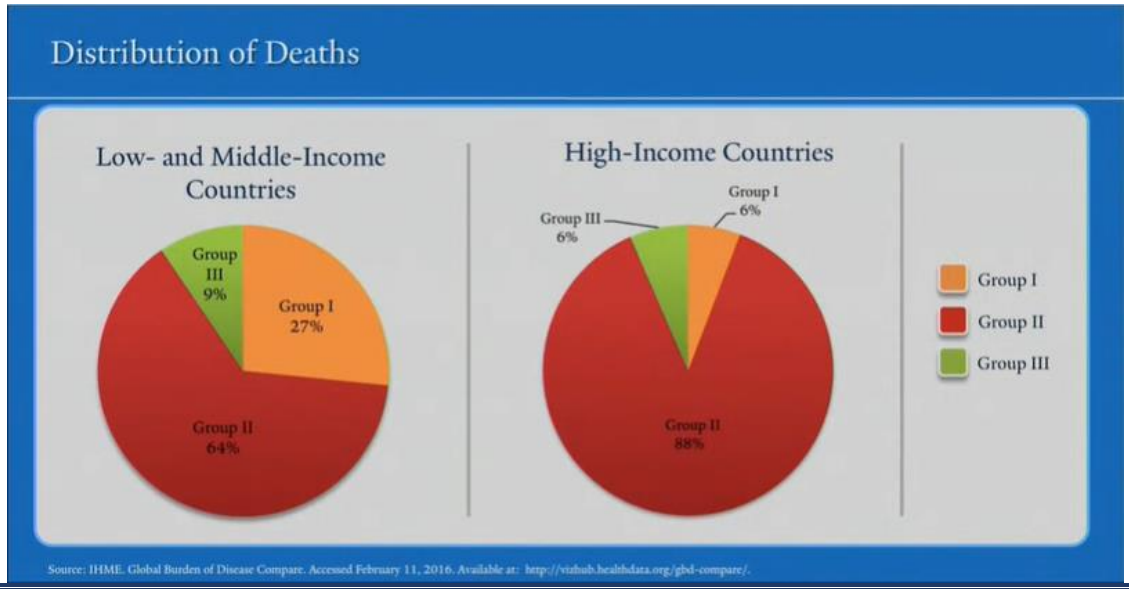
- **YLD (Years lived with disability):** Years of life lived with disability multiplied by the weight assigned to the particular health condition.

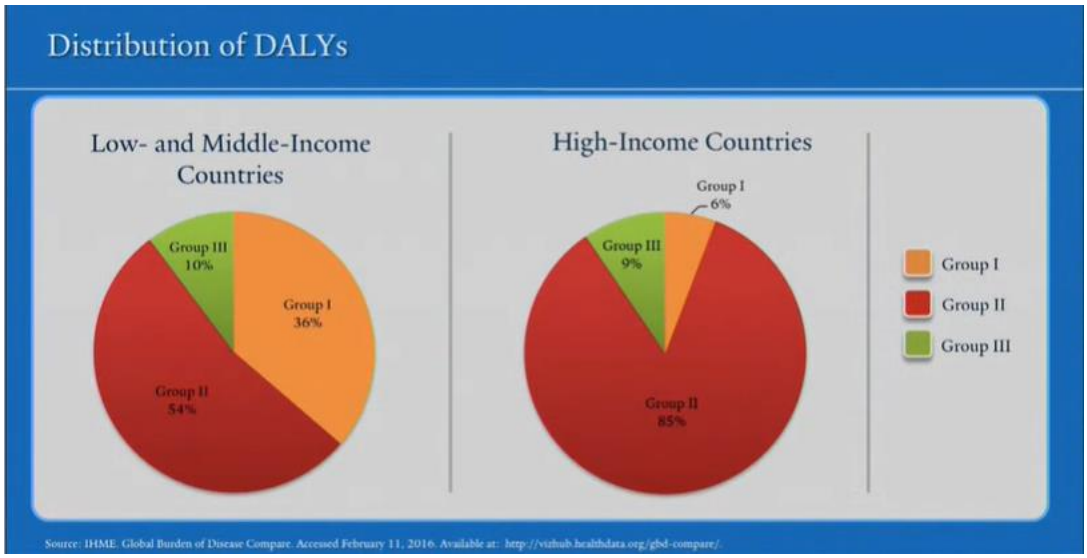
Calculating the years spent with disability, it is very important to know the disability weight that's attributed to that particular health issue.

Why is it about people being ill, injured and dying?



The major burden of Global disease falls under these three categories. In low and middle-income countries, the predominant cause of death and DALY is **Non- communicable disease burden.** This is substantial; however amount of communicable diseases and about 9% of the total deaths in these countries due to injuries is also quite high. In higher- income countries we see, overwhelmingly people are dying of non- communicable diseases and there is relatively very small share of total deaths that stems for communicable diseases and injuries.





For distribution of DALYs, Low and middle-income countries reflect the real paradigm shift from what we've seen in the pattern of deaths is burden of communicable diseases which is associated with fair amount of disability. This shift in the paradigm is called as **"Epidemiological transition".**

- **Epidemiology transition:** The notion of epidemiological transition, is a transition from a disease profile that is predominantly communicable before to the one that is predominantly non-communicable now. Many years before when the world was barely developed, people used to die young of communicable causes more as compared to non-communicable diseases. There's still a fair no. of countries among the lowest-income countries which still has the burden of communicable diseases.

Key risk factors for Deaths and DALYs: The global disease burden was also showing the world's main potential risks for deaths and DALYs. These attributes are examined in different World Bank regions. In Sub-Saharan Africa, the risk of death tends to be primarily associated with transmissible diseases, prenatal conditions, dietary causes and maternal causes. The risk factors were different from Sub-Saharan Africa as anticipated in Latin America and the Caribbean World Bank region. The risk factors here include high blood pressure, high body mass index or obesity, high fasting plasma glucose or high blood sugar, increased cigarette use populations, drug consumption and kidney disorders. Increased total cholesterol, a high sodium intake and a lifestyle factors are also some risk factors in high-income countries.

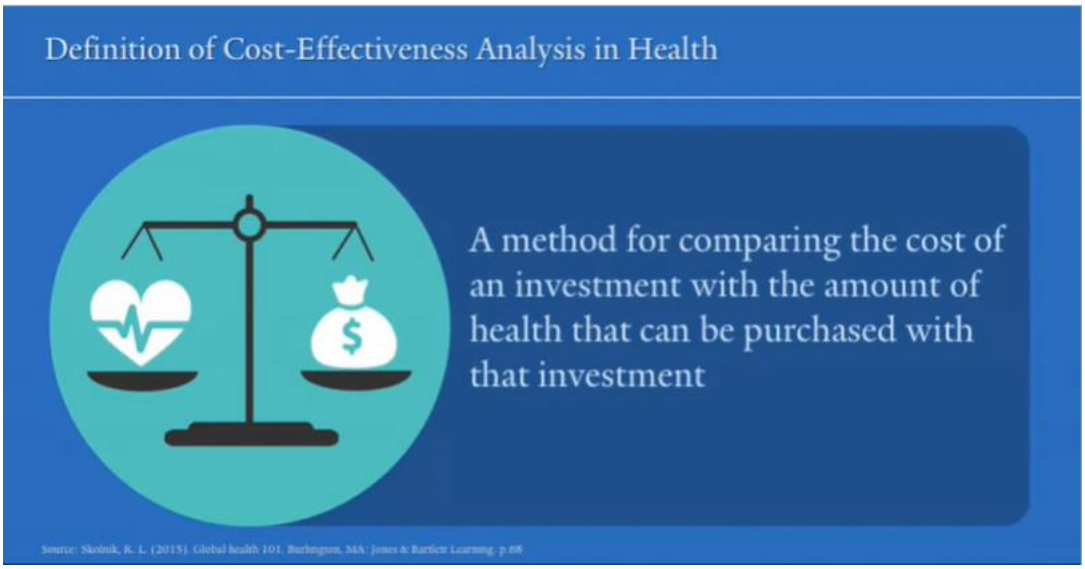
For the deaths of under-5 children, the leading factor in Sub-Saharan Africa is found to be childhood under nutrition, sub-optimal breast feeding, and intake of contaminated water and sanitation, which also applies to hygiene hand washing. Furthermore, household pollution has also been seen as one of the leading risk factors for deaths and DALYs

Value for money in Global health: The Cost-effectiveness in healthcare system basically relies on the cost of the intervention program, produced outcomes and the extent to which interventions are implemented affectively; this is the value for money and health. Some considerations like; incidents and prevalence, cost of intervention and the outcomes produced. Should be made for the reliability of cost-effectiveness tool.

Cost-effectiveness analysis is important because money is not unlimited. It is important to set priorities. All governments have to set priorities for investment to purchase the amount of health.

Other Factors to be considered:

- Political factors, political forces and political parties
- Equity
- Burden of disease
- Extent of the investment
- Capacity

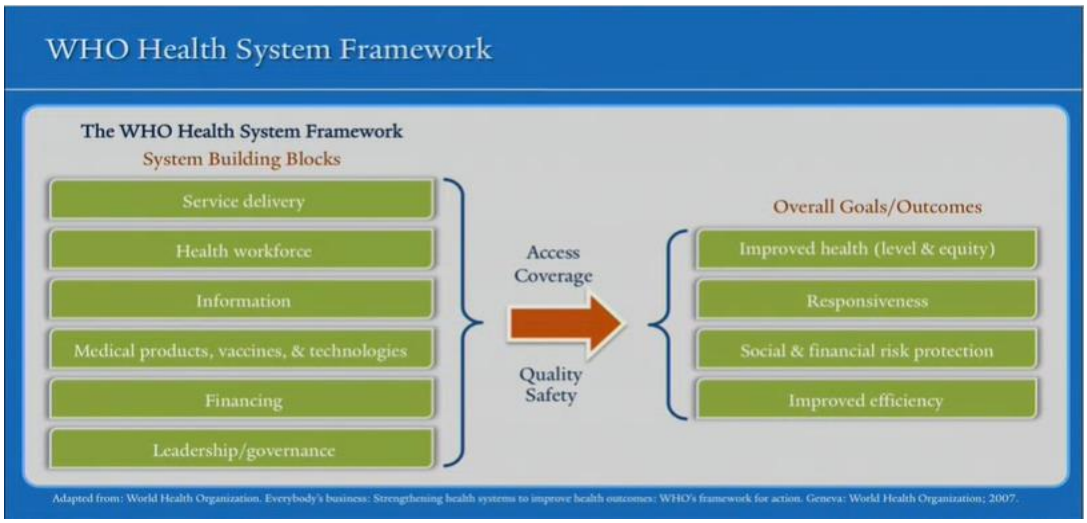


The organizations and aims of Health systems:

- **Health System:** All practices which are primarily intended to encourage, restore and/or preserve safety. That includes the individuals, institutions and services organized in

accordance with the policies developed. Improving the health of the community they represent by reacting to the reasonable demands of people and shielding them from the cost of ill health through a range of programs aimed primarily at improving health. The primary focus of any level of the health system is to reduce the out of pocket expenses for health treatment.

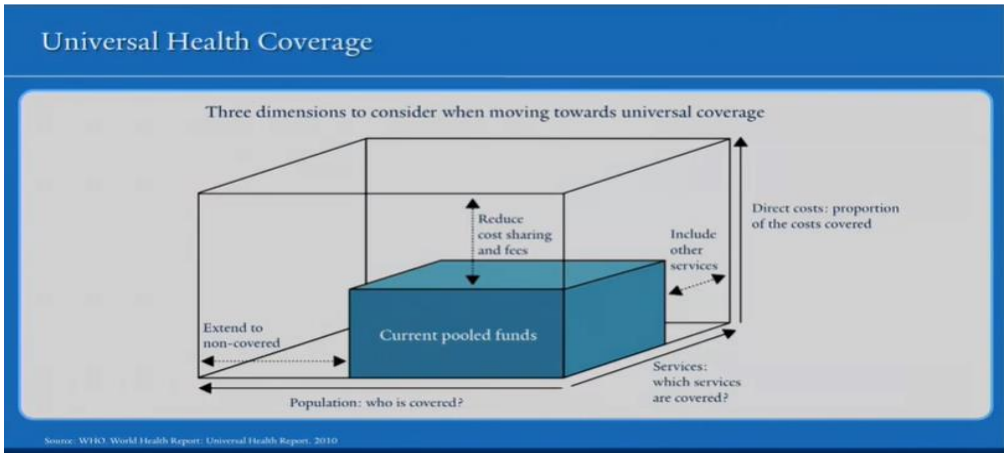
- **WHO's Framework for Health System:**



Starting with the outcomes we inferred that the major goal to be achieved is the improved health of the person in equitable ways. Now, in order to achieve this the program must be open to people's needs and their social mores, that it has to provide social and financial protection and the work should be carried out in the most efficient and effective ways. In order to achieve these outcomes, the inputs that'll be required are: good leadership and governance in the system coupled with sound administration, the system has to raise money and be able to spend it effectively and efficiently, the system should have health management information system so we can study what we're doing by keeping a track of it and finally, keeping the feedback of the information for using it to make good decisions. It has to have health workforce in the right place at the right time, with the right training in the whole country, it should have medical products, vaccines, etc. So, that our health workforce can assist in ensuring that these are used efficiently and effectively.

Expenditure on hygiene, search for UHC and pharmaceuticals: It reflects the major challenges faced by many governments of different countries in focusing on health aspects of the society. These challenges include: Financial crunches for low and middle- income countries for the payment of sufficient number of drugs and vaccinations, proper establishment of pharmaceutical supply chainas, sometimes some drugs require cold temperature which is not attained

appropriately during rural delivery, taking decisions over prioritizing the procurement of which drug and vaccination etc.



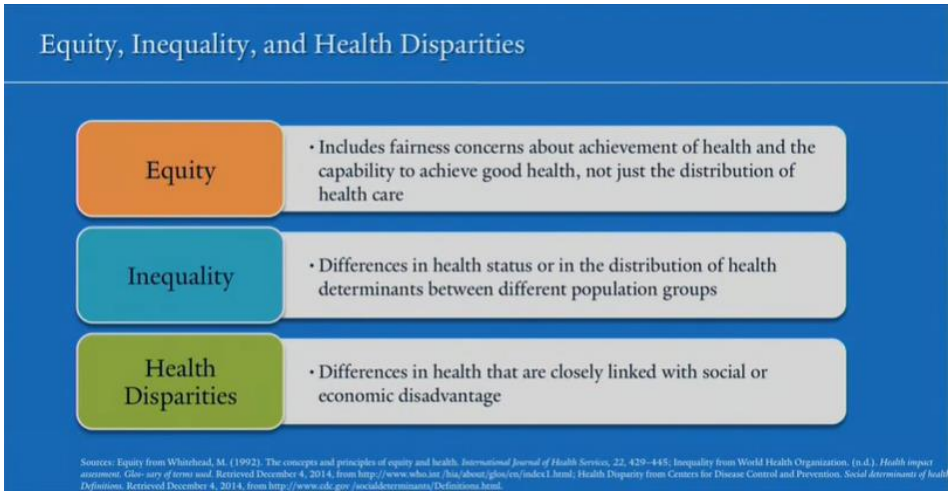
This is a very important figure which signifies which three main dimensions should be considered towards universal health coverage for a country. As, our resources are not unlimited so, the decision-making process should be done with all the cost-effectiveness considerations and appropriate prioritization.

First question that needs to be emphasized: Population to be covered.

Second question: which services should be covered?

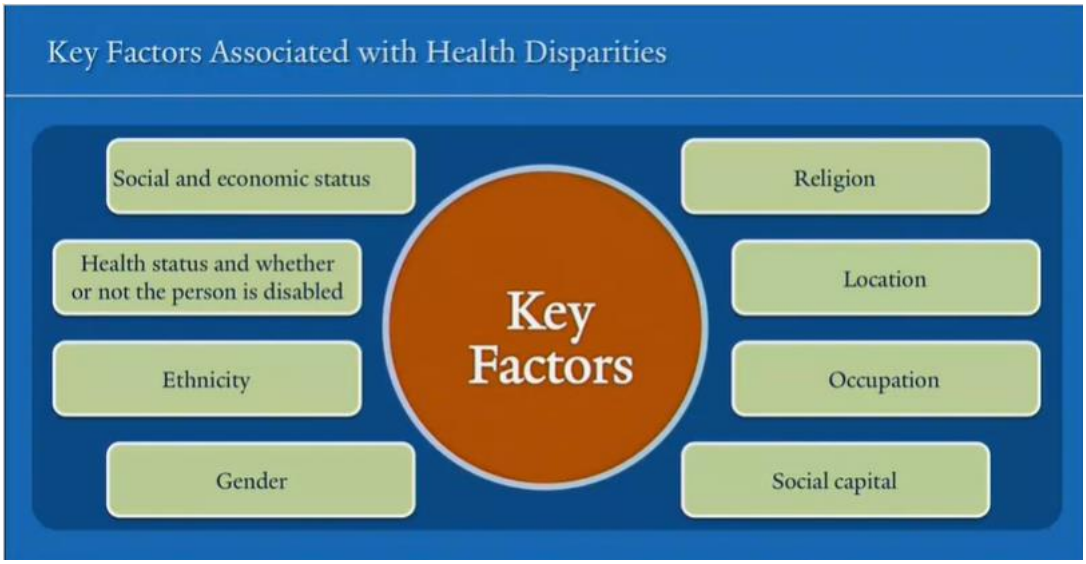
Third major question which should be focused: what proportion of the cost needs to be covered?

Health Disparities: Disparity somewhere is the amalgamation of equity and inequality, where, the disparity in health status that relates to social disadvantages can be considered.



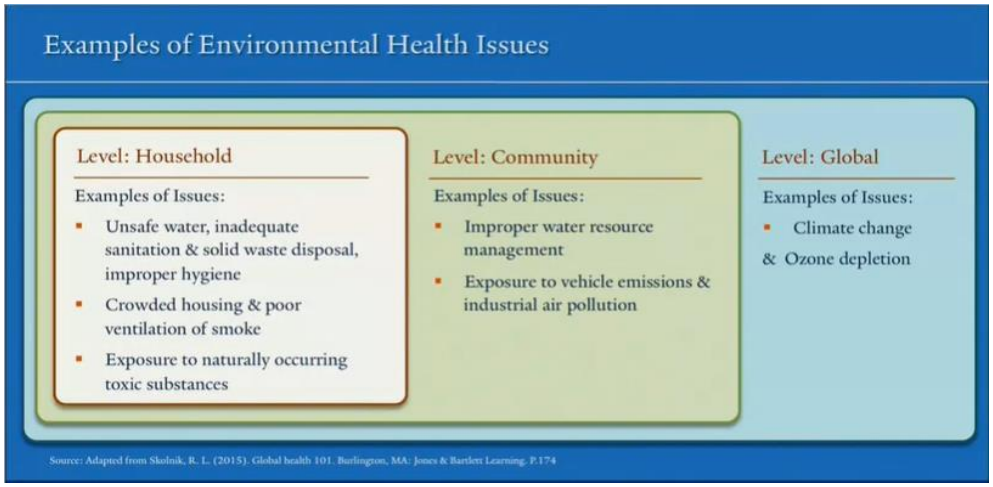
Factors most closely linked to the rise of health inequalities are:

- Access to monetary resources
- Many classes of people more disadvantaged or ostracized out of society
- Discrimination towards some groups of people like; indigenous people against whom there are pre held misconceptions, which hinders their way towards access of health and health services.

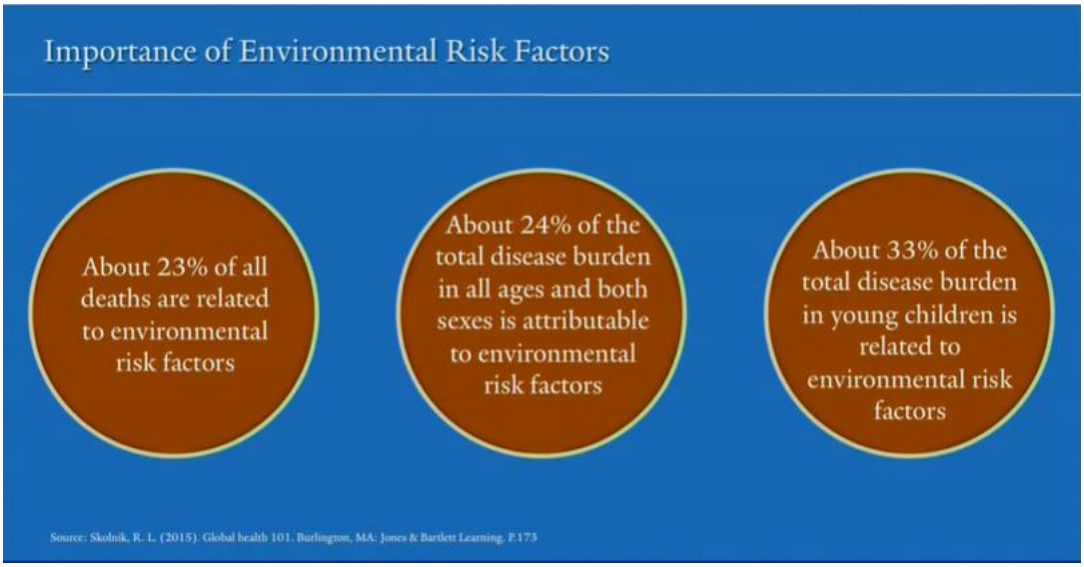


Disparities in health are totally central to the study of public health and world health. As, it helps us to see the health statuses of different countries through equity lens through analyzing the health status of various people, their connection to health care, the availability of health insurance, the extent to which they are shielded from financial crunches and the equal distribution of health benefits overall.

Earth, Environment and Safety and Climate Change:



- **According to WHO:** environmental health comprises those aspects of human health including quality of life. Those are determined by physical, chemical, biological, social and psycho-social factors in the environment. It also refers to the theory and practice of assessing, correcting, controlling and preventing those factors in the environment that can potentially affect adversely the health of present and future generations.
- **Major threats:**
  1. Ozone depletion
  2. Global Warming
  3. Exposure to vehicle emission and industry pollution
- Importance of environmental health factors:
  1. Approximately 23 per cent of deaths include environmental risk factors.
  2. Approximately 24 per cent of the total disease burden in DALY is due to environmental risk factors in all age groups of both sexes.
  3. It is also estimated that 33% of the disease burden is associated with environmental risk factors in young children.



According to health indicators and assessment: 15% of all deaths are due to five environmental risk factors across all age groups and all sexes; better water, inadequate sanitation, noise contamination, household air pollution and lead.

The World Health Organization reports that air pollution in the atmosphere caused 6.7% of all deaths in 2012. They have estimated that approximately sixteen% of deaths from lung cancer,

eleven% of deaths from chronic obstructive pulmonary disease and over twenty% of deaths from ischemic heart disease and stroke were due to ambient air pollution. And again, despite their great size and complexity, India and China, as we would suspect, have big disease burdens that contribute to particulate matter environmental air pollution as they call it.

Common Air Pollutants & Their Health Effects

Name of Pollutant	Example	Health Effects
Carbon monoxide	Combustion of gasoline and fossil fuels; cars	Reduction in oxygen- carrying capacity of the blood
Lead	Leaded gasoline, paint, batteries	Brain/central nervous system damage; digestive problems
Nitrogen dioxide, nitrogen oxides	Variety of oxygen formed by chemical reaction of pollutants	Damage to lungs and respiratory system
Ozone	Variety of oxygen formed by chemical reaction of pollutants	Breathing impairments; eye irritation
Particulate matter	Burning of wood and diesel fuels	Respiratory irritation; lung damage
Smog	Mixture of pollutants, esp. ozone; originates from petroleum-based fuels	Irritation of respiratory system and eyes
Sulfur dioxide	Burning of coal and oil	Breathing problems; lung damage
Volatile organic compounds (VOCs)	Burning fuels; released from certain chemicals (e.g. solvents)	Acute effects similar to those of smog; possible carcinogen

Source: Adapted from Skolnik, R. L. (2015). Global health 101. Burlington, MA: Jones & Bartlett Learning. P.175; Data from :U.S. Environmental Protection Agency. *The plain English guide to the Clean Air Act: The common air pollutants.* Retrieved March 28, 2005, from http:// www.epa.gov/airquality/peg_caa/cleanup.html; U.S. Environmental Protection Agency. *Air & radiation: Six common air pollutants.* Retrieved February 27, 2015, from http:// www.epa.gov/air/urbanair/.

Nutrition and Global health: Vitamin A deficiency was predominantly the leading cause of blindness in children, or Xerophthalmia as everyone call it some 20 years back but, now the no. of children suffering from blindness is very low.

- Variables which are used to determine young children's nutritional status are:

Gauging Nutritional Status for Infants & Children

Measure	Index	Definition
Birthweight	Low birthweight	Child's weight at birth is less than 2500 g
Height-for-age	Stunted	Height-for-age is 2 z-scores or more below the median of the international reference for height-for-age
Weight-for-age	Underweight	Weight-for-age is 2 z-scores or more below the median of the international reference for weight-for-age
Weight-for-height	Wasted	Weight, measured in kilograms, divided by height, in meters squared, is more than two z-scores below the median of the international reference

Source: Adapted from Skolnik, R. L. (2015). Global health 101. Burlington, MA: Jones & Bartlett Learning. P.200

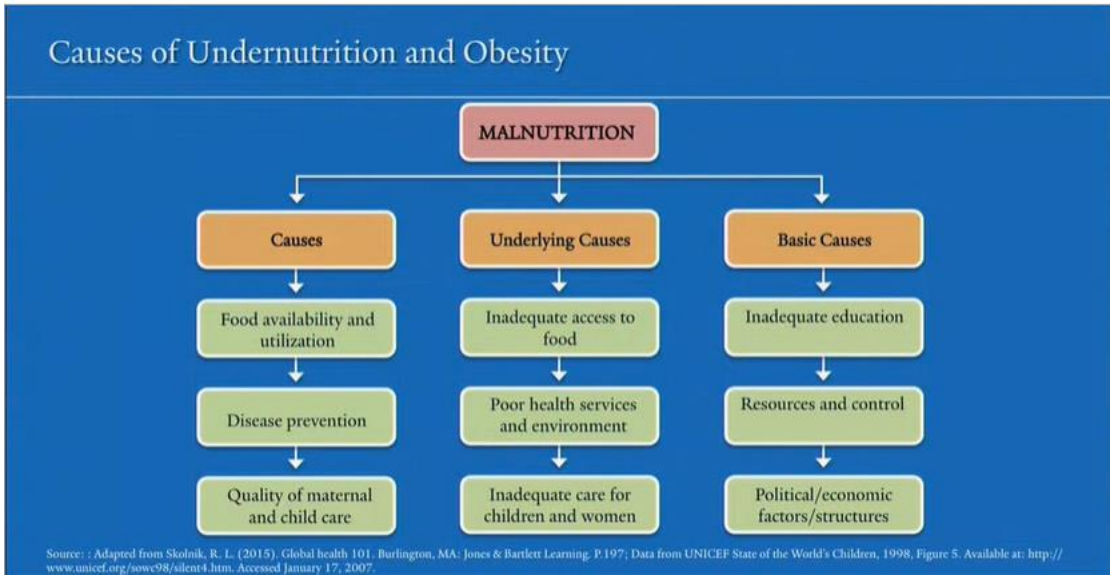
Selected Micronutrient Deficiencies, by UN Region

	Prevalence of Vitamin A Deficiency (%)		Prevalence of Zinc Deficiency (%)	Prevalence of Iodine Deficiency (%)	Prevalence of Iron Deficiency Anemia (%)	
Region	Children < 5	Pregnant Women	Overall	Overall	Children < 5	Pregnant Women
Africa	41.6	14.3	23.9	40.0	20.2	20.3
Americas & Caribbean	15.6	2.0	9.6	13.7	12.7	15.2
Asia	33.5	18.4	19.4	31.6	19.0	19.8
Europe	14.9	2.2	7.6	44.2	12.1	16.2
Oceania	12.6	1.4	5.7	17.3	15.4	17.2

Note: Vitamin A deficiency definition used is serum retinol <0.70 μ mol/L (1995-2005); Zinc deficiency defined as inadequate zinc intake and is determined from a weighted average of country means (2005); Iodine deficiency defied as urine iodine concentration < 100 μ g/L (2013); Iron deficiency anemia defined as hemoglobin < 110 g/L (2011)
Source: : Adapted from Skolnik, R. L. (2015). Global health 101. Burlington, MA: Jones & Bartlett Learning. P.207 ; Data from Black, R. E., et al. "Maternal and child undernutrition and overweight in low-income and middle-income countries." The Lancet 382(9890): 427-451.

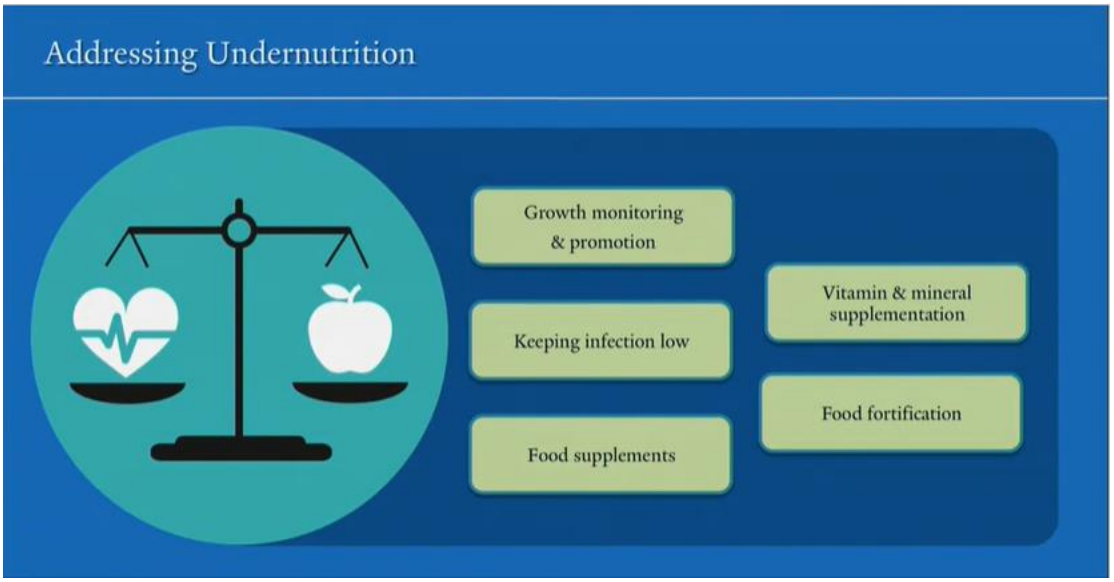
Child's birth weight is a very important indicator for estimating the child's probability of thriving. Also, I learnt that we look height for age of the child, we looked at weight for age of the child and we look at weight for height of the child in order to compare them for standard or reference population. After this, substantial attention is given to the children who are below than the median.

The data on this nutritional value according to countries is not great but, it is the best data available. The data on zinc is spatially limited.



- Vitamin A and zinc are more closely associated with immunity than iron and iodine. In nutritional deficiency and micronutrient deficiency which are associated with child deaths or increased morbidity, excess deaths in children, the two which are most significant are Vitamin A and zinc. Iodine too is very essential because it promotes the growth of the children and at the same time deficiency in iodine will lead to thyroid problems such as development of large growth called goiter. Iron deficiency or anemia is very, very common and its deficiency will reduce the strength, causes fatigue and will cause the person to feel less productive than a person would normally be.
- Another important global nutrition concern is the increasing level of obesity in people due to surplus of resources in high-revenue nations, meanwhile in comparison, substantial amount of under nutrition people in low- income countries are on rise.

- We can address the concern of undernutrition globally by focusing on some of the key factors:

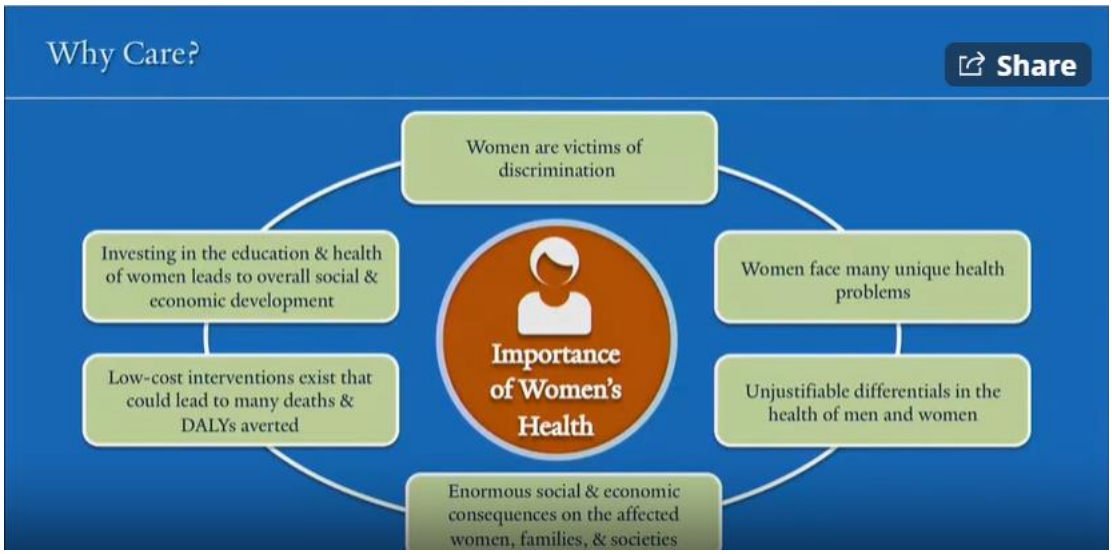


1. Through growth monitoring and promotion, we as an individual or community as whole can examine the growth curve of children by weighing them and observing their growth status whether it is meeting the standardized criteria or not. Children who are not thriving can be given extra nutrition and care under promoting efforts which can be taken to enhance their current nutritional status to get the kids back on the growth curve.
2. There has been found and established length of relationship between nutrition and infection, and between infection and nutrition. That's very important in ensuring children's health stature so, that their health cycle remains as virtuous cycle and not vicious cycle. One important way to certainly achieve this is through child immunization. There's been considerable amount of global efforts and within many

countries that children are sufficient rather than deficient in key micro nutrients of vitamin A, zinc, iron and iodine.

3. Food fortification is also a way of trying to ensure that essential requisite micronutrients are built in food that we all eat. It' the world's most successful approach, which has come into highlight through fortification of salt with iodine that has made dramatic progression in reduction of the problems might come from iodine deficiency.

Health of women: Compared to men, women mostly have different health problems; one such concern is of child birth. Also, women play a very significant role in the family, because they often primarily considered responsible for raising the children and managing family. Mother's wellbeing is quite clearly related to the health of a child, so by ensuring that the mother's health is fine by taking proper care of it we're also ensuring that the next generation is taken care of. Women have often been traced into gender discrimination issues onto many areas of life, this discrimination somewhere has created a unique measure of disparities between men and women. This is one of the concerns to care about women's health in particular.



"Being born as female is dangerous for your health"

Understanding main issues that affect women's health is very important to consider some of the relevant biological and social determinant factors. Issues related to biology are; risk of ovarian cancer, cervical cancer, women had more expose mucosal areas and are more susceptible in a greater risk of HIV than men are

Other health concerns referred to or related to the social status of women such as; families that might strongly push them towards getting married very young, having their first birth very young, having large no. of children and having them in quick successions. Sometimes, there are chances where women are indulged in the violence by intimate partner and other violence against them as well, which is very common in so many countries.

There are very important and threatful health issues that women face and these go well beyond just the issues concerning reproductive health. As, countries are getting better and better off, women are expected to suffer from substantial amount of disabilities from musculoskeletal disorders from depressive disorders, from sensory disorders in the absence of required change.

One of major global women' health concern is of **"Female genital mutilation".**

- **Genital mutilation of females:** This is a method of partial or total elimination of external genitals of women. Half of the girls that go through female genital mutilation are cut by the time they're five and the rest by the time they're 15. No. of girls who undergo FGM is declining, but it's estimated that 3 million girls are cut every year.

When FGM practice is performed initially it can lead to shock or unbearable pain, further it is also related to the risk of numerous infections because the equipments used for cutting are not always clean and it can be associated with acute hemorrhage. With prolonged life, it can have a no. of deleterious health defects including urine retention, infertility and obstructive labors. Babies born to women who had underwent FGM are also likely to undergo resuscitation after birth or die a neonatal death. These infections overall can lead to serious health consequences, including pelvic inflammatory disease, ovarian abscesses, and infertility.

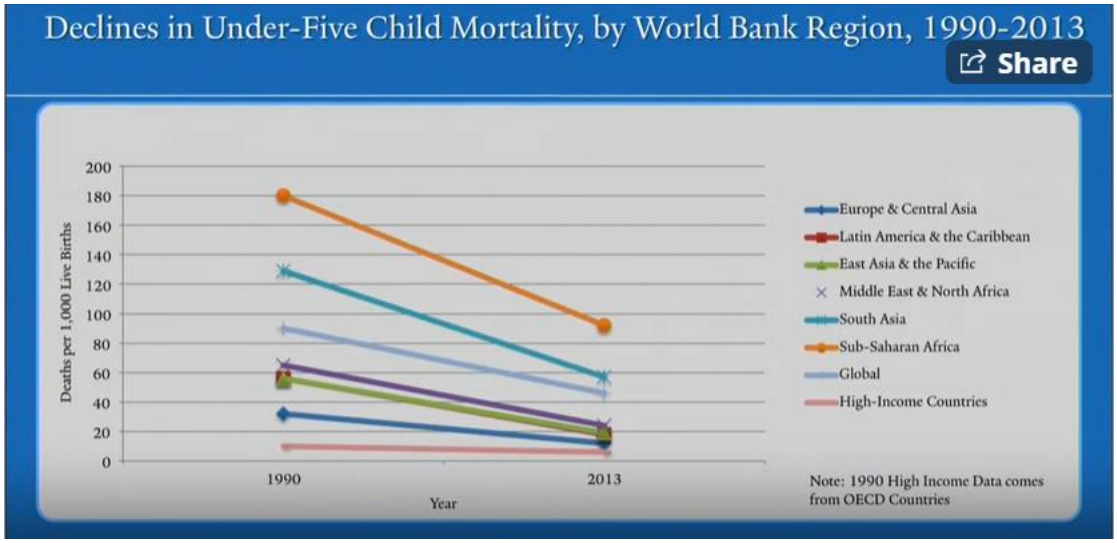
Violence as well as sexual abuse against female is very common globally. In general, sexual abuse is defined as statutory offense, sexual assault, sexual molestation, sexual harassment and incest. According to a study by UN AID, between 10 to 50 per cent of women around the world have been physically abused in their intimate relationship at least once in their lifetime. Women around the world were battered, forced into prostitution and subjected to serious emotional violence. WHO has also estimated that about 22 million illegal abortions occur in the world annually, it is equally important to consider this because it's estimated that about 13% of all maternal deaths in the world are attributed to unsafe abortions.

Another serious health condition of women due to unsafe abortions is a medical concern of **"Obstetric Fistula".**

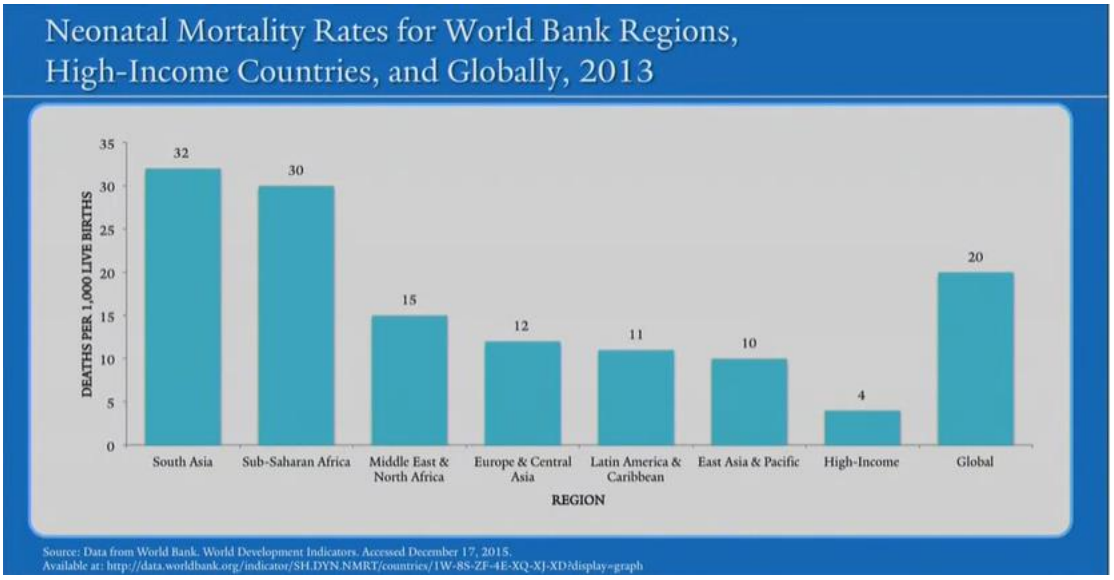
- **Obstetric Fistula:** It is a condition in which a hole opens up in women between the bladder and the vagina or between the rectum and the vagina. This is due to the result of prolonged or failed childbirth. As, a consequence of this, urine or feces are leaked through vagina.

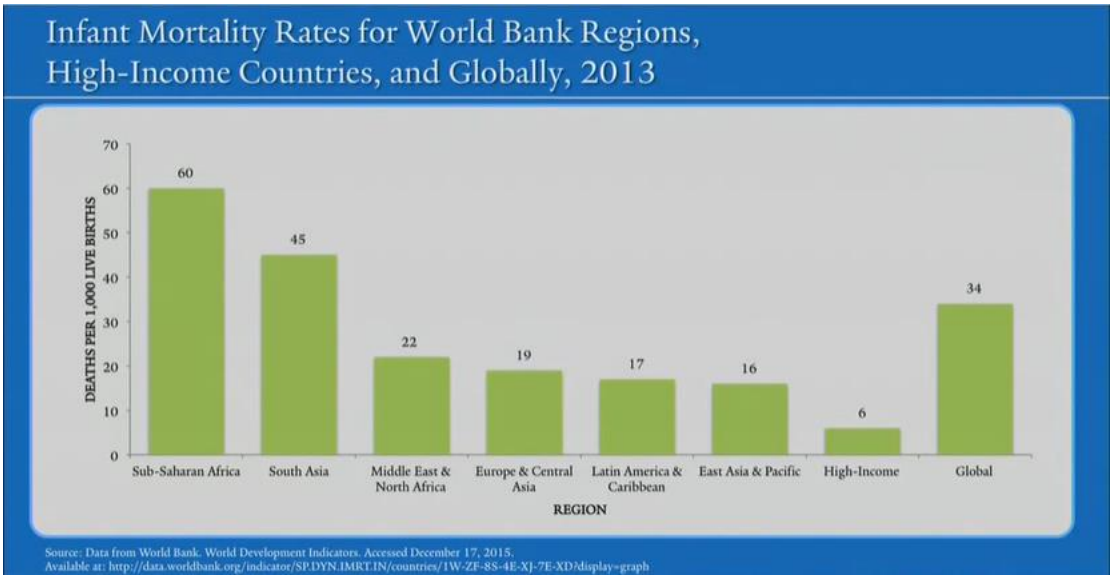
Through this we can infer clearly that obstetric fistula can have enormous adverse social consequences. As, a woman who suffers a condition of leaking feces and urine is almost certainly prone to social stigma, often by her own family and community around her. There are about 2 million women in the world who have suffered and are living with obstetric fistula.

Child health: There has been a notable decrease in the mortality rate of under 5 children by world bank area, it's good news that over these years the no. of deaths per thousand live births of children under- 5 of age, has moved in the correct direction in all regions of the world and many less no. of children are dying than they did some 25 years ago.

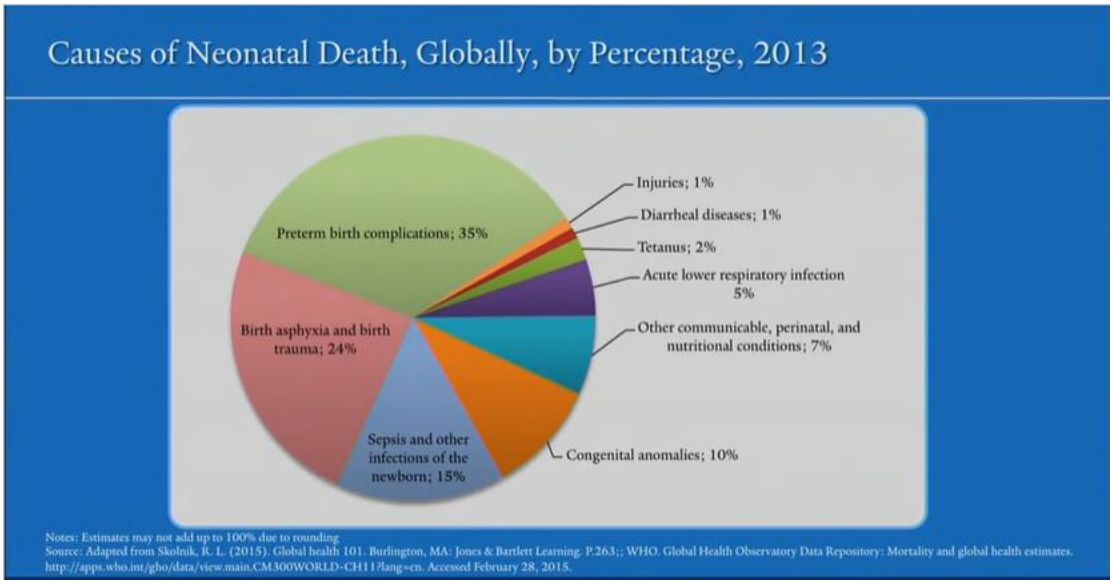


The rate of neonatal deaths in sub-Saharan Africa per 1000 live births is seven times and in high-income countries, South Asia is eight times the rate. Though, the comparison is irrelevant but it's very important to remember, if these countries are able to, they should be able to bring neonatal deaths down to certain level. Here forth, the majority of these deaths of neonates are in fact preventable.





Here, again high-income countries we observe the similar paradigm of infant mortality rates for world bank regions, Although the Sub-Saharan Africa rate is ten times greater than the high-income countries, the South Asian rate is more than seven times higher than the high-income countries. Now, again most of these deaths are preventable. South Asian countries have made important progress in decreasing deaths among children one to five. But, enough attention hasn't been paid to the reduction of deaths in neonatal period, which in many aspects are much tougher to get to.



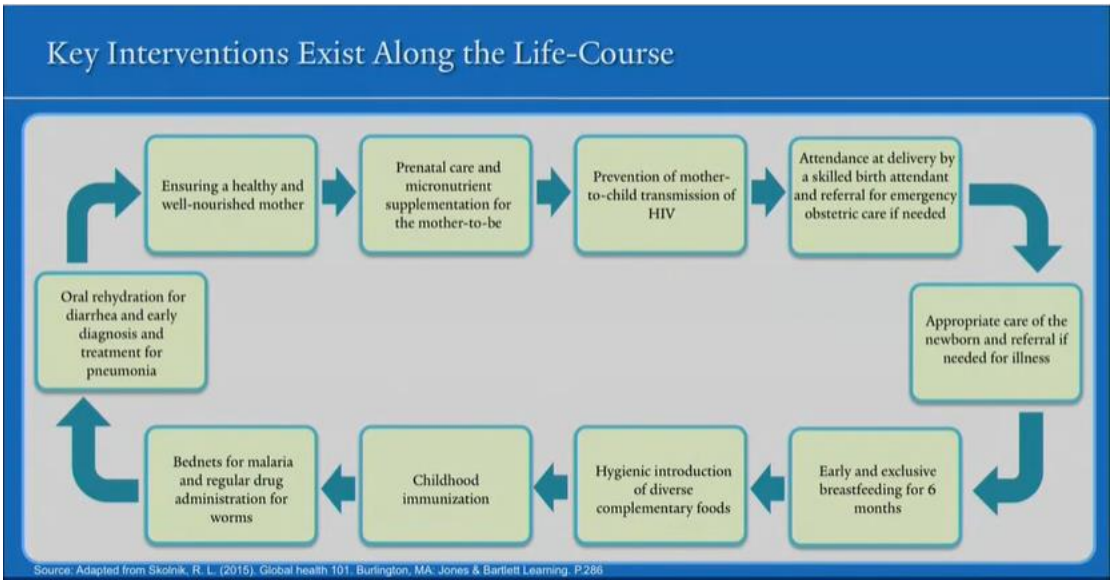
Here, we can infer that how preterm birth complications are the major leading cause of the neonatal death, followed by **"Asphyxia".**

- **Asphyxia:** A condition in which children are born alive but they can't breathe and it can be addressed through very easy means of training by those who attend the birth to suction out the baby.

Fortunate are the babies who are born in high income countries where attendants took a no. of steps to be sure that the child is kept warm, wiped down appropriately and suctioned out in order to nullify the problem of birth asphyxia that is an important cause of death.

Neonatal and infant deaths are avoidable through the provision of extra care for small babies, many which can be taken at the community level. Many of the aspects which can considered in preventing neonatal and infant deaths somewhere, has to do with knowledge and behavior. One can highlight the enough significance of exclusive breastfeeding, wiping the baby down, not bathing the new born with cold water and keeping the baby warm, all these parameters are not expensive but requires proper knowledge and behavioral skills.

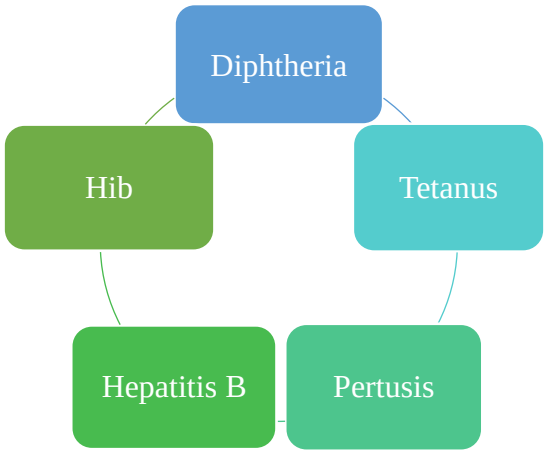
- Core health measures for the child start with the mother and the mother's health and nutritional status. This starts with; sound prenatal care, micronutrient supplements, avoiding the risk of maternal to child transmission of HIV, having an experienced birth attendant who can recognise mother's problems to tackle the health concerns of the child and mother, childhood immunization is critical and families to be aware of basic supplements and care needs.



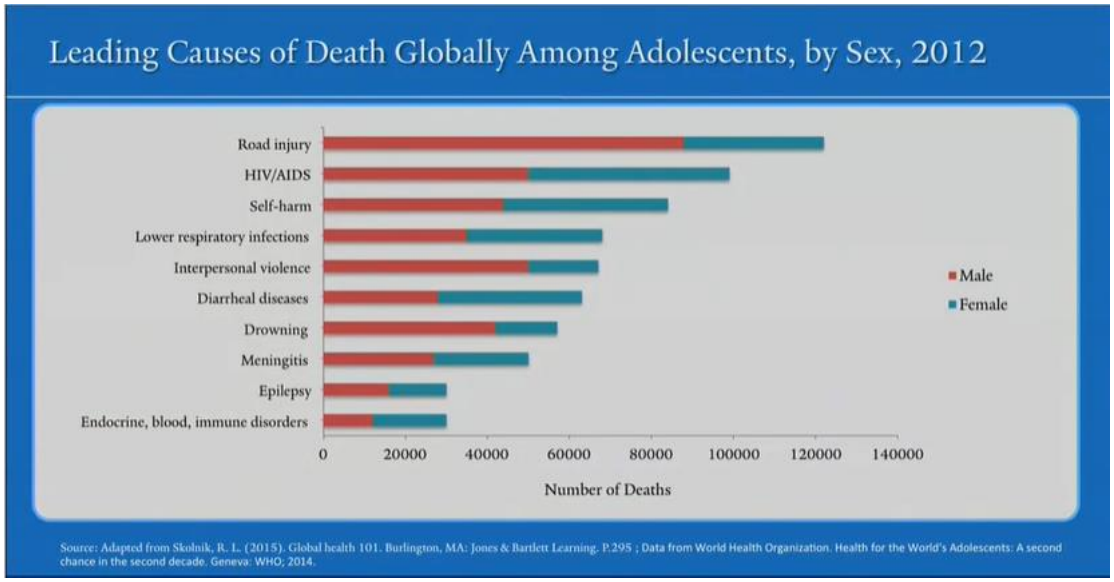
Childhood immunization:protecting the child against many harmful diseases and protecting them against harmful susceptibility of various diseases through vaccinations and drug administration is basically childhood immunization.

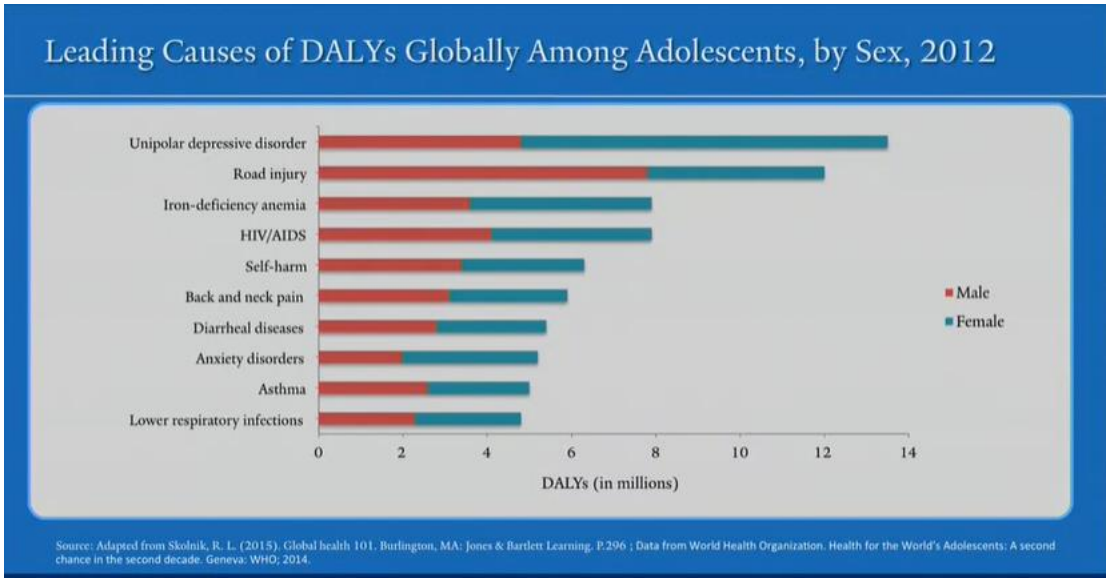
- Key benefits of childhood immunization:
  1. Providing benefits to those who are immunized and, through herd immunity, to those who are not.
  2. Preventing diseases which are often treated with antibiotics, thereby reducing the risk of developing anti-microbial resistance.
  3. Helping to keep people healthy, through promotion of economic growth and poverty reduction and allowing children to become productive adults.
  4. Saving families from the direct and indirect costs of vaccine preventable childhood diseases.

- The pentavalent vaccine is the most significant vaccine for the prolonged health of the child. It protects the child against severely life-threatening diseases.



Health of adolescents: Leading cause of deaths among adolescents in the world is road injuries. I've also learnt that HIV/AIDS has also been found out an important concern usually for upper adolescents. Also, the cases of self-harm and depression can not be neglected. Cases of pneumonia, lower respiratory infection, interpersonal violence which occur primarily among adolescents are also some of the leading concerns of health of adolescents.





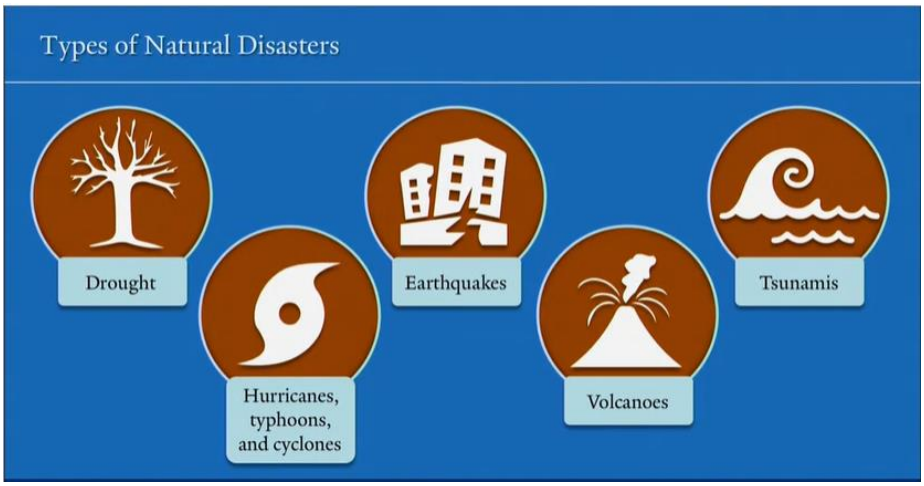
Here, the pattern of DALYs is somewhat different from leading death issue. The leading cause of DALY among adolescents is found to be mental disorders because teenage have been proven to be the most sensitive as well as the most crucial age of any person's lifetime. Risk of indulging the emotions and involvement of thoughts into something which further leads to something devastating is substantially high. Truly exceptional importance should be given to mental health

during adolescent years because the graphic itself explains unipolar depressive disorder, self-harm and anxiety disorders are all somewhat related to mental state which somewhere are contributing significantly to overall disability in adolescents.

Complex Humanitarian Crisis: A dynamic , multi-party, intra-state conflict that results in humanitarian chaos that could pose multi - level potential risks to domestic and international security.

- Key definitions:
    1. Calamity - Any event that causes damage, ecological degradation, loss of human life or deterioration of health and public infrastructure to a degree sufficient to require an exceptional response from outside the affected region.
    2. Fugitive- A person who is of nationality or habitual residence outside his / her country; has a well- founded fear or persecutions because of its race , ethnicity , nationality, social group membership or political opinion; but is unwilling or reluctant to take advantage him- or herself, for fear of persecution, to defend the country or return there.
    3. Interior displaced persons - Anyone who, for reasons such as religious or political persecutions or conflict, has been forced to flee their home but has not crossed the foreign boundary.

Major proportions of complex humanitarian emergencies are associated with large no. of internally displaced people and large no. of refugees. These refugees maybe will never or maybe could never return to their native place. Estimates have been made some years back, that loosely. Out of complex humanitarian crises, 320,000 to 420,000 people die each year. Most of these deaths are due to indirect cause like; under nutrition, epidemic outbreaks etc.
Humanitarian emergencies occur at the time of natural disasters also.



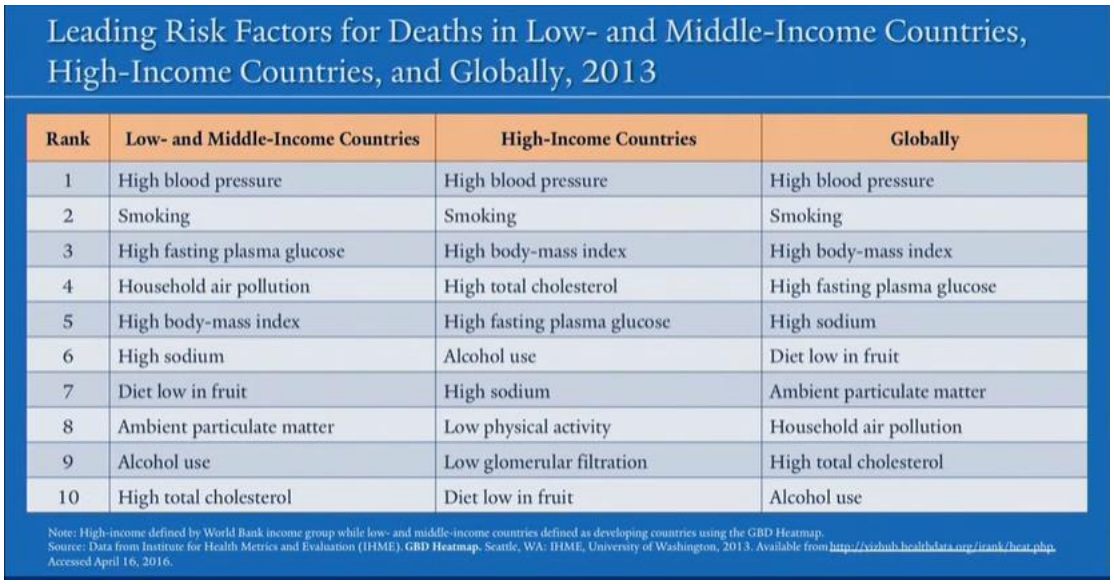
In the case of natural disasters and their association with health, we can easily infer that earthquakes kill the most no. of people and leave a lot of people injured, volcanos don't kill so many people but its affect is often destructive upon mud and from ashes. Tsunamis can also cause substantial amount of deaths, generally from drowning and when we think of group which is mostly affected is definitely the poor because of their circumstances and no means of ability to take care of themselves.

HIV/AIDS: Acquired immune deficiency syndrome is a global threatful disease which is majorly affecting many parts of the world currently. The risk of blood transfusion is highest of all, more than 9000 for every 10000 are susceptible for it. It is followed by receptive anal intercourse and then the risk of needle sharing during drug injecting among drug addicts or maybe in healthcare facilities due negligence. Those who are most at risk of being diagnosed with HIV include; sex workers or the ones who administer drugs in the body through injection, people who are engaged in sex with multiple partners, certain occupational groups, especially some truck drivers who are minors and migrant men, risk is also high if you're uncircumcised male or female. Also, female have higher biological chances of getting infected with HIV and having another STD also increases your susceptibility of becoming HIV positive.

TB: It is a bacterial infection, which basically affects your respiratory organs but sometimes can affect different body tissue too. There are no. of possibilities which can happen with a person if he is exposed to TB, one is nothing might happen to him, another thing might happen is that the person might get the infection still TB disease isn't involved. In this case the body somewhere walls off the infection and inside of that person he will have what we call as latent TB. The third case is the worst-case scenario where the person who is exposed to TB develops an active TB disease. Either the infection will affect the lungs or may be some other organ of the body. It is very important to consider that 1/3 of the in the world have latent TB and through under-nutrition, diabetes, old-age that latent TB emerges as active TB disease. TB will not spread to people with latent TB but, is able to develop active Tuberculosis. It is equally essential for study and to understand the association between TB and HIV, people with HIV are 30 times more prone to grow active tuberculosis because Human immunodeficiency virus compromises your immune system.

NCDs: It is really important to note that the diseases that are not communicable impact younger generation in low- and middle-income countries than those in higher-income countries. Also, today most low- and middle-income countries have less potential to prevent, to diagnose and

monitor non-communicable diseases in contrast with the high-income countries of today. One saddening fact is also that the deaths attributed to non-communicable diseases in low- and middle-income countries are higher than in high-income countries..



Leading Risk Factors for Deaths in Low- and Middle-Income Countries, High-Income Countries, and Globally, 2013

Rank	Low- and Middle-Income Countries	High-Income Countries	Globally
1	High blood pressure	High blood pressure	High blood pressure
2	Smoking	Smoking	Smoking
3	High fasting plasma glucose	High body-mass index	High body-mass index
4	Household air pollution	High total cholesterol	High fasting plasma glucose
5	High body-mass index	High fasting plasma glucose	High sodium
6	High sodium	Alcohol use	Diet low in fruit
7	Diet low in fruit	High sodium	Ambient particulate matter
8	Ambient particulate matter	Low physical activity	Household air pollution
9	Alcohol use	Low glomerular filtration	High total cholesterol
10	High total cholesterol	Diet low in fruit	Alcohol use

Note: High-income defined by World Bank income group while low- and middle-income countries defined as developing countries using the GBD Heatmap.
Source: Data from Institute for Health Metrics and Evaluation (IHME). **GBD Heatmap**. Seattle, WA: IHME, University of Washington, 2013. Available from http://vizhub.healthdata.org/irank/heat.php. Accessed April 16, 2016.

- Key points of NCDs:
  1. NCDs Make up the largest proportion of deaths and DALYs in all parts of the world except Sub-Saharan Africa)
  2. Non-communicable disease is growing in low- and middle-income countries as a share of overall deaths and DALYs.
  3. Almost all of the non-communicable disease risk factors are connected to 'lifestyle.'
  4. Numerous NCDs may be avoided at relatively low cost, but the treatment can be very pricey.
  5. For low- and middle-income countries, NCD is highly relevant considering its burden, the relatively young age at which they strike and their health and economic consequences.

Looking Forward: it's also going to be very important for people, for communities, and for countries, to invest in addressing some of the top ones environmental and social determinates of health, like the lack of safe water, like poor sanitation, poor hygiene, like measures needed to enhance nourishment status, particularly for youngsters and young mistresses. And especially in the longer run, the importance of ensuring that all girl children everywhere go to schools of sufficient quality and go to those schools long enough that the changes in what they know will be able to enable societies to change for the better and for the healthier and in sustainable ways.