

Iowa Department of Public Health

Shirlee Hasstedt RN, BSN

TB Nurse Consultant

What Is Iowa Known For?



PORK PRODUCTION: Bacon, bacon, bacon!

What Is Iowa Known For?



CORN PRODUCTION! Corn, corn, and more corn.

What Is Iowa Known For?



The Iowa State Fair & Politicians.

Iowa TB Program Team



Where is our Health Department located?



Nurse Role

1. Overseeing all the active TB cases in Iowa.

- ▶ Receiving initial report from hospital or physician.
- ▶ Advising.
- ▶ Reviewing all medical records to assure complete care. (dialysis, chemotherapy, diabetics, COVID, HIV, etc.)
- ▶ Reviewing TB medication doses and ordering medications from the pharmacy.
- ▶ Assisting with Heartland Consultations.
- ▶ Reviewing daily lab reports.

2. Reviewing the LTBI medication orders.

- ▶ If the CXR is abnormal, arrange for sputum collection or Dr. Hornick to review.
- ▶ Document LTBI completion or reason for non completion. Approximately 1200 LTBI patients per year.

3. Answering all questions from ER's, clinics, employee health, etc.

	2021	2022
Reported TB Cases	50	55 (as of Sept 30)
PTB only	17	13
Extra-pulmonary TB only	9	14
Both PTB & extra-pulm.	16	21
TB Meningitis	6	6
Clinical Case of TB	7	5
Pansensitive Cases	21	27
No Sensitivities	7	10 (ocular & clinical cases)
MDR TB	1	1
INH resistance only	2	2
RIF resistance only	0	0
PZA resistance only	3	6
Pediatric Cases	6	7
Pregnant Cases	2	3
Deaths	3 (2 congenital TB cases)	4 (1 was a 30 yr. old: respiratory arrest at worksite)
Alt. regimes due to intolerance or > LFT's	5	11
Marshallese	4	5

Challenges

1. Loosing nurses to retirement & burnout.
2. Sicker patients: also Covid positive, elevated LFT's, or SE of meds. Longest Hospital Stay was 5 months.
3. Marshallese clients: No PCP, noncompliance.
4. 2 Congential TB cases.

How was challenge addressed?

1. Taking additional time with new staff to explain what needs to be done and why.
2. Assist with Heartland Consultations.
3. Found ARNP that will see patients in clinic even while infectious when no one else will. ARNP went to TB training by Curry & is gaining trust in the Marshallese community. Dr. Buhr had a Zoom meeting with Dr. Riklon in in Arkansas about cultural barriers. Large community TB screening in Dubuque.
4. Asking more questions about infertility, miscarriages, GIGU TB. Worry about miscarriages not being counted.

Complicated TB Scenario

- 24 yr. old female Pacific Islander. History of rheumatic heart disease with valve replacement at age 12 years.
- 9-14-21: Hospital #1. R)pleural effusion, 610 cc drained. Cultures negative.
- 10-7-21: Hospital #2. Significant enlargement of the pre-tracheal, R)hilar, & sub carinal lymph nodes. R)ML consolidation. R)pleural effusion. Cardiomegaly with engorgement of the pulmonary vessels.
- 11-16-21: Hospital #1 via ambulance. Cannot sit/walk. Drained 1450cc of pleural fluid. Cath lab, severe stenosis of aortic/mitral valves.
- 12-19-21: Hospital #2 via ambulance. R)pleural effusion. Drained 1450 cc. Dilated R-ventricle of heart. Prolonged QT interval.
- 12-20-21: Transferred to hospital #3 via ambulance. Urgent cardiac surgery & valve replacement. Discharge in January.
- 2-7-22: Hospital #2 via ambulance. Unresponsive at home. Respiratory and cardiac arrest with seizures.
- 2-24-22: Life-Flighted to Hospital #3. IDPH is not aware of this patient.

Complicated TB Scenario

- ▶ 4-8-22: SHL calls me about a pleural fluid culture from 2-18-22 that is + MTB.
- ▶ I contacted physician at hospital #3 and he is VERY surprised about the TB diagnosis. Her condition is grave.
 - ▶ On ventilator/trach/restrained.
 - ▶ HGB: 7.6 has had 7 units packed RBC's. PLT: 87,000. Fever 103. Glucose: 30.
 - ▶ Has drug resistant pseudomonas of the lungs.
 - ▶ Open wound from heart surgery is hooked up to wound VAC.
 - ▶ Septic shock due to strep in blood.
 - ▶ Chest tube due to R-pleural effusion.
 - ▶ Dialysis 3x/week. Kidneys shut down.
 - ▶ Multi organ failure & needs vasopressors to increase her blood pressure.
 - ▶ Ischemia of extremities, causing gangrene of fingers & toes. Viagra 3x/day.
 - ▶ Oral & genital herpes.
 - ▶ Nutrition via NG tube.
 - ▶ Placed in airborne isolation.

Complicated TB Scenario

- ▶ 4-8-22:
 - RIPE started.
 - Upon further testing this patient has TB in her brain, cranial bones, sternal bone, abdomen, pleural space and lungs.
 - Heartland Consultations began.
- ▶ 4-16-22:
 - TB meds were modified Moxifloxacin and Linezolid were added for better penetration into the brain. Steroids Were Added to decrease the brain swelling. Because of her dialysis the TB meds were scheduled after dialysis.
- ▶ 5-7-22: Taken out of airborne isolation.
- ▶ 6-15-22: Amputated all the toes on her left foot. One toe on the right foot. Tendon is exposed.
- ▶ 6-28-22: G-tube placed. Severe pain with swallowing.
- ▶ 6-30-2: Ileus with emesis.
- ▶ 7-5-22: Trach being capped.
- ▶ 7-14-22: Product placement over exposed tendon on leg.

Complicated TB Scenario

- ▶ Fast forward to 7-19-22.
 - ▶ 5th hospitalization in 10 months.
 - ▶ Last admission was 2-7-22, so 5 ½ months of acute care.
 - ▶ 5 Heartland Consultations.
 - ▶ Admission weight: 64 kg/141#. Current weight: 48.1 kg/105#. Calorie counts.
 - ▶ Dialysis 3x/week.
 - ▶ Goal: up in chair all day.
 - ▶ Future operation to remove sternal wires.
 - ▶ To be fit for prosthesis when feet heal.
 - ▶ Current TB meds: INH, RIF, MOXI, B6. Continuation phase started 6-15-22. Treat through 1-15-23 or longer.
 - ▶ Transfer to acute rehab. Home 2 weeks later.

Questions

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**Thanks to Heartland TB Center of
Excellence!**

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