

UNIVERSITY OF CALIFORNIA BERKELEY



AMSA

AMERICAN MEDICAL STUDENT ASSOCIATION

5th General Meeting:
Global Health: How Good Sanitation Can Save Lives

Berkeley Project is now live!

- Berkeley Project (Nov. 3) is now accepting applications for volunteering
- Make sure to apply at www.berkeleyproject.com
- Under “Team Name”, specify “AMSA”

Chaparral House (10/7)

- Saturday 9:30AM – 12:00PM
- Talk to Dong after the GM to sign up
- 3 spots available



Global health

what is it?



Global health is...

The health of populations in a global context that transcends the perspectives and concerns of individual nations.

The background of the slide is a collage of various vintage postage stamps and postmarks. Visible elements include a red 'PAR AVION' (By Air) stamp, a yellow '100.00' stamp, a red 'MADRID' stamp, and a red 'COSTA RICA' stamp. There are also several circular postmarks and handwritten numbers like '02293' and '0000000000'.

Lack of proper sanitation

A decorative horizontal line with diamond shapes at each end, positioned below the title.

India tackles public defecation

<http://www.cnn.com/video/#/video/world/2012/09/17/pkg-udas-india-open-toilets.cnn>

Discussion Groups

- ✦ Soap and personal hygiene
- ✦ Education and culture
- ✦ Toilets and sewage
- ✦ Clean water

Soap and Personal Hygiene

- ✦ 2.4 billion people lack access to basic necessities
- ✦ Lack of soap causes
 - ✦ diseases: cholera, diarrhea, typhoid
 - ✦ many children die due to weak immune systems
- ✦ Just giving every child one bar of soap could reduce the widespread problem of infection by 40%

A child washes her hands on the first Global Handwashing Day



What's being done?

- ✦ Global Soap Project collects used soap bars from local hotels to disinfect and recycle the soap for use in nations who need them
- ✦ UNICEF, WHO, CDC, and other organizations working to educate people about the importance of washing hands, hygiene, diseases, and much more

Derreck Kayongo is the creator of the Global Soap Project



Education and Culture

- ✦ Lack of sanitation due to lack of education and restrictions caused by cultural practices

- ✦ ex. Many Indians believe that having a toilet in their house is unsanitary

- ✦ ex. In Ghana, the majority of the population defecates in public

- ✦ Millions of people are infected or die due to diseases that could have been easily prevented by proper disease and sanitary education.

- ✦ ex. Schistosomiasis

- ✦ 160 million people are infected with schistosomiasis, disease causes tens of thousands of deaths every year

- ✦ Basic sanitation would reduce the disease by up to 77%

- ✦ ex. HIV/AIDS

- ✦ In Uganda, a child who quits attending school is three times more likely to be HIV positive later on in life than a child who completes basic education

- ✦ Solution?

- ✦ Culturally relevant programs which educate people on the importance of hygiene

- ✦ ex. Sabu Campaign by UNICEF in Pakistan

Education and Culture

-Sabu Campaign:



<http://www.youtube.com/watch?v=E9-Y3Bj6lBI>

Toilets and Sewage

✦ Quick Facts

- ✦ > 200 million tons human waste goes untreated every year
- ✦ 90% of sewage in developing countries discharged into lakes, rivers, and oceans
- ✦ 1.4 million children die each year due to untreated sewage (1 every 20 seconds)

✦ Global Poverty Project

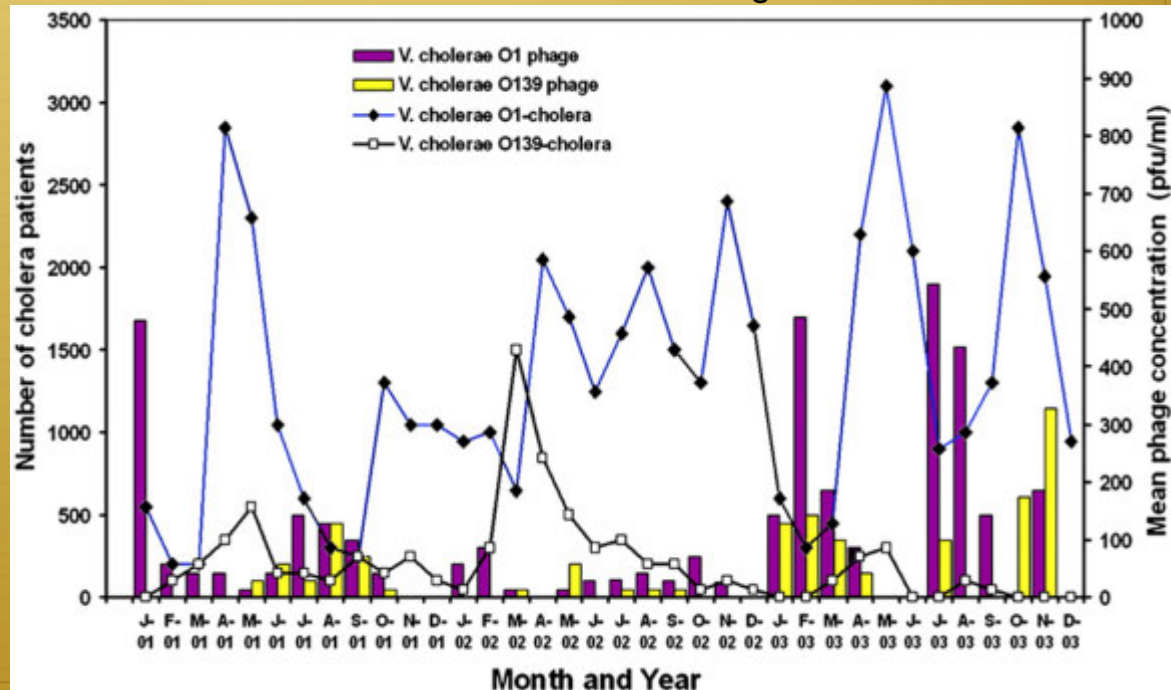
- ✦ "Reinvent the Toilet Challenge" led by Bill Gates
 - ✦ Decreasing water use/affordable
 - ✦ Human dignity
 - ✦ Generate clean water/minerals

Cholera

- ✧ Cholera is a bacterial pathogen that is spread via a fecal oral route
- ✧ Causes severe dehydration due to water loss in the form of diarrhea
- ✧ Treated most effectively with oral hydration (water, salt, sugar solution)
- ✧ 75% of cases asymptomatic
- ✧ Can kill healthy adults within hours
- ✧ Endemic in Bangladesh, occurs in seasonal outbreaks due to rainy seasons

- ✧ Contaminated water and food supplies
- ✧ Problem in all developing countries
- ✧ If untreated as many as 1 in 2 people will die

Seasonal Outbreaks of Cholera Bangladesh



Importance of Clean Water

- ✦ 88 percent of all diseases can be linked to contaminated drinking water
- ✦ 50 percent of all people in the developing world will be in hospitals suffering from one or more water-related diseases
- ✦ Water-related diseases are the second biggest killer of children worldwide
- ✦ 1.1 billion humans lack access to freshwater



Typhoid fever

✧ Facts:

- ✧ An estimated 16–33 million cases of typhoid fever occur annually resulting in 216,000 deaths in endemic areas (mostly developing countries)
- ✧ Its incidence is highest in children and young adults between 5 and 19 years old

✧ Causes:

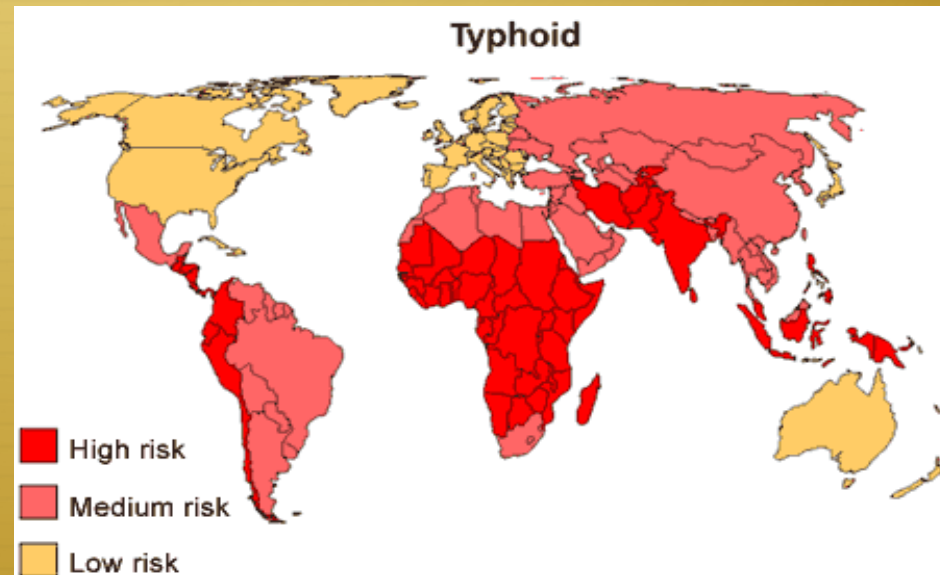
- ✧ Presence of the *Salmonella typhi* bacteria in contaminated food, drink, or water.

✧ Symptoms:

- ✧ Fever (typically over 103 °F)
- ✧ General ill-feeling
- ✧ Abdominal pain
- ✧ Severe diarrhea

✧ Treatment:

- ✧ Fluids and electrolytes intravenously
- ✧ Appropriate antibiotics are given to kill the bacteria.



Clean Water

Case Study: Harare suburbs in Zimbabwe

✦ Residents shun tap water

✦ strange odor

✦ green coat forms on surface when boiled

✦ Forced to walk 5 km to get water from boreholes

✦ Harare has faced cholera and typhoid breakouts in the past due to poor water quality

✦ City officials deny that water quality is an issue



What can be done about this?

