Unit 7: Africa

DISEASE IN AFRICA

Report:
https://www.youtube.com/watch?v=2Kv8qkEsFeQ
HIV: *Human Immunodeficiency Virus*

HIV is a relatively modern disease unlike Diabetes, Parkinson’s, and Malaria that were all described in medical texts of the Egyptians, Chinese, and Greeks thousands of years ago.
HIV

- Where did HIV originate?
  - Conclusive evidence points to Central Africa
  - Simian Immunodeficiency Virus (SIV)
    - Disease carried by Chimpanzee’s in Cameroon
    - Chimpanzee’s were butchered and sold for their meat
    - Over years disease evolved into HIV-1 which could be carried by humans

- 2,000 people suspected of having it by 1960’s

- **DRC**
  - 1970’s believed that this is where the first epidemic occurred.
  - Surge of opportunistic infections
    - Meningitis, tuberculosis, specific pneumonia

- **How it spread:**
  - One person brought it down from Cameroon.
  - Spread quickly through sexual network.

- Carried into **eastern Africa**
  - *Did not reach epidemic until 1980’s*
  - Took the continent in the 1980’s
1. Humans butcher chimpanzees infected with SIV.

2. The virus is carried by people travelling along the river ...

3. ... to Kinshasa, where the epidemic begins.
HIV 1990s

- Prevalence rates skyrocketed in the 1990s
HIV Mortality

2/3rds of all people infected live in sub-Saharan Africa

- 10% of world population

- During 2009 1.3 million adults and children died.
  - More then 15 million have died since the start of the epidemic

- Life expectancy in some countries has fallen 20 years
  - Swaziland = 31 years old
  - Less then half what it would be without aids
African Success story?

- Uganda’s first AIDS control program was set up in 1987 to educate the public about how to avoid becoming infected with HIV.

- ABC program
  - Abstinence
  - Be Faithful
  - Condoms
The estimated number of people living with HIV/AIDS by country as of 2008.
Those Receiving Drugs

Number of people receiving ART and percentage of all people living with HIV receiving ART in low- and middle-income countries overall and by WHO region, 2013

TOTAL: 11.7 MILLION
36% [34–38%]

People receiving antiretroviral therapy, December 2013

- African Region: 790,000 (44% [34–50%])
- Region of the Americas: 255,000 (22% [19–25%])
- South-East Asia Region: 28,000 (10% [7–15%])
- Eastern Mediterranean Region: 9,100,000 (37% [35–39%])
- European Region: 400,000 (32% [24–40%])
- Western Pacific Region: 1,100,000 (33% [27–39%])
- High-income countries
Estimated Number of AIDS-Related Deaths Worldwide, 1980-2000

Source: UNAIDS
Malaria

**Begins with a bite**
- 9 to 14 days later symptoms appear

**Symptoms**
- Headache, vomiting, flue like symptoms.
- Kills by destroying red blood cells and clogging capillaries.

**Treatment**
- If not available could become life threatening.
Malaria in Africa

- **300 million** cases globally
  - 90% in Africa
- Kills an African child every 30 seconds
- Leading killer of **under 5 year olds**
- Costs Africa **12 billion**
  - 40% of public health funds
  - 30-50% of hospital admissions.
Issues with prevention

- Lack Infrastructure and resources
  - Hospitals
  - Campaigns

- Drug Resistance
  - Chloroquine is the cheapest and widely used.

- Rapid Response
  - Not taken to hospital

Proportion of children under 5 years of age in selected African countries treated with an antimalarial starting within 1 day after onset of fever or later, 2003-2004
Issues with prevention 2

- The people are in dire need of nets to avoid acquiring this disease. Many do not have them or they are damaged.
- Surveys in 18 African countries have revealed that 34% of households own an insecticide-treated bed net but they are not always used to protect the most vulnerable - only 23% of children and 27% of pregnant women slept under a net.
Water based Disease

• Water-related diseases are a growing human tragedy, killing more than 5 million people each year.

• Water-borne diseases include cholera, typhoid, bacillary dysentery, polio, meningitis, hepatitis A and E and diarrhea, among others. These are diseases caused by dirty water, and most can be prevented by treating water before use.
Pollution and Urbanization

• The first contributor to water pollution in Africa is the mining organizations and farmers. Many of the mines are polluting the water with their waste.

• Poor sewage systems also contribute to the water pollution in Africa. Much of the human waste in Africa is spilling into the water ways.

• Sub-Saharan Africa suffers from chronically overburdened water systems under increasing stress from fast-growing urban areas.
Water pollution cycle

- Polluted water is used to take care of small children and infants.
- They are going to become ill if they are continually drinking contaminated water.
- This water is also used to water the crops that are being grown in Africa.
- That water is polluting the food that is then being consumed by animals and humans living in Africa.
- Finally, cattle and other livestock are also drinking the water.
- They are becoming contaminated as well. When they produce milk or they are butchered for meat, they are producing contaminated food that Africans are consuming.
CHOLERA

Cholera is an infectious disease that causes severe watery diarrhea, which can lead to dehydration and even death if untreated. It is caused by eating contaminated food or drinking water.

- In many West African countries, the cities and villages contain few clean toilets and most people openly defecate, often dangerously close to open wells that are the source of water for most residents.
A common latrine in Kroo Bay slum in Sierra Leone's capital, Freetown
Evolution of cholera epidemic in West Africa and Sahel between 1999 to 2012