

Measles and More

The Fort McCoy Story

Credits

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 - ▶ Career Epidemiology Field Officer, CDC
 - ▶ Bureau of Communicable Diseases
 - ▶ Wisconsin Division of Public Health
 - ▶ Wisconsin Department of Health Services
- ▶ Jared Tessman
 - ▶ Monroe County Emergency Manager

Monroe County, Wisconsin

- Population ~46,000
- Towns: Sparta and Tomah (10K each)
- “Cranberry Country” and “Bike Capital of America”

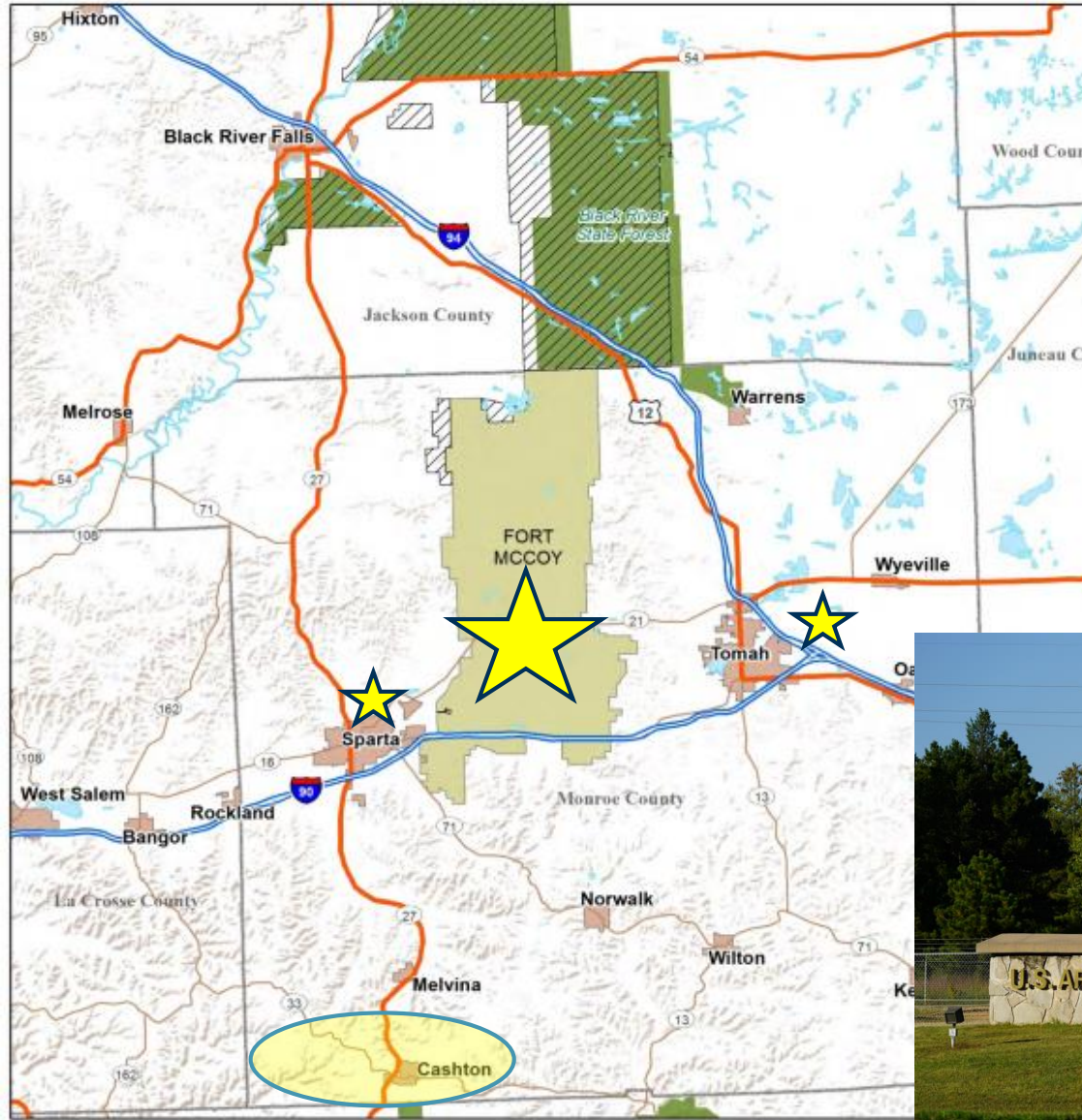


Monroe County, Wisconsin

Monroe county health department



Amish communities



I-90/94 split



Fort McCoy



Kabul, Afghanistan



Afghanistan Health Summary

■ Health Indicators

- Infant mortality: 44 per 1,000 births (ranks 26th highest);
- Maternal mortality ratio: 638 per 100,000 (ranks 9th highest)
- Life expectancy (66 years) ranks 37th highest

► Polio

- Endemic; 1 of 2 remaining endemic countries (with Pakistan)

■ Measles

- Endemic; low vaccination coverage (66%)

■ COVID-19

- Low vaccination coverage, limited case data

■ Tuberculosis (TB)

- 65K cases and 10K deaths per year (2017)
- ~63% effective treatment coverage

■ Other vaccine-preventable diseases

- Hepatitis A/B, diphtheria, tetanus, pertussis, rotavirus



Hamid Karzai International Airport—Kabul, August 2021





Kabul, August 15-30, 2021
76,000 Afghans evacuated to U.S.

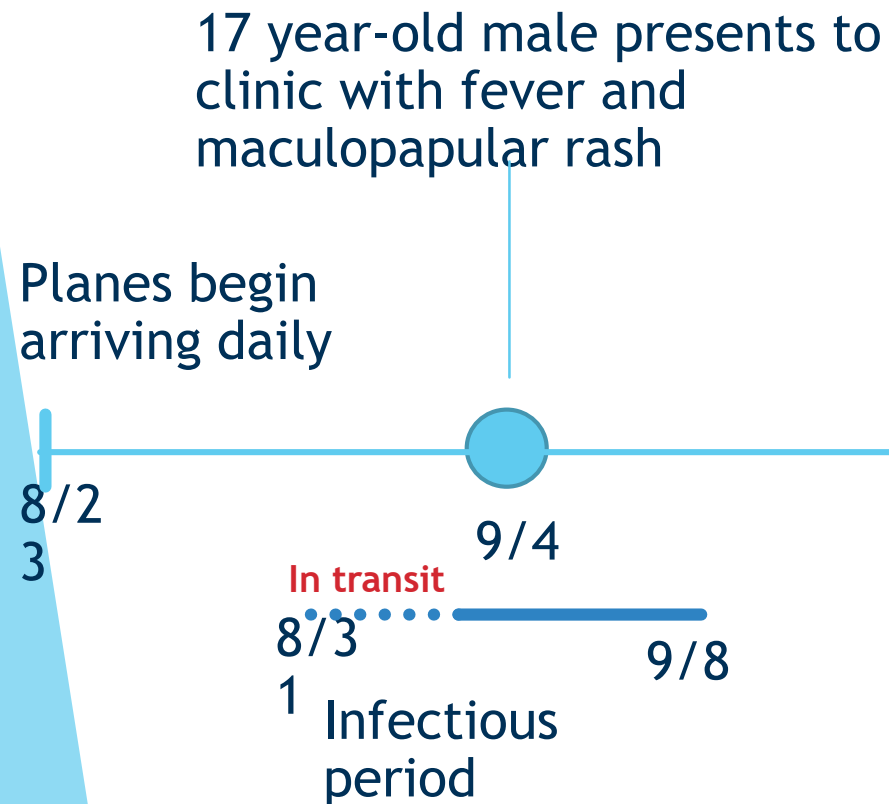
Fort McCoy, Wisconsin

Between August 23 and September 5, 2021

13,000 Afghans arrive at Fort McCoy Army Base on 80 flights



Fort McCoy Timeline



Symptoms and course

- 9/1: Onset of prodrome
 - Fever (107.6), conjunctivitis, sore throat
- 9/4: Onset of rash on face, chest, and limbs
- 9/4: Transported to local emergency department
- 9/4: Specimen collected for measles virus PCR
- 9/5: PCR positive by WSLH

Epidemiology

- Arrived at Fort McCoy the day before rash onset (9/3)
- Infectious during travel (beginning 8/31)
- Recovered and returned to Fort McCoy in isolation

*Camp Liberty, Fort McCoy,
Used for temporary isolation housing*

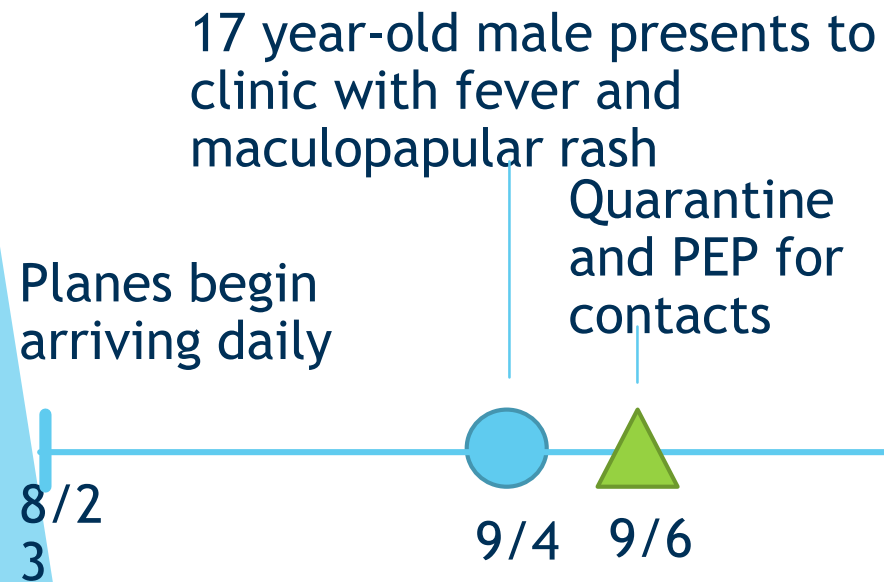


17 year-old male presents to clinic with fever and maculopapular rash





NBC 15 News <https://www.nbc15.com/2021/09/17/afghan-refugees-receive-vaccinations-fort-mccoy/>



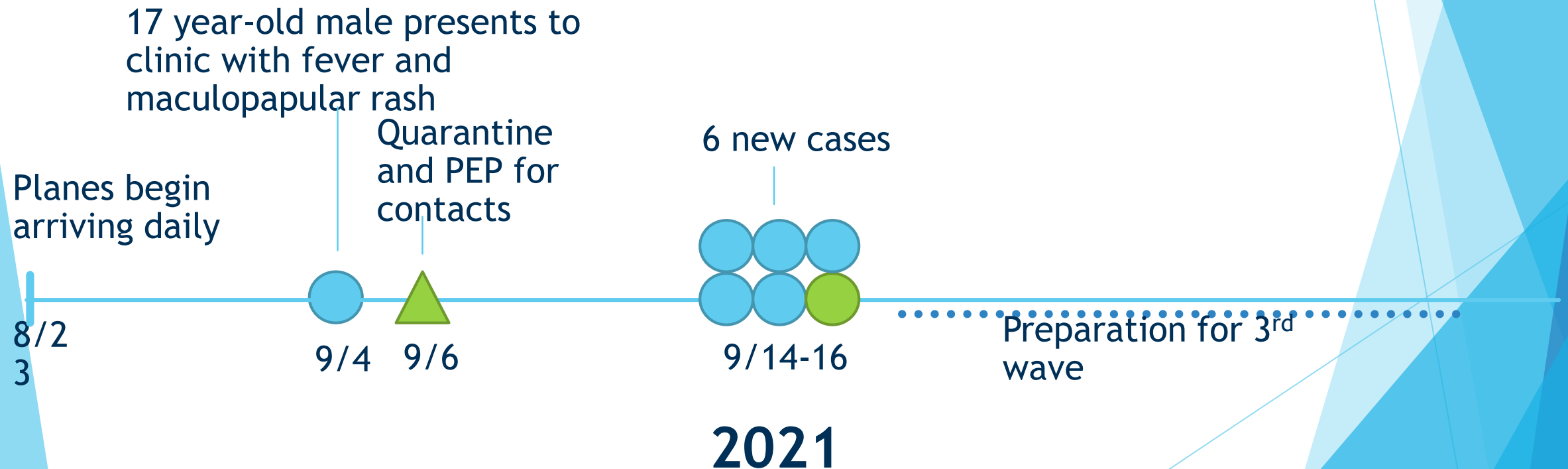
Mass vaccination:
~12,000 guests receive MMR and other immunizations

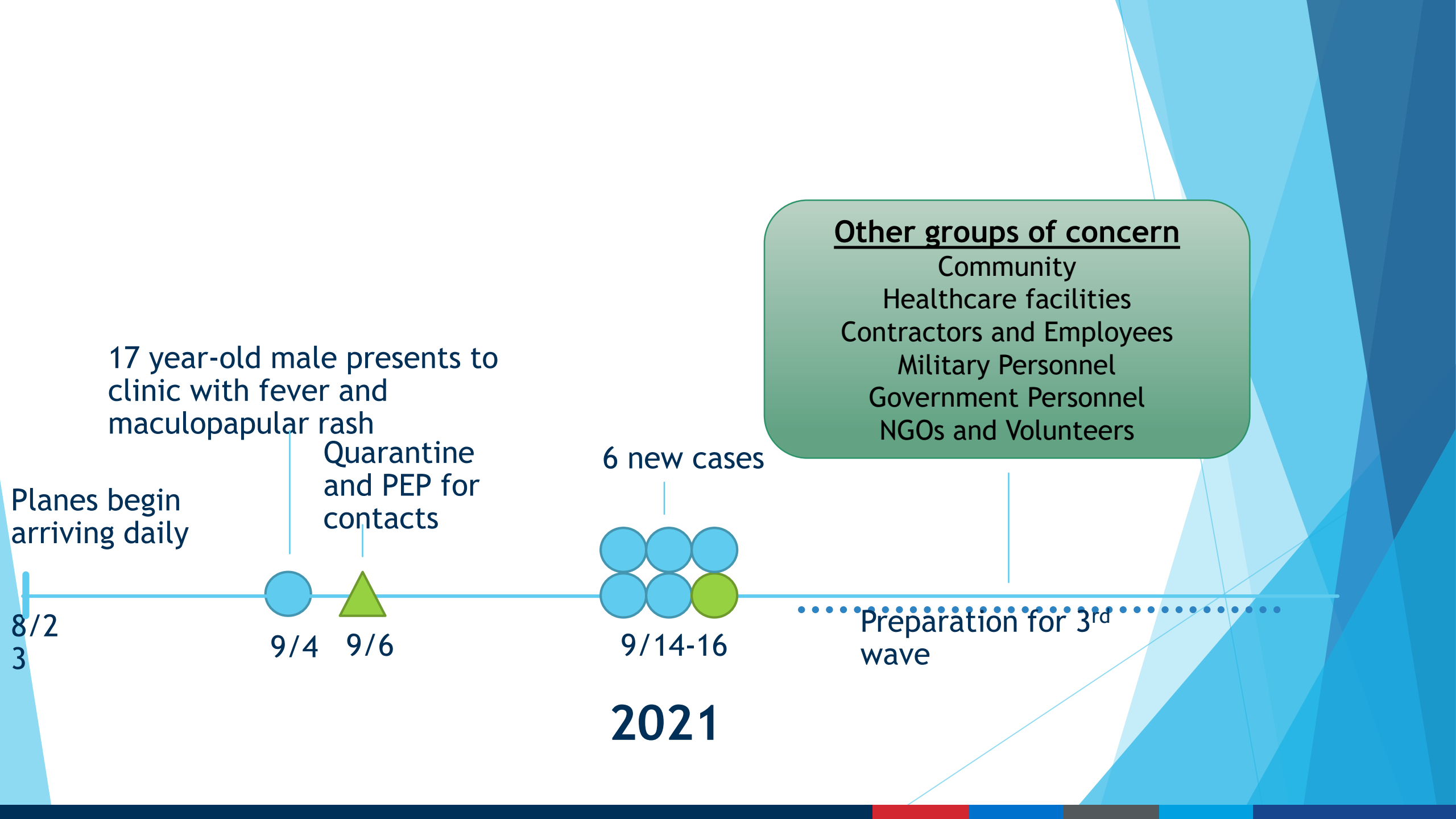
9/16-23

2021

Of 6 new cases...

- 1 was in quarantine, 5 freely interacting while infectious (9/10-9/16)
- Mass vaccination not early enough to be effective for many

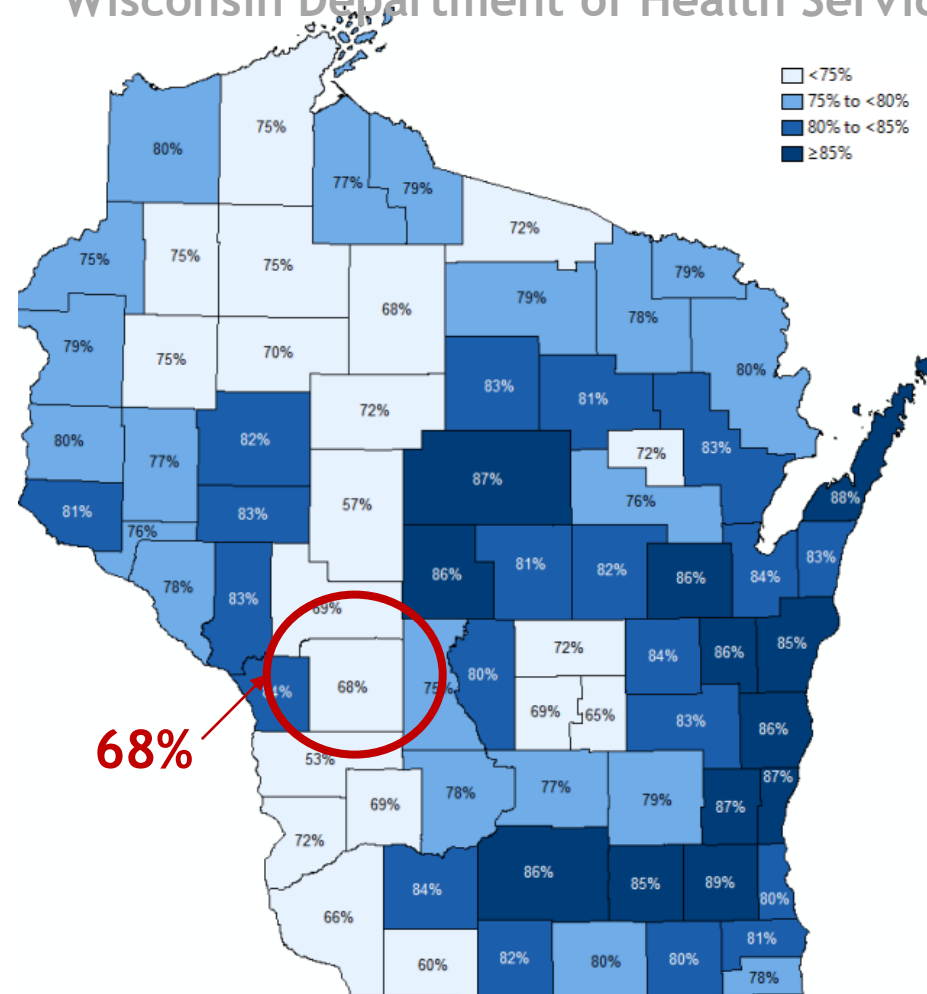




Monroe County, Wisconsin

Percent of children with ≥ 1 dose of MMR by age 2

Wisconsin Department of Health Services



Other Personnel

Immunization Records (MMR)

- ✓ Active duty military
- ✓ Health care staff (clinic and
- ? Dining staff
- ? Laundry staff
- ? Cleaning staff
- ? Volunteers and NGO staff
- ? Other government staff

NGO = nongovernmental organization



Monroe County Health Department

Serving the Community since 1921

Measles Alert

Date: 9/23/2021

Several persons with measles have been identified at Ft. McCoy.

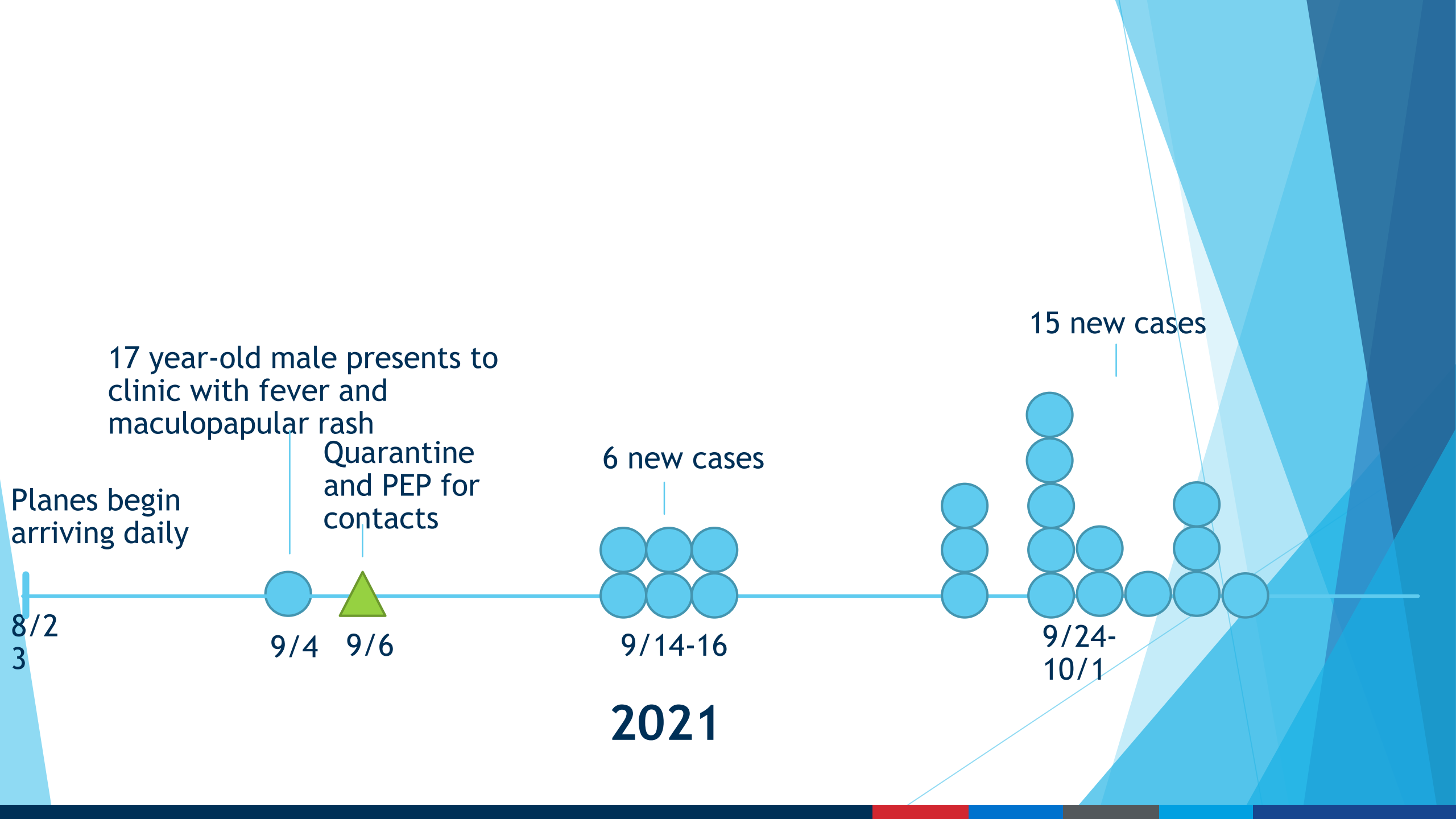
Measles is a very contagious disease. The classic symptoms of measles are a full body rash, starting at the hairline and moving down the body, along with fever (which can be as high as 104°F). Additional symptoms include cough, runny nose, and conjunctivitis (watery, red eyes).

Measures are being taken to identify and contain contacts who are at risk for getting measles. Persons are considered protected from getting measles if they have had 2 doses of MMR vaccine, were born before 1957, or have a history of measles diagnosed by their doctor.

Staff should be on alert for additional persons with measles. Immediately report to health services an Afghan guest who is found to have rash.

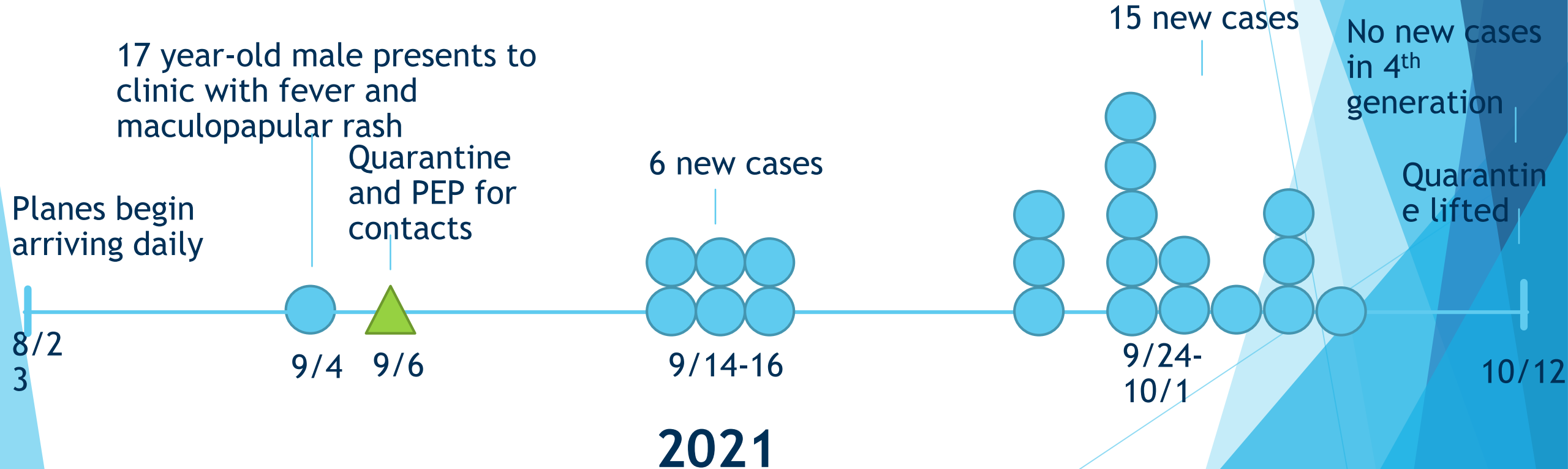
Exposed staff should check with their doctor or employer's occupational health program to see if they have protection against measles. If they do not, then they are recommended to receive MMR vaccine within 3 days after exposure. However, it is still beneficial to receive MMR vaccine outside this window because vaccination





Measles at Fort McCoy

- 22 confirmed cases among Afghan guests
 - 14 (64%) treated in hospitals
 - Age: 4 months to 26 years (median 3 years)
- 2 vaccine-strain measles (Meva)
- No cases among personnel, volunteers or staff
- No community cases





Wisconsin State Laboratory of Hygiene

UNIVERSITY OF WISCONSIN-MADISON

- ▶ PCR samples tested at WSLH: **47**
- ▶ Turnaround times that allowed for rapid public health action
 - ▶ Often 24 hours from collection to result!
 - ▶ Staff worked nights and weekends to transport and test urgent specimens
 - ▶ State patrol support for urgent transport



Public Health Actions to Control Measles Among Afghan Evacuees During Operation Allies Welcome — United States, September–November 2021

Weekly / April 29, 2022 / 71(17);592–596

Results

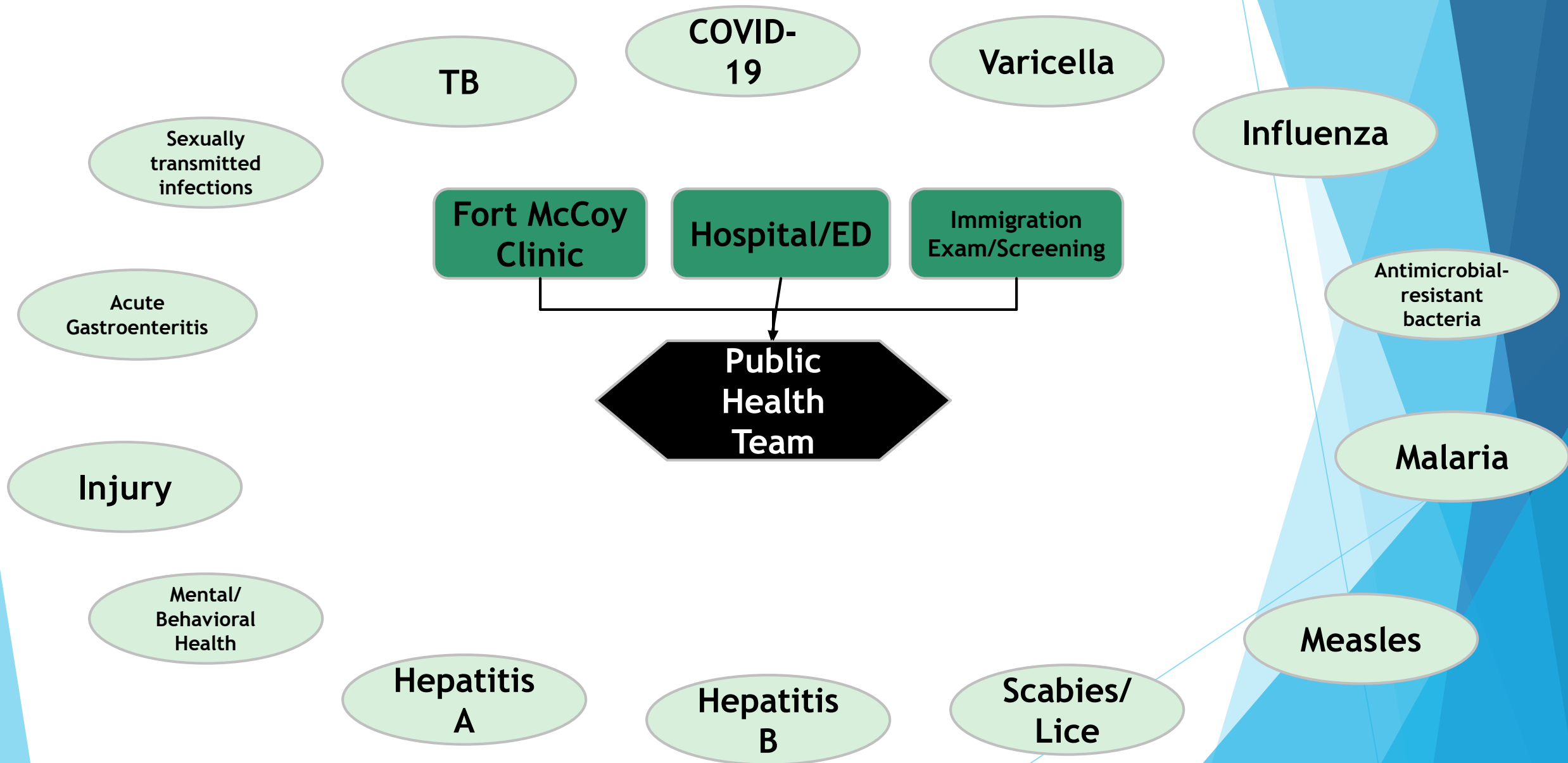
- **47 confirmed measles cases** across 6 sites, all Afghan guests
- **Attack rate of 0.065%** among Afghans, no spread in communities or personnel

Conclusion

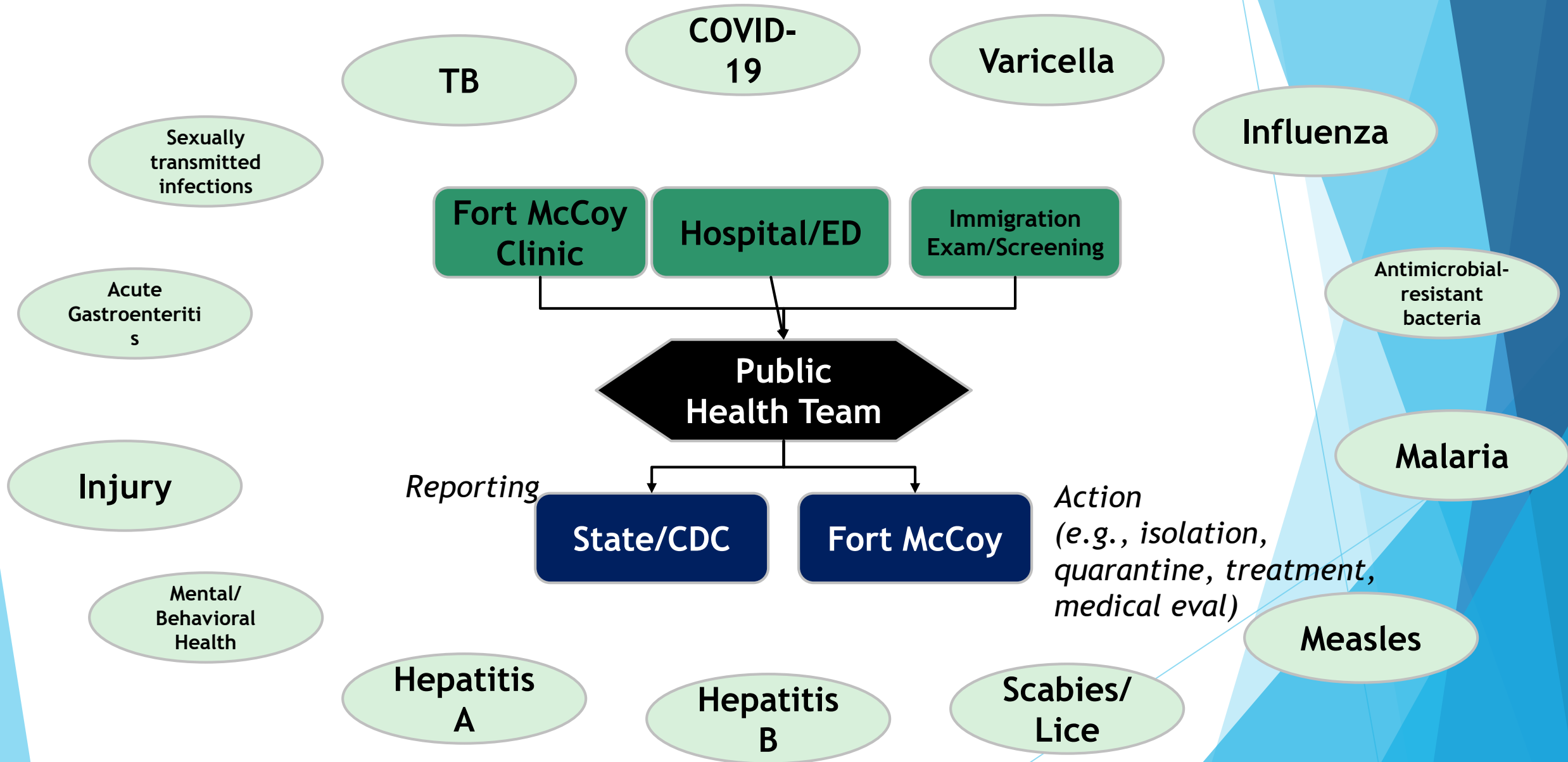
- **Mass vaccination** of 91% of Afghans within 3 weeks, 95% within 2 months
- Suspension of new arrivals and resettlement to U.S. communities until quarantine lifted

Rapid public health action limited spread among Afghans and personnel at sites, prevented transmission to U.S. communities

Public Health Surveillance at Fort McCoy



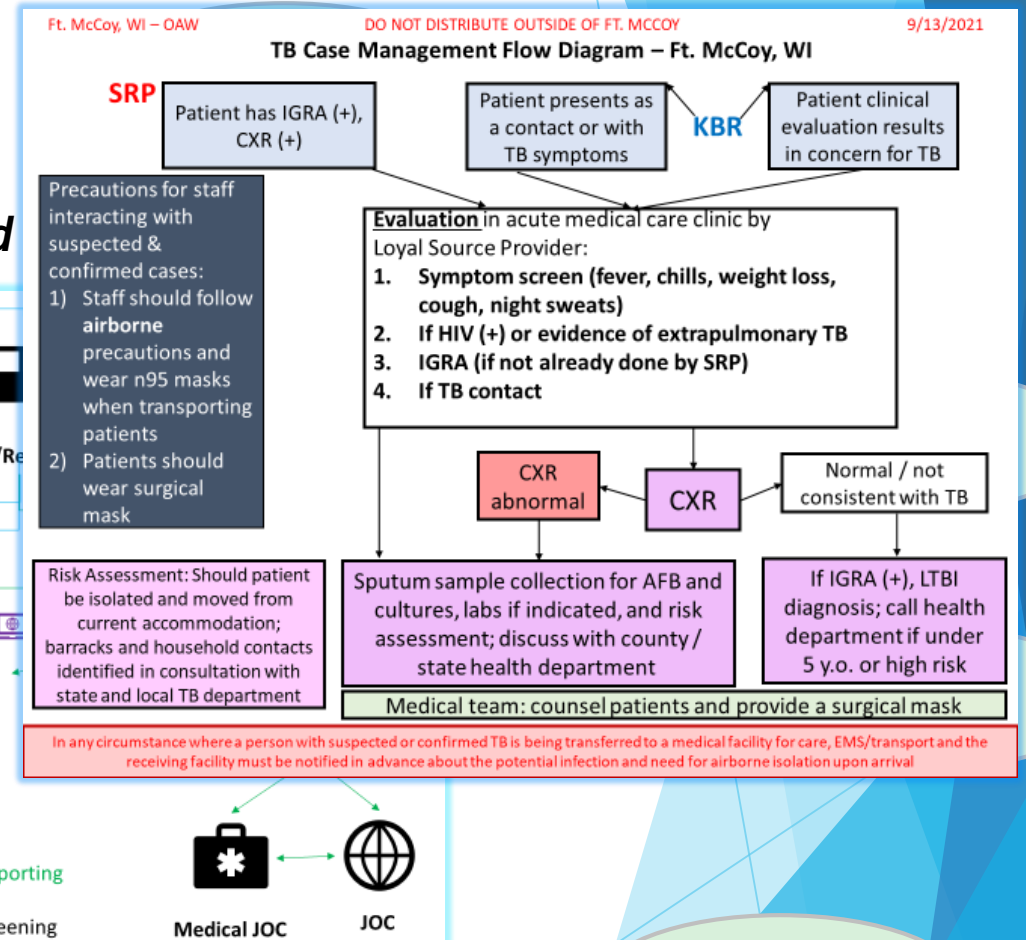
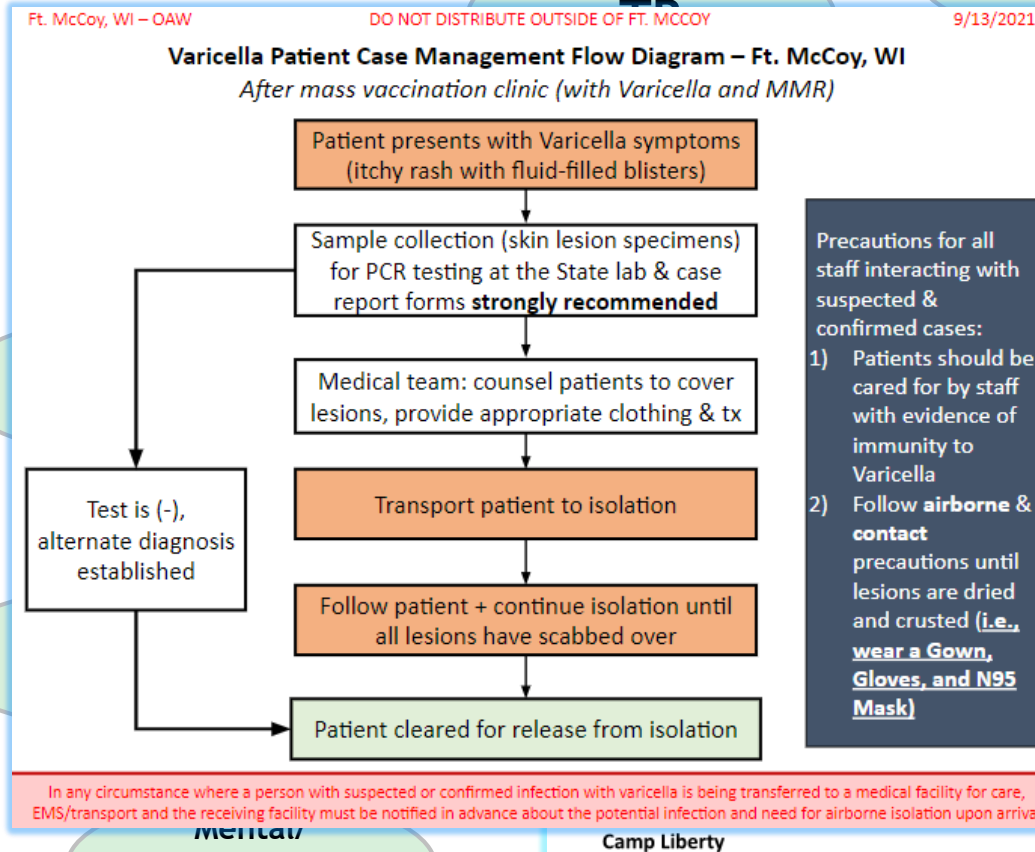
Public Health Surveillance at Fort McCoy



Public Health Surveillance at Fort McCoy

COVID-19

Complicated



Mental/
Behavioral
Health

Hepatiti
s A

Hepatiti
s B

Scabies/
Lice

Measles

Public Health Surveillance at Fort McCoy

Table. Selected diseases reported to WDHS from Fort McCoy among Afghan guests

Disease	Number of cases (total population ~ 13,000)
COVID-19	424
Measles	22
Active TB	17
Varicella (chickenpox)	19
Influenza	4
Hepatitis A	2
Hepatitis B	14
Malaria	5
Elevated blood lead in children	≥2
Acute gastroenteritis (norovirus, Campylobacter, Shigella, rotavirus, E. coli)	≥24
Lice (treated)	10,505
Scabies (treated)	3,302
Pinworms (treated)	744
Poliomyelitis	0

Tuberculosis

Screening (IGRA) required for all Afghan guests

Chest X-ray for all IGRA+ (or clinically suspected)

Isolated pending sputum results, report to DHS
(n = 35)

3 negative sputum
cultures (WSLH)

Cleared

Positive sputum
culture (WSLH)

Confirmed (n = 17)

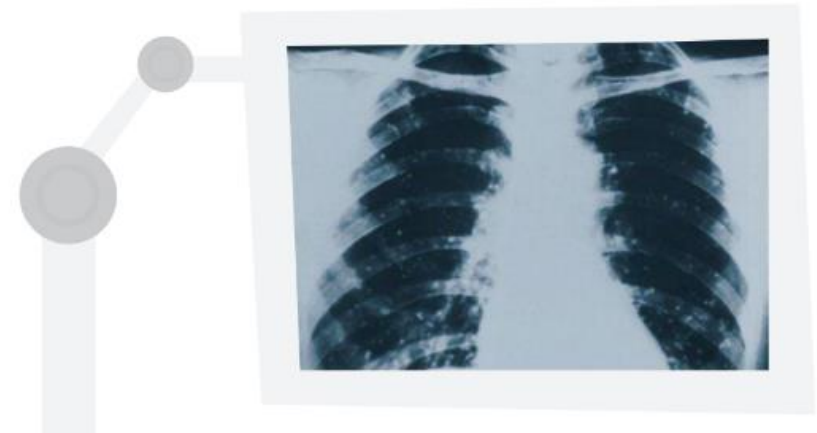
Treatment and
continued isolation
cleared (n = 17)

IGRA = interferon-gamma
release assay

TUBERCULOSIS

2021

د تېرکولوز په اړه پوښتنې او ځوابونه



SPUTUM COLLECTION GUIDE

**You
will
need...**



A collection tube



A plastic bag



A paper bag

Tuberculosis

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Pregnancy

- Approximately 300 pregnant women at Fort McCoy
- 65 babies born (outside hospitals) between August 2021-February 2022
- Identifying and tracking pregnancy was a top priority for medical and public health personnel



Prenatal care



**Priority
resettlement**



Perinatal hepatitis B
(3 cases of HBV in pregnancy)



Local delivery



**Vaccine and post-exposure
prophylaxis
(measles IG,
varicella zoster
immune globulin
[VZIG])**



Lead poisoning and Kajal (Surma)

- ▶ Eyeliner widely used in Afghanistan on young children observed in use at Fort McCoy
- ▶ Traditionally contains high concentrations of lead
- ▶ 2 cases of elevated blood lead levels in children identified; unable to obtain Kajal and establish epidemiologic link
- ▶ Provided fliers and education via NGOs

Dari/Pashto - 4/2019

Surma Can Poison Children


"My daughter was poisoned by surma. We couldn't even tell she was sick. A doctor tested her blood for lead. I thought surma was healthy because it is natural. Now I know it has lead, which hurts children." - Afghan Refugee

Lead is a Poison

- Most surma that is from Asia, Africa, and the Middle East has lead. People have used surma for a long time. Now we know it is dangerous.
- Many children across the United States have tested high for lead from using surma. Surma is also called "ranja," "kohl," "kajal," "gajal," "kahal," or "al-kahal."
- Lead can poison the brain and make it hard for children to learn, pay attention, and behave.


Do Not Use

Do not use surma products like these. They may have high amounts of lead in them.



Use Safer Products

Use products from the USA or Europe such as "Kajal" by Maybelline and "Infallible" by L'Oréal.




Get a lead test

- Ask your doctor for a lead test for your child.
- Getting a lead test is the only way to know if someone has lead poisoning.

For more information

Call (866) 827-3478 or Email: pehsu@ucsf.edu
Western States Pediatric Environmental Health Specialty Unit (WSPHSU)

Baby with surma around eyes



Source: Rolf Klemm, Johns Hopkins University

Lead can get into the eyes and mouth and poison children

COVID-19

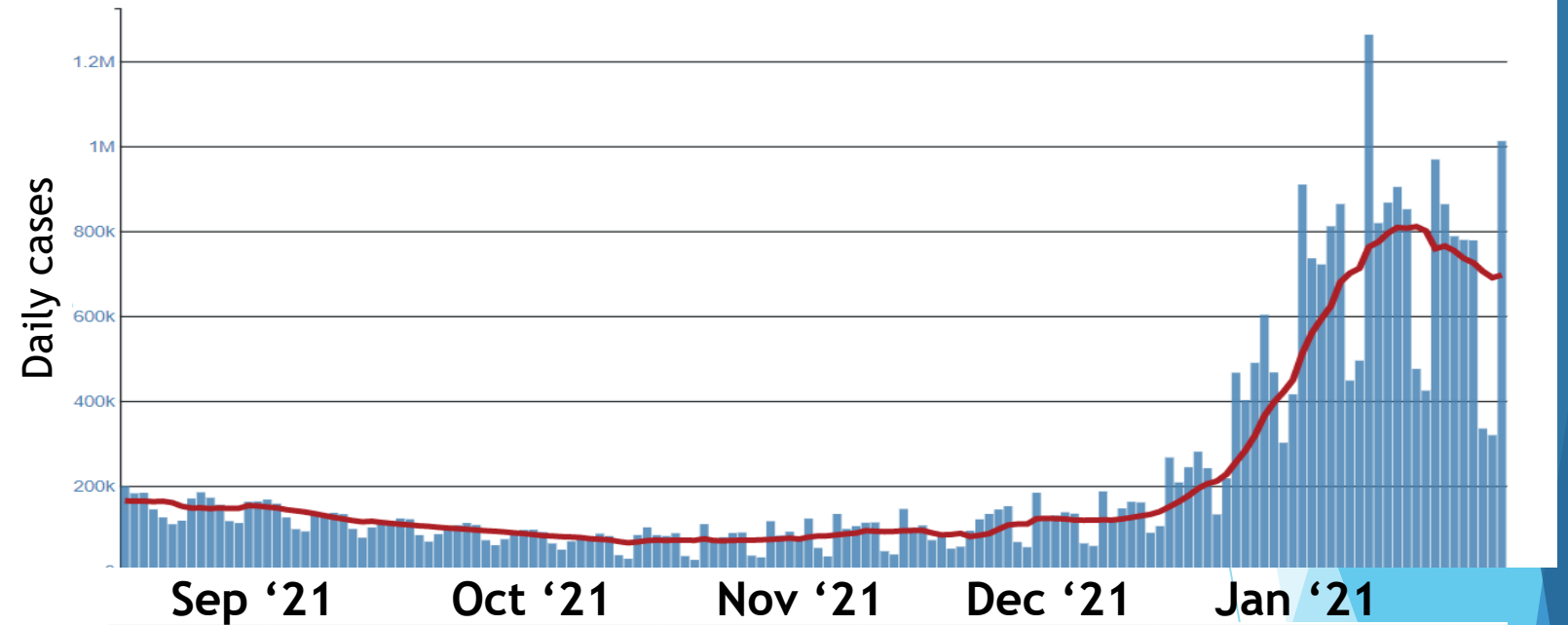
Prevention and Control Measures

- ▶ **Serial screening testing for Afghan guests and military personnel**
 - ▶ Every 3-7 days *recommended* by CDC
 - ▶ Wisconsin National Guard deployed to screen Afghans
 - ▶ BinaxNOW (antigen) with confirmatory PCR
 - ▶ Limited testing for volunteers and staff
- ▶ **Masks and physical distancing required for staff and personnel, optional for Afghans**
- ▶ **Isolation and quarantine**
 - ▶ 10-day isolation and 10-day quarantine
 - ▶ Challenges of congregate setting with family units
 - ▶ Challenges with changing CDC and DoD guidance
- ▶ **Mass vaccination**
 - ▶ Challenges of large ineligible group (<12 years old, according to authorization at the time)



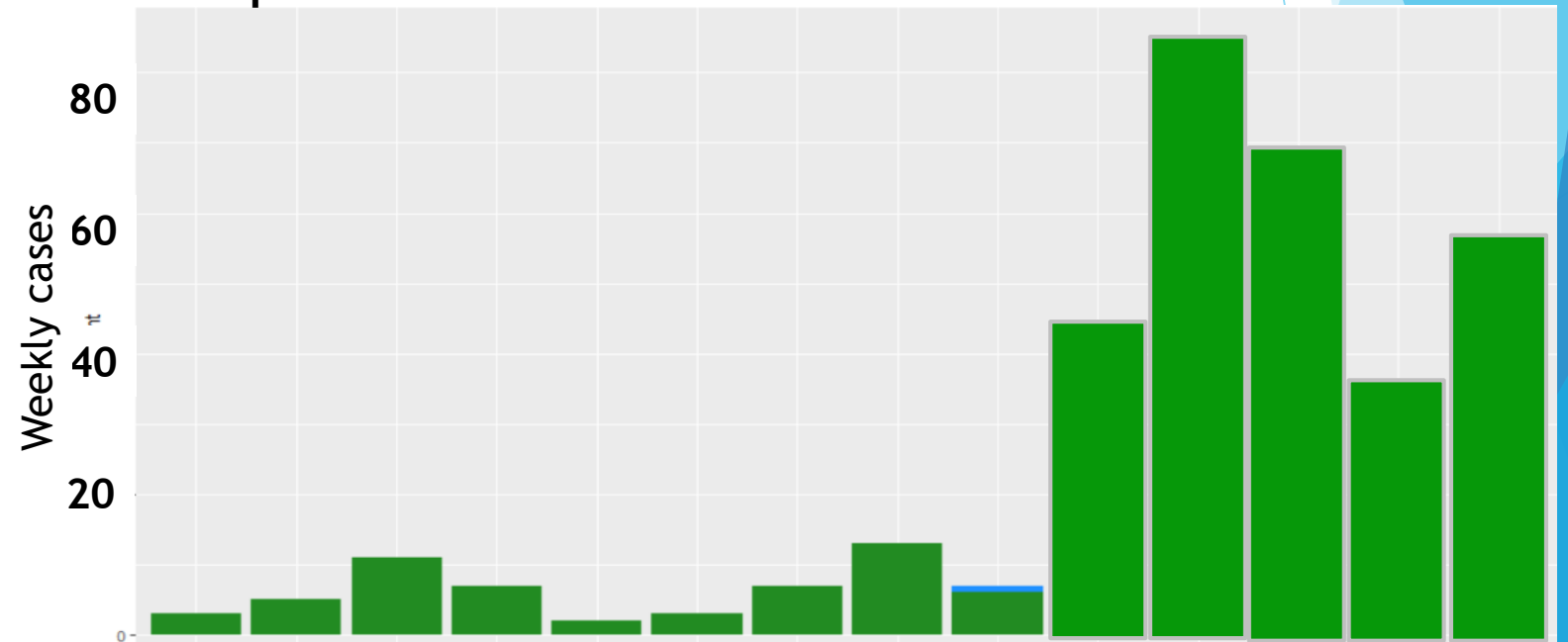
COVID-19

U.S. Cases



Fort McCoy cases

Total: 424 cases





Monroe County Public Health

-
- Coordinated with local health departments and clinics to acquire 250 doses of MMR vaccine to cover vaccine administration to Afghan guests exposed to measles case.
 - Provided needed needles and syringes for vaccine administration.
 - Worked with State and Local providers to acquire specimen collection supplies and testing for communicable diseases of concern until supply chain and lab capacity was established.
 - Coordinated and connected Ft. McCoy with pharmacies to acquire IVIG and IMIG for those exposed to measles and varicella that could not be vaccinated.
 - Worked with State to establish treatment for TB cases and acquired medications through the State TB dispensary.



Monroe County Public Health (continued)

- Provided scales for use in the Pediatric clinic.
- Provided car seats and cribs if needed before discharge from the hospital.
- Provided MMR and Hep A vaccine to contracted staff post exposure.
- Participated in calls with HCP, State and Federal partners to coordinate support for OAW.



Monroe County Child Support

- Starting 10/25/21, the Monroe County Child Support Agency started receiving referrals on some of the babies born to the Afghan Guests at Fort McCoy
- The referrals were received as the children were signed up for Badgercare benefits. Information that was entered was not complete so that resulted in a case being opened for child support to either establish paternity or a support obligation.
- Monroe County ended up getting a total of 27 cases
- None of the cases should have been referred to the Child Support Agency as all of the babies were marital children born to an intact family (mom and dad together).
- It took Child Support from 10/27/21 to 1/19/22, to get the information which allowed us to close all of the files.



Monroe County Human Services

- Child Protective Services- 7 Abuse and Neglect reports-Developed MOU with Ft. McCoy concerning CPS reports and follow-up
- Youth Justice Services-3 reports
- Provide Behavioral Health Crisis Services and follow-up for 2 Chapter 51 Detention situations



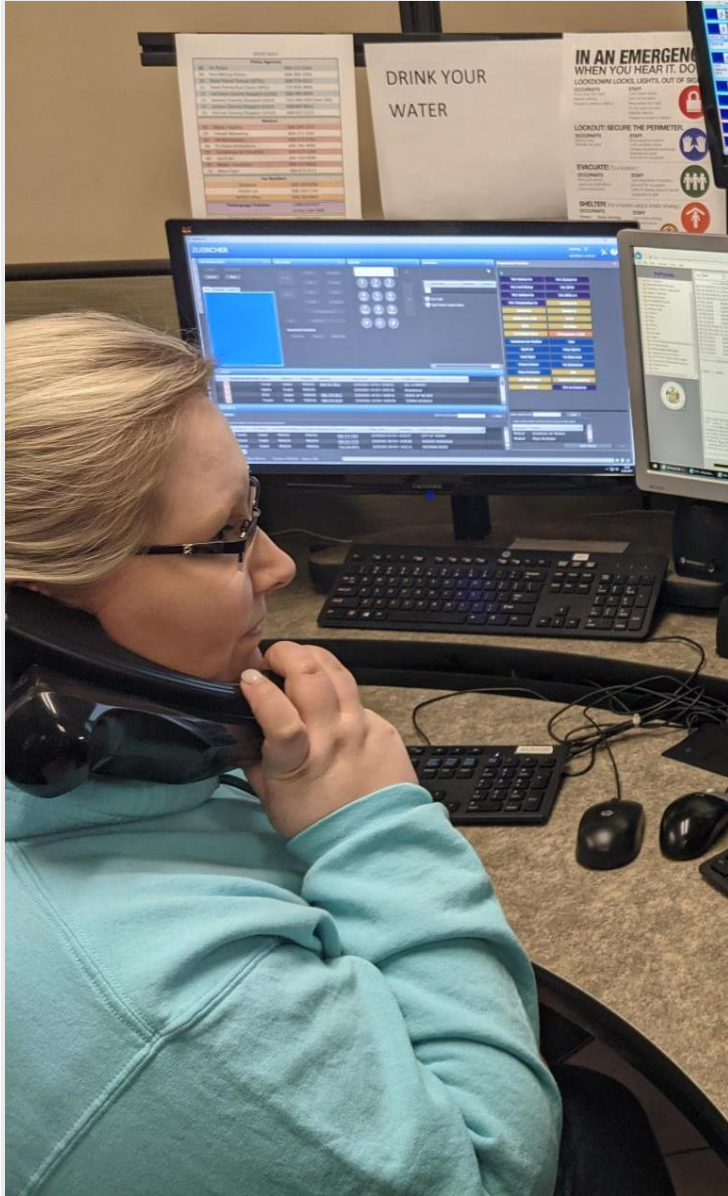
Monroe County Sheriff and Emergency Management

- Rumor Control
 - Local/National
- Jurisdiction issues
 - SWAT/Crowd Control
 - Exclusive Federal
- Top-down resource requests



Local Economy

- Loss of Room Tax due to no federal tax on hotel rooms
 - Impact to direct operating expenses
- Increase in restaurant and other local revenue
- Not just Monroe County



Monroe County Communications Center

- Received between 50-100, 911 calls from Ft. McCoy almost everyday
- Most calls were hang ups once dispatch called
- Some calls were real emergencies
- The calls that were real emergencies were problematic due to the language barrier
- Dispatchers downloaded apps on cell phones to translate



Monroe County Landfill

Loss of Total Air Space

➡ 7113.00 y3

➡ 150+ loads of mattress pads and pillows
(10,000+)

Loss of Airspace Revenue

➡ \$101,173

➡ Due to items not compacting

The additional air space, used added into the already tight window would put the landfill at about 2 months of time lost. This might end up making the landfill full before they can get the expansion built.

Acknowledgements

Public Health

CDC Fort McCoy Deployment
Teams

CDC Operation Allies Welcome
WDHS Fort McCoy Response Group
Monroe County Health
Department
Wisconsin State Lab of Hygiene

Fort McCoy

All of the military staff,
government workers, NGOs,
contractors, and other who
dedicated this time to supporting
Afghan evacuees



Government Response

■ Sites

- Fort McCoy (Wisconsin)
- Fort Dix (New Jersey)
- Camp Atterbury (Indiana)
- Fort Bliss (Texas)

■ Federal Response

- Dept of Homeland Security (Lead Agency)
- Dept. of Defense (Army, Coast Guard)
- Dept. of State
- Office of Refugee Resettlement (HHS)
- Centers for Disease Control and Prevention
- USCIS (U.S. Citizen and Immigration Services)
- FBI

■ State/local-level Response

- Dept of Health Services, Monroe County Health Dept.
 - Division of Public Health, Refugee Health
- Dept of Children and Family Services (Resettlement)
- Department of Military Affairs, Wisconsin Emergency Management

■ Non-government

- Red Cross
- International Organization for Migration (IOM)
- International Rescue Committee (IRC)
- USCCB (Catholic charities)
- Team Rubicon
- Others

Successes and **Lessons Learned**

- ▶ Rapid public health scale-up in extremely challenging setting (and during a pandemic)
- ▶ Dedication and collaboration from stakeholders at federal, state, and local level
- ▶ Vaccination and post-exposure prophylaxis saved lives
- ▶ **How could we be better prepared next time?**
 - ▶ Better contracts for lab and IT infrastructure (*no electronic medical records, electronic disease surveillance systems, vaccination records*)
 - ▶ Larger public health staff
 - ▶ 2 weeks or 6 months?? Better health care planning for long-term support
- ▶ **How close were we to a large community measles outbreak? Polio case?**
 - ▶ Better communication with local health care systems
 - ▶ Better access to testing, vaccination, vaccine records and information for contractors and volunteers on base