## From ISIS to Ebola: Experiences and lessons learned from being in over my head in medical missions





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## Objectives

Discuss medical care in an austere environment

Understand challenges and pitfalls of doing medical missions in remote locations

Review useful equipment and skills for austere medical missions

Review experiences on the mission field to gain understanding of different opportunities around the world

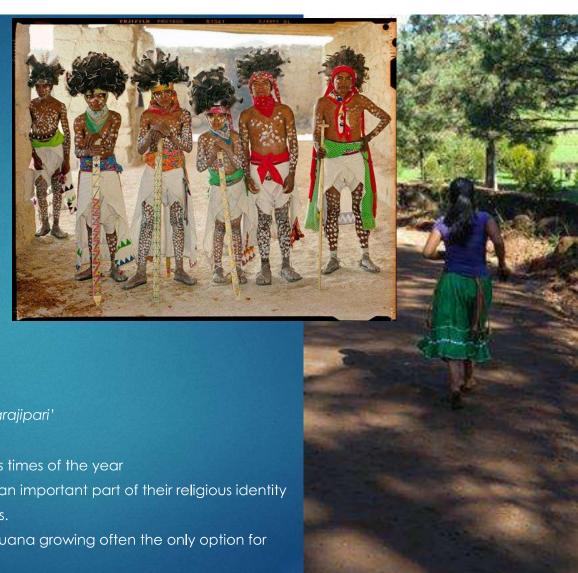


#### Tarahumara/Raramuri

 Live in the Sierra Madre is the largest canyon system in the western hemisphere

One of the few remaining indigenous tribes remaining in North America

- About 90,000 Tarahumara are spread out in this area
- Famous long distance runners
  - ▶ Call themselves the Raramuri "the people who run"
  - ▶ Will run up to 200 miles in one session in a race called a rarajipari'
- Subsistence farmers
  - Beans and corn, most migrate to different areas at various times of the year
  - Majority of the corn crop goes towards making Tesguino, an important part of their religious identity
  - Extremely impoverished, undereducated, with few options.
  - Cartels have extremely strong presence, opium and marijuana growing often the only option for indians







#### Tarahumara - Health

- Sexual abuse, STDs rampant
  - Estimated 85-90% of girls have been sexually abused/raped by age 15
  - Most happens during tesguinadas
  - Maternal Mortality worst in western Hemisphere
    - Maternal mortality was recently estimated as high as 1 in 10
    - Women give birth alone in woods
    - One of the only cultures with no position of midwife
    - Poor care in government hospitals has increased M&M
- Child neglect rampant
  - Also due to tesguinadas.
  - Severe malnutrition during drinking seasons
  - Average mortality rate is estimated at 50% by age 5
    - ▶ 80-90% of those die within the first year
    - ▶ Women are sometimes afraid to name their babies
    - Maternal attachment at birth often an issue
    - Twins especially at high risk for neglect due to fears that one will die no matter what – a self fulfilling prophecy.
  - Complex issues from rape increase incidence of neglect



#### Hospital Mision Tarahumara

Google maps: "Hospital Samachique"

- ▶ 8 hours south of El Paso
- Serving the Tarahumara (Raramuri Indians)
- ▶ 2 ORs
- 30 beds (mens, womens, pediatric)
- ▶ 2 bed "OB"
- ▶ 1 bed ICU
- ▶ 1 bed ER
- Community health, literacy, agriculture outreaches











## Two weeks after passing boards

- 14 y.o. 35 week primagravida
- Seizing in the ER
- **BY** 184/140, HR 156, SaO2 65%
- Threw up/aspirated in village, brought in by family hours later
- Family practice docs gave valium, Depakote IV, attempting to ventilate with Ambu
- Intubated her, no mag available, 2 versed IV stopped seizures.
- Decision to do c/s, vs 6 hour transport in ambulance
- Baby's Apgars 0/0/0, intubated, CPR initiated, hand ventilated for 8 hours until SV returned. At least a minute of hypoxia/anoxia – extubated at around midnight
- Mom went into ARDS, only ventilator was my anesthesia machine prone position kept SaO2 at 80%
- Multiple mucous plugs, coded x2
- In the morning, decided to transport, flew her out, pulmonary artery rupture shortly after landing

# One of the family practice docs adopted baby, named him "Josue"











► Tuberculosis common, extremely underreported

Malnutrition, cold winters in enclosed places contribute

▶ Poor government treatment campaigns have resulted in increased incidence of resistant strains of TB

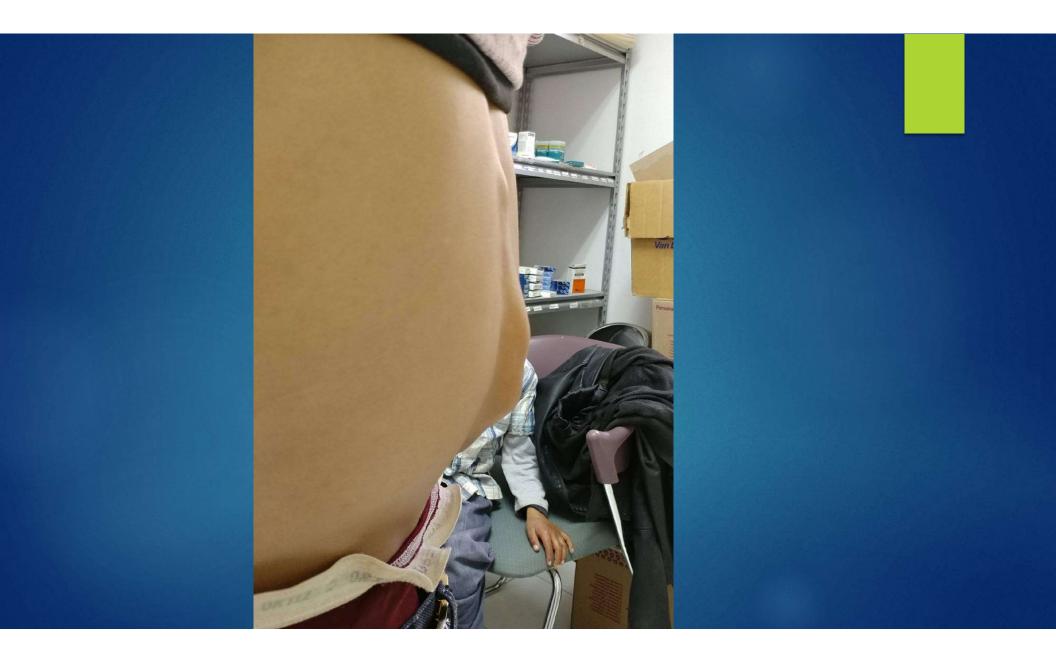
Prior to Mision Tarahumara Hospital being opened,

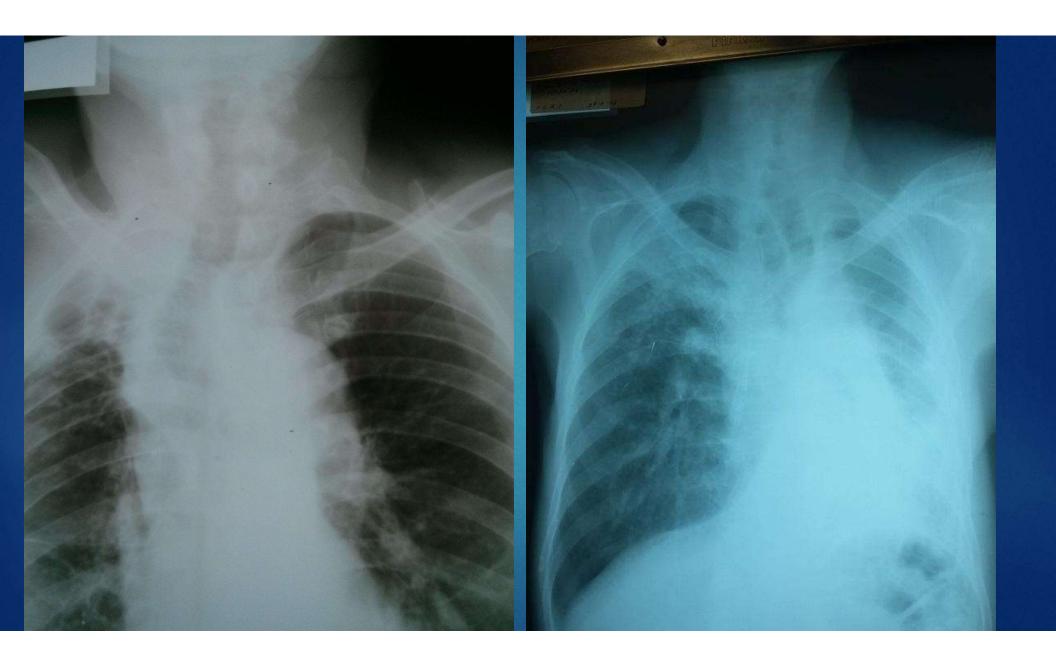
rate was "0"

► First testing with our hospital

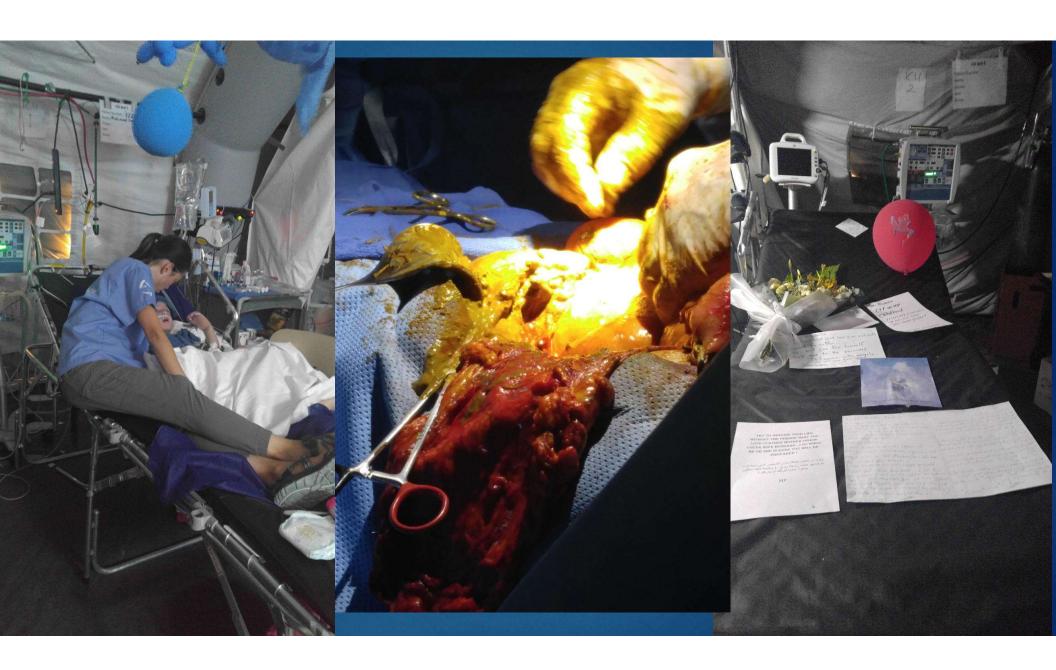
Mexican government investigated hospital for reporting outcomes

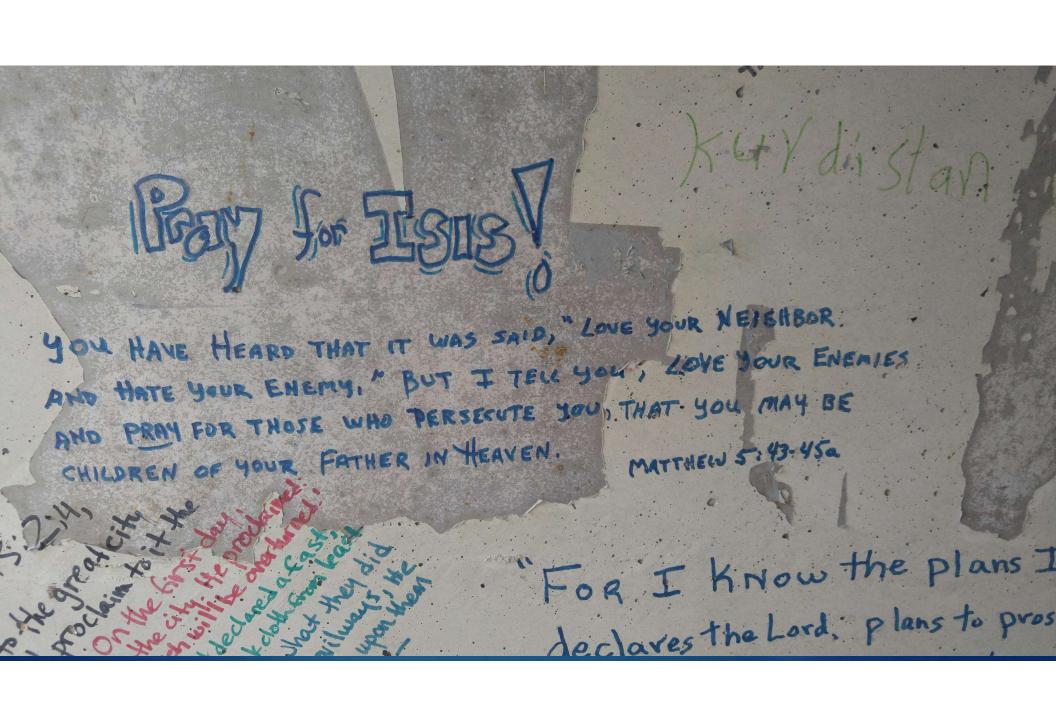






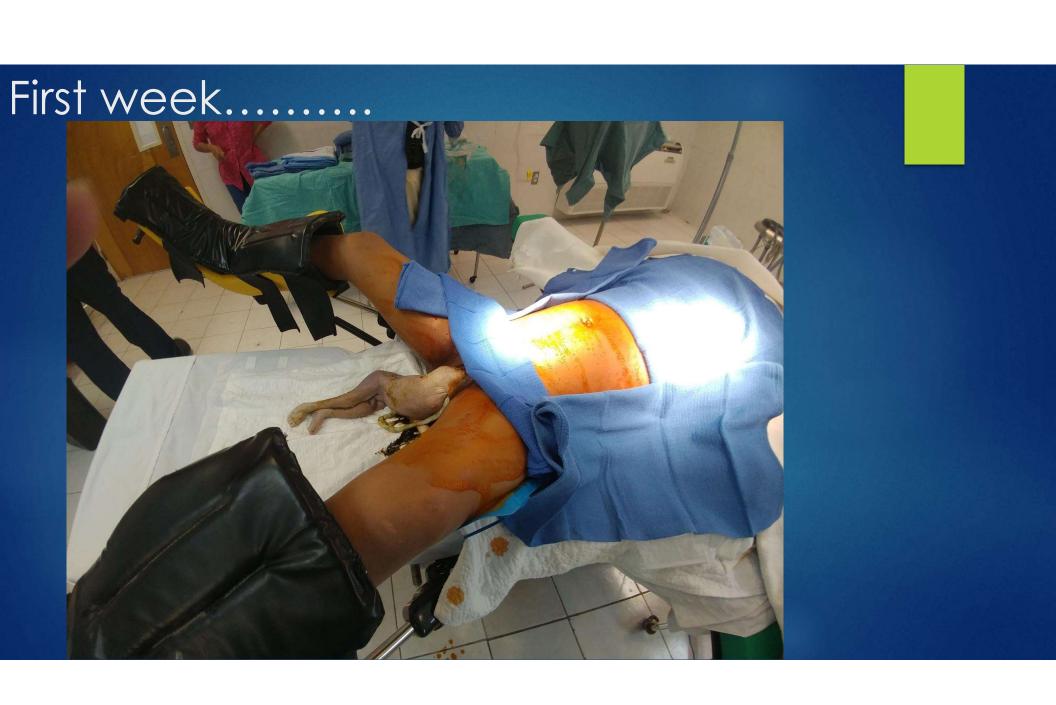




















## Kwashiorkor vs Marasmus





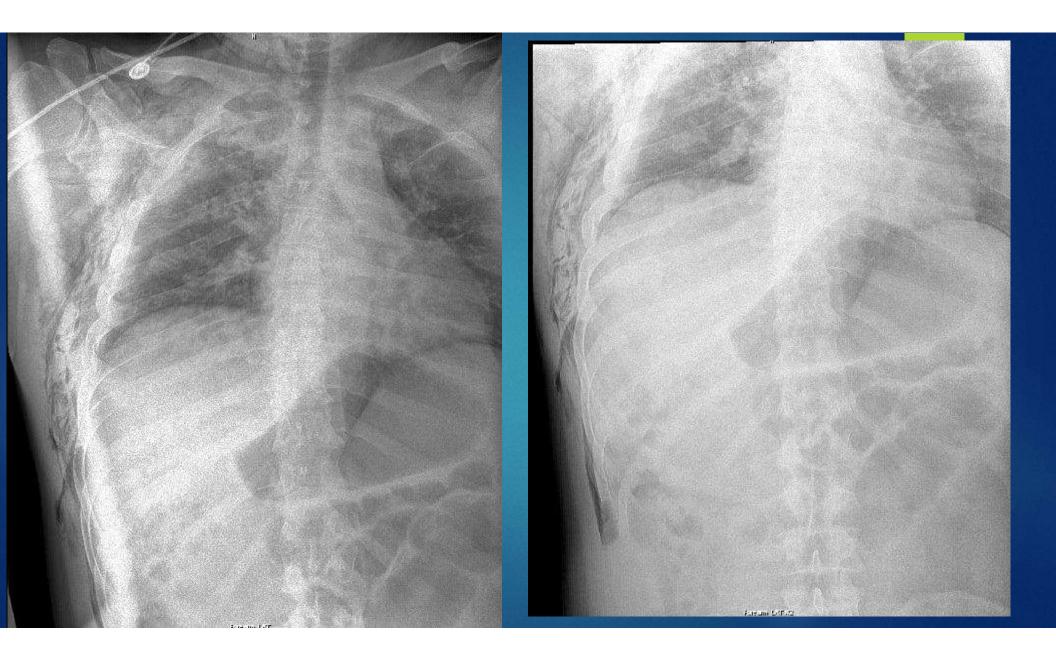












## Ebola while at MSU!











## Post Mexico, lessons learned

- ▶ Be wary of burnout. Enjoy yourself. Sometimes it's ok if stuff fails because you need a break
- Take an ultrasound and Cipro every time you go on a missions trip
- Keep an eye out for each. Don't be afraid to say something to someone who is struggling
- ▶ Be a sweeper: "For even Jesus did not come to be served, but to serve" [Mark 10:45]

## Questions??????????

