YAKIMA HEALTH DISTRICT

TUBERCULOSIS (TB) CONTROL: USING MODERN TECHNOLOGY TO BATTLE AN ANCIENT PROBLEM

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What is Tuberculosis? (TB)

- A disease that can infect any part of the body, but the lungs are most commonly infected

- Caused by a bacteria, usually mycobacterium tuberculoisis

- Primarily transmitted from person to person through the air

- Usually remains in a latent state for years before becoming active

WHY WORRY ABOUT TB?

HISTORY OF TB

- Ancient illness described by Hippocrates as "phthisis" (to waste away), most common illness of his time (460 BCE) and almost always fatal according to his writings

- Clinical features found in Egyptian mummies thousands of years old

- In the 19th century TB was the #1 killer in Europe and America called "consumption" commonly at that time

- In 1851, 1 in 4 people are killed by TB in Europe and America

WHY WORRY ABOUT TB?

Global TB

- 10 Million people became ill with TB in 2017
- 1.6 Million people died from TB in 2017, more than HIV/AIDS
- 230,000 children died from TB in 2017
- 558,000 cases of TB had resistance to rifampin (82% MDR)

U.S. TB

- 9,021 people became ill from TB in 2017
- 526 people died from TB in 2016
- Approximately 2% of TB cases are multi-drug resistant

WHY WORRY ABOUT TB?

TB Mortality - Without Proper Treatment Very High Mortality
- About 50% of patients will die
- About 17% will survive in a continuously infectious state
- About 33% will spontaneously cure, but are high risk to reactivate

Treatment is Difficult
- 6-9 months of daily, multi-drug treatment
- Many side effects possible, some very serious
- Improper treatment leads to drug resistant TB
- Patient will usually remain contagious until proper treatment administered

How Do We Control TB?

DIAGNOSIS AND PROPER TREATMENT

- Clinical Consultation
- Case Management
- Directly Observed Therapy
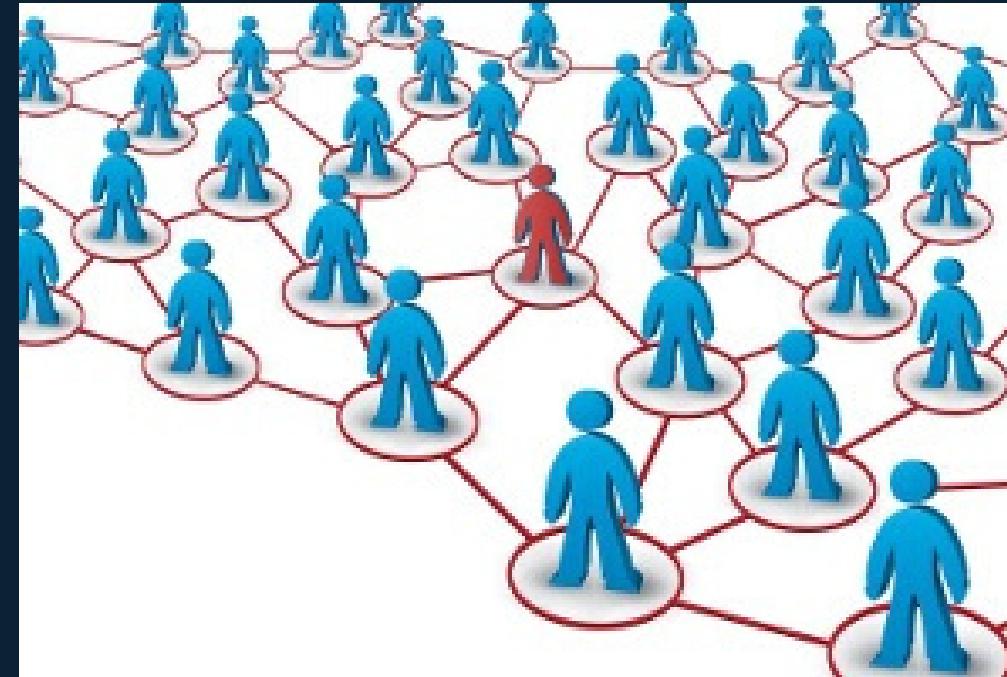
CONTACT INVESTIGATIONS

- Finding exposed people
- TB testing and treatment

EDUCATING MEDICAL PROVIDERS

- Screening for TB
- Diagnosing TB
- Treating TB

FOCUS ON:

Directly Observed Therapy

Directly Observed Therapy (DOT)

- DOT is a standard of care promoted by WHO and CDC since the 1990 to prevent increasing drug resistance

- Medications are taken under the observation of a public health worker

- Prevents treatment failure and drug resistance

NEW FOR 2019:

Video DOT

What is Video DOT? (vDOT)

- Patients use a smartphone app to video record themselves taking the medications
- The video is encrypted, then uploads to a secure server
- Video is automatically deleted from the phone once uploaded (protects privacy)
- The video is viewed by Health District staff via a secure web portal
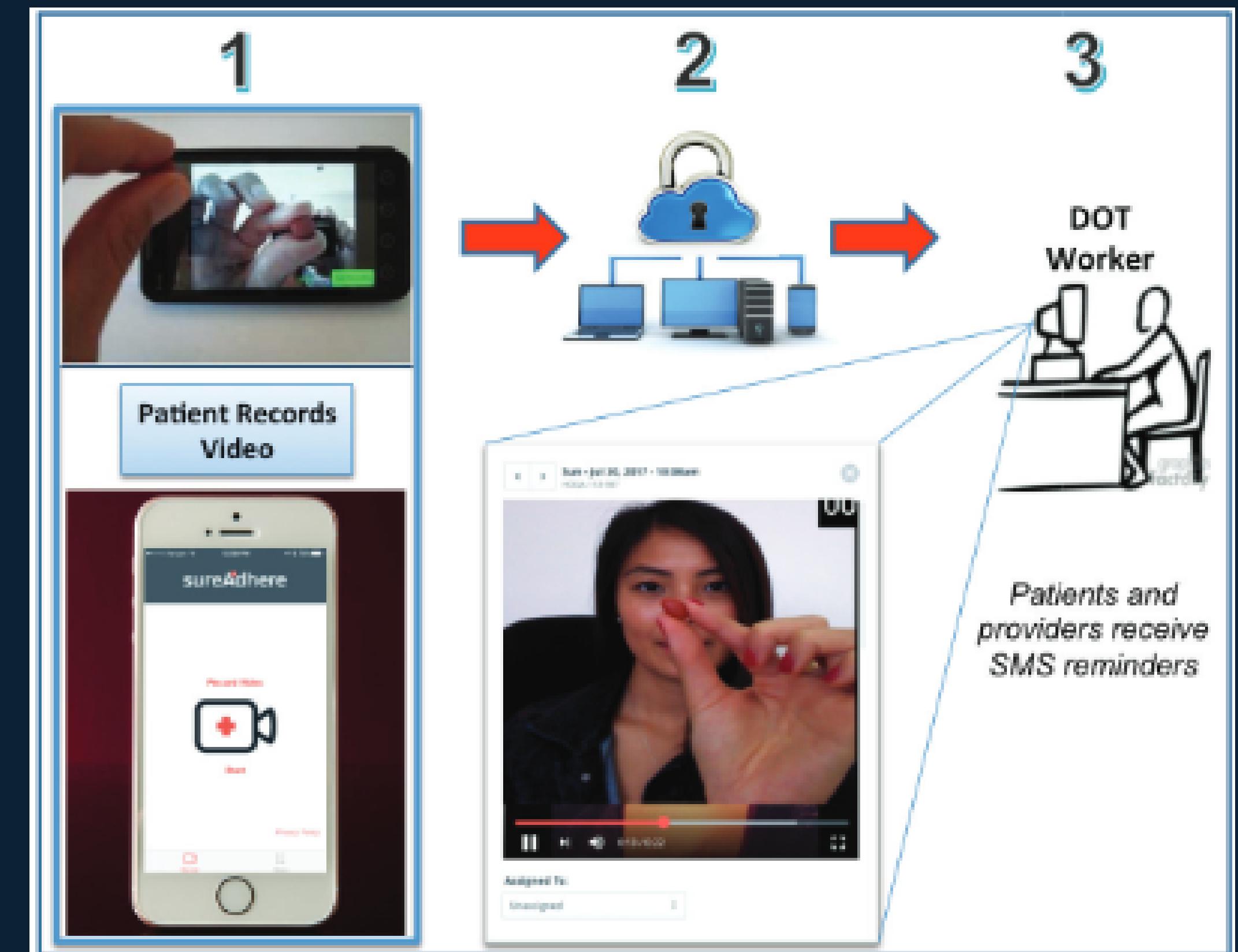
Video DOT

Advantages

- By making DOT more convenient for patients, the TB Control program can be more effective at improving patient adherence

- Much more efficient - enables staff to provide mandated TB control in less time and at lower cost

- Staff and patients do not have to drive in inclement weather as often

- Staff do not have to travel as much to potentially dangerous areas

Video DOT

Challenges Addressed
- Less opportunity to evaluate patients in person
  - *Solution*: Face to face DOT for first 2 months, then gradually transition to vDOT
- Small chance patient does not report side effects in a timely manner
  - *Solution*: Thorough education upfront and during use of vDOT
- Smart phone and internet access necessary
  - *Solution*: Provide smart phone with internet access to patient temporarily while on vDOT
- System must be HIPAA compliant, common video chat apps not recommended
  - *Solution*: Use of SureAdhere system

Cost Savings of vDOT

2018 Cost - Traditional DOT
- DOT for one TB case in Tieton for six months = ~$19,000
- DOT for one TB case in Toppenish area for six months = ~ $14,000

2018 Cost - vDOT
- vDOT for one TB case in Tieton for six months = ~$3,600 (~$15,600 saved)
- vDOT for one TB case in Toppenish area for six months = ~ $3,300 (~$10,900 saved)

Creative Writing 101 Presentation

YHD Strategic Goals

STRENGTHEN MANDATED SERVICES

INCREASE COMMUNITY PARTNERSHIPS

IMPROVE EFFICIENCY & EFFECTIVENESS

Questions?

Central Washington State Fair

How to Be Safe Around Animals

ALL ANIMALS CAN CARRY GERMS THAT MAKE PEOPLE SICK.

Stay Healthy:
- No food, drinks, baby bottles