



HENNEPIN COUNTY
MINNESOTA

Public Health Department

2017 Measles Response

Presented at the Wisconsin Governor's
Conference on Emergency Management
& Homeland Security

March 21, 2019

Courtney Wetternach, MPH
Marcee Shaughnessy



Presentation Objectives

1. Understand the complexity of an **extended public health response**, and the successes and challenges around planning for, and responding to, an incident of this type.
2. Understand the process in an **epidemiological investigation** to measles.
3. Share successes and challenges around **community outreach** and engagement during measles outbreak.
4. Describe the **culturally-specific** response to measles in the Somali-Minnesotan community.
5. Share how response was **coordinated with** the Minnesota Department of Health and Metro Health and Medical Preparedness Coalition **partners**.

2017 Measles Outbreak

- **April 11**: First case confirmed in an unvaccinated 20-month-old with no travel history
- **79* confirmed and suspected cases** statewide, 70 in Hennepin County
- **90% of cases unvaccinated**, 81% within the Somali MN Community
- 22 cases were hospitalized
- ~ **9,000 people** exposed
- Last case: July 13, 2017
- All Clear date: Aug 25, 2017

* 4 cases were later removed from the outbreak case total (all in Hennepin)

MEASLES IS IN OUR COMMUNITY

Make sure you and your family are vaccinated

Call your doctor or clinic if you see symptoms

Symptoms begin with fever, cough, runny nose, and red watery eyes. Then a rash develops that spreads from the head to the rest of the body.

MDH Minnesota Department of Health

www.health.state.mn.us

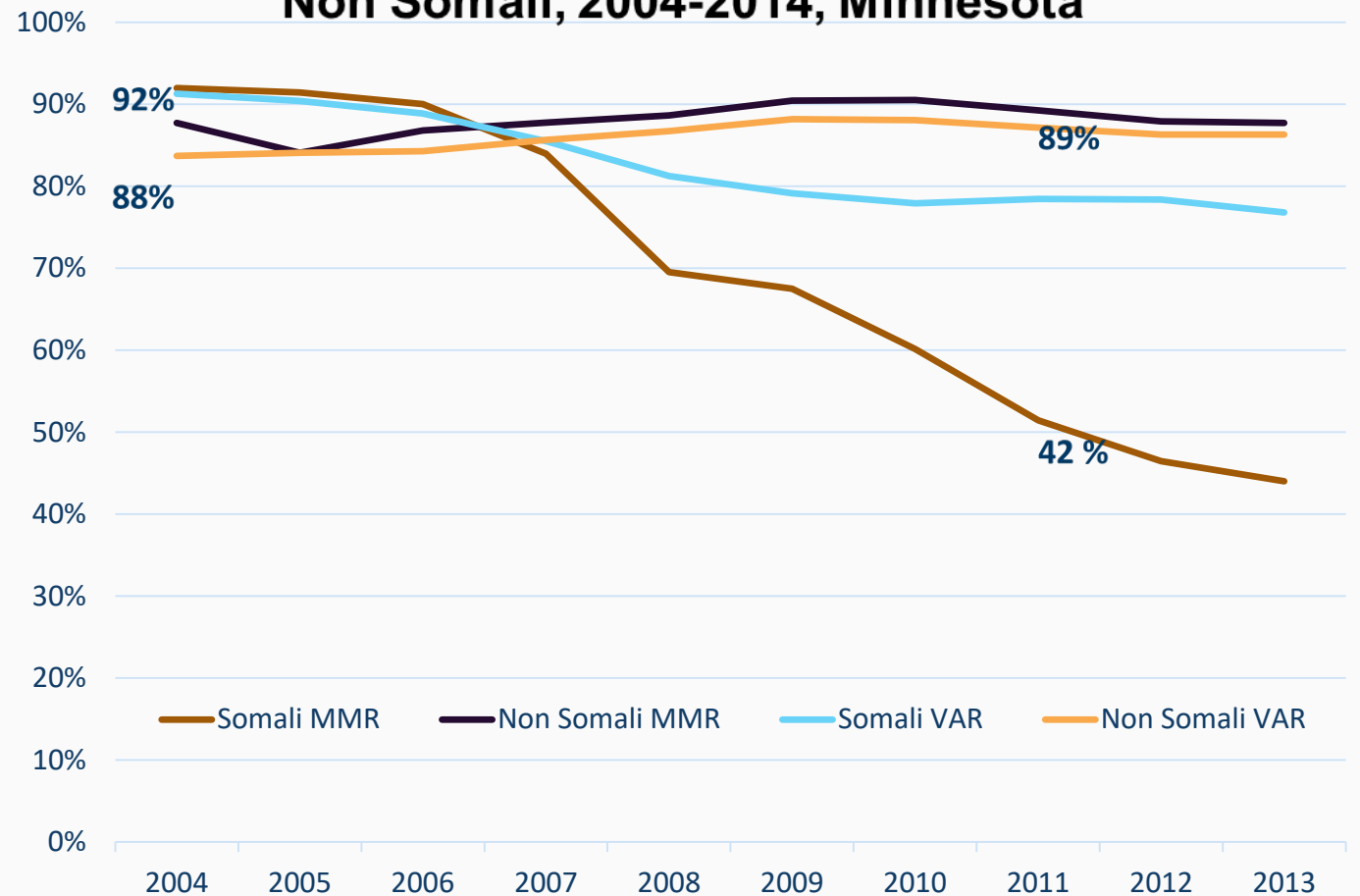
Impact of Misinformation on Somali Minnesotan Community

Minnesota Sees Largest Outbreak of Measles in Almost 30 Years

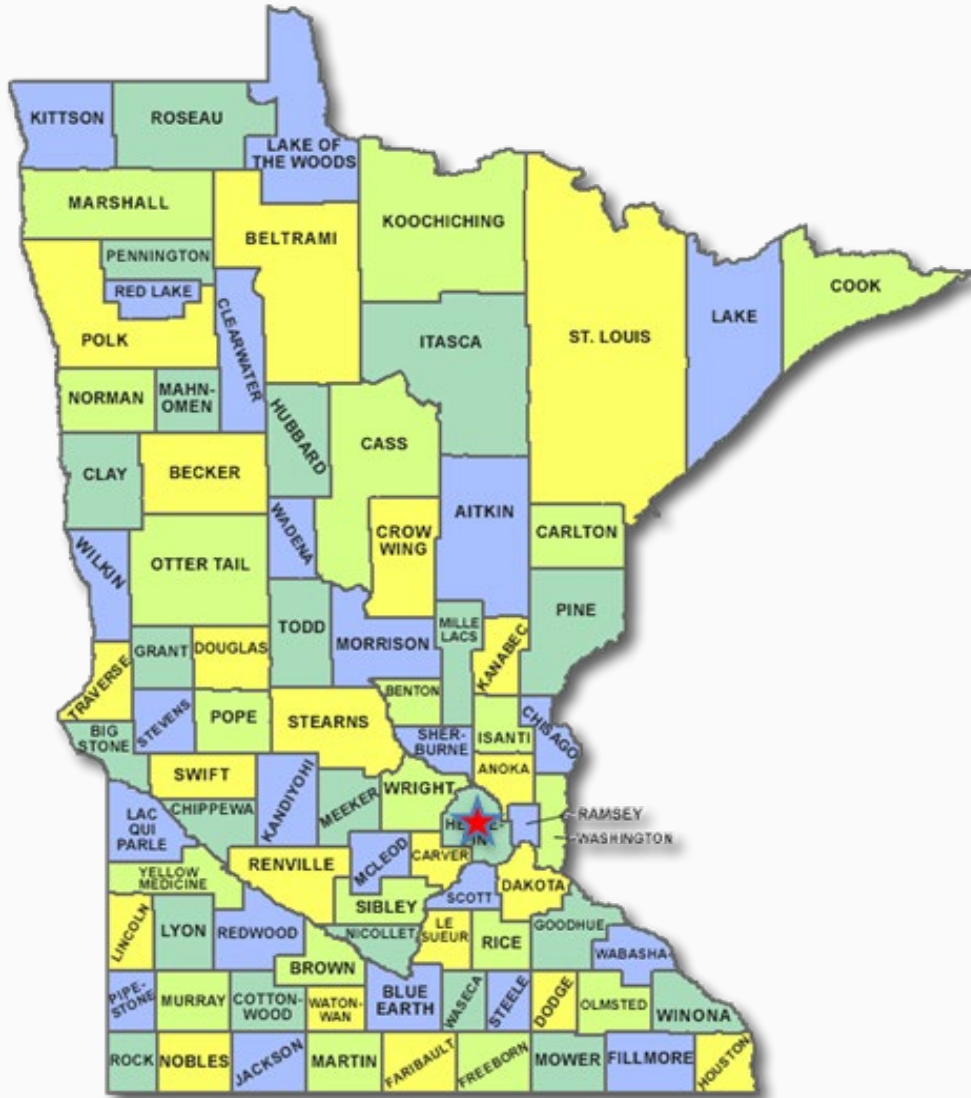
By CHRISTOPHER MELE MAY 5, 2017



Comparison of MMR and Varicella Rates at 2 Years Old in Minnesota-born Children of Somali Descent versus Non Somali, 2004-2014, Minnesota



Hennepin County, MN

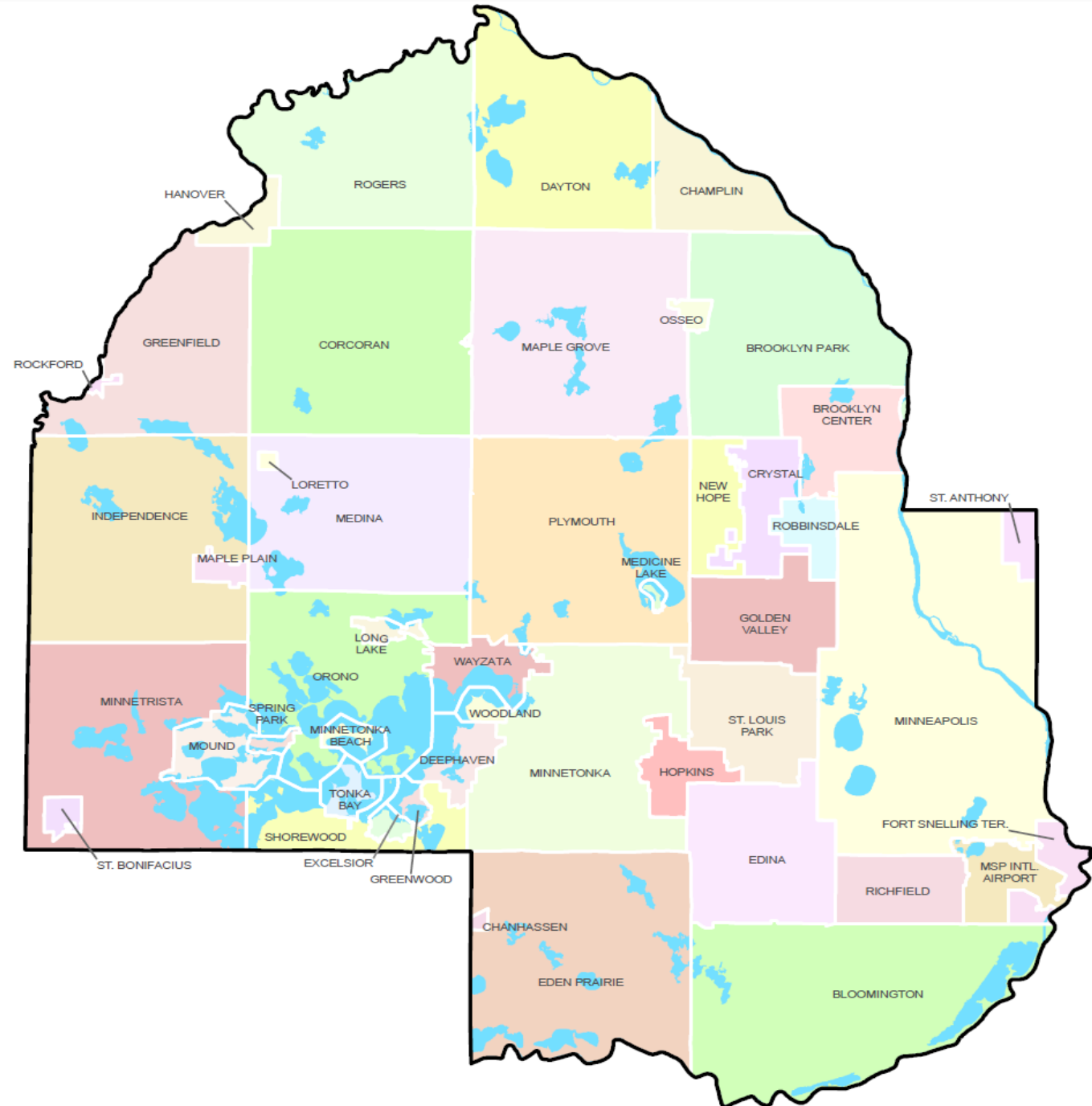


- 1.2 million residents
- 22% of the State's population
- Median age: 36.2
- 17.5% speak language other than English at home
- 13.4% of Hennepin County's population is foreign-born



Hennepin County Government

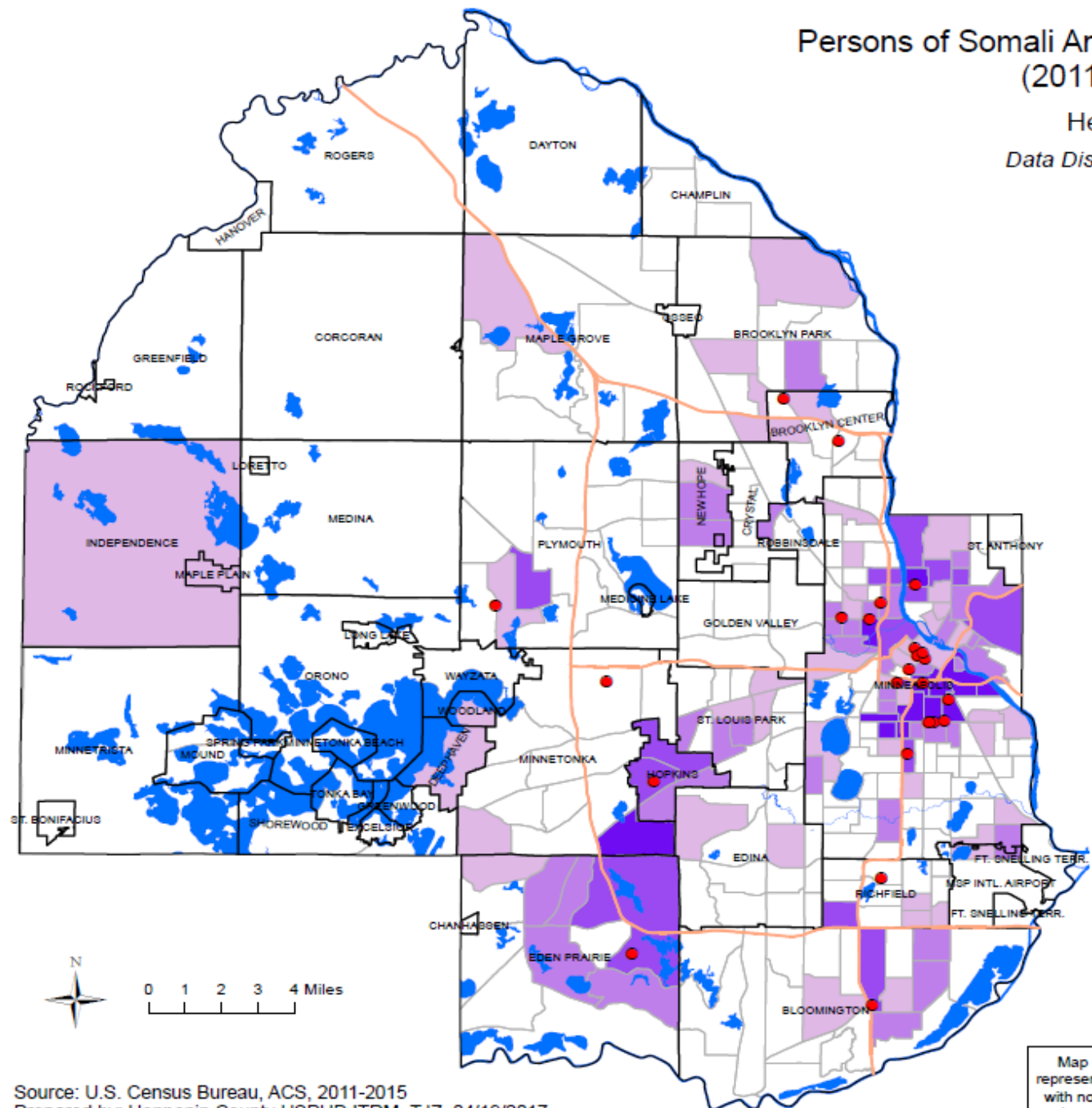
- ~ 10,000 total staff
- Human Services and Public Health Departments ~ 3,800 staff
- Emergency Preparedness Unit – 6
- Epidemiologists – 5 FTE (4 FTE during measles, 3 doing measles response work)
- 45 municipalities (Cities)
- 22 independent school districts



Persons of Somali Ancestry as Percent of Population (2011-2015 Average)

Hennepin County

Data Displayed by Census Tract



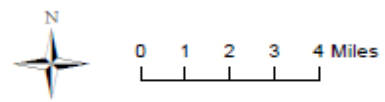
- HSPHD staff sites
- Interstate hwys
- City boundaries
- Water

% of population

- 0%
- 1% - 2%
- 3% - 5%
- 6% - 10%
- 11% - 28%

N = 20,820 persons
(1.7% of population)

Note: These data are from the Census Bureau's American Community Survey. They are five year average data, and due to the small sample size at the census tract, the margins of error may be large for some tracts. They should be used for the purpose of general geographic guidance, rather than as exact numbers.



Source: U.S. Census Bureau, ACS, 2011-2015
 Prepared by: Hennepin County HSPHD ITRM_TJZ_04/19/2017
 Somali ancestry as % of pop_ACS 2011-2015_Hennepin_tr.mxd

Map Disclaimer: This map (i) is furnished "AS IS" with no representation as to completeness or accuracy; (ii) is furnished with no warranty of any kind; and (iii) is not suitable for legal, engineering or surveying purposes. Hennepin County shall not be liable for any damage, injury or loss resulting from this map.



MEASLES



RASH



COUGHING



HEADACHE



DOCTOR



CONJUNCTIVITIS



LOSS OF APPETITE



SNOT



VACCINATION



LIGHT SENSITIVITY



RASH



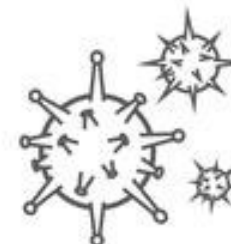
BED REST



AIRBORNE INFECTION



FEVER



VIRUS



DIAGNOSTICS

Measles Investigation

- **Laboratory** confirmation
- Identify exposed **contacts**
- Assess **immunity** of exposed contacts
- Administer **post-exposure prophylaxis** to exposed, **susceptible** contacts
- If too late to administer prophylaxis, **exclusion and monitoring** of exposed **susceptible** contacts



Post Exposure Prophylaxis (PEP)

- MMR vaccine within 72 hours of exposure
OR
- Immune globulin (IG) within 6 days of exposure **for those at highest risk**



Isolation/Quarantine vs. Social Exclusion

WARNING MEASLES

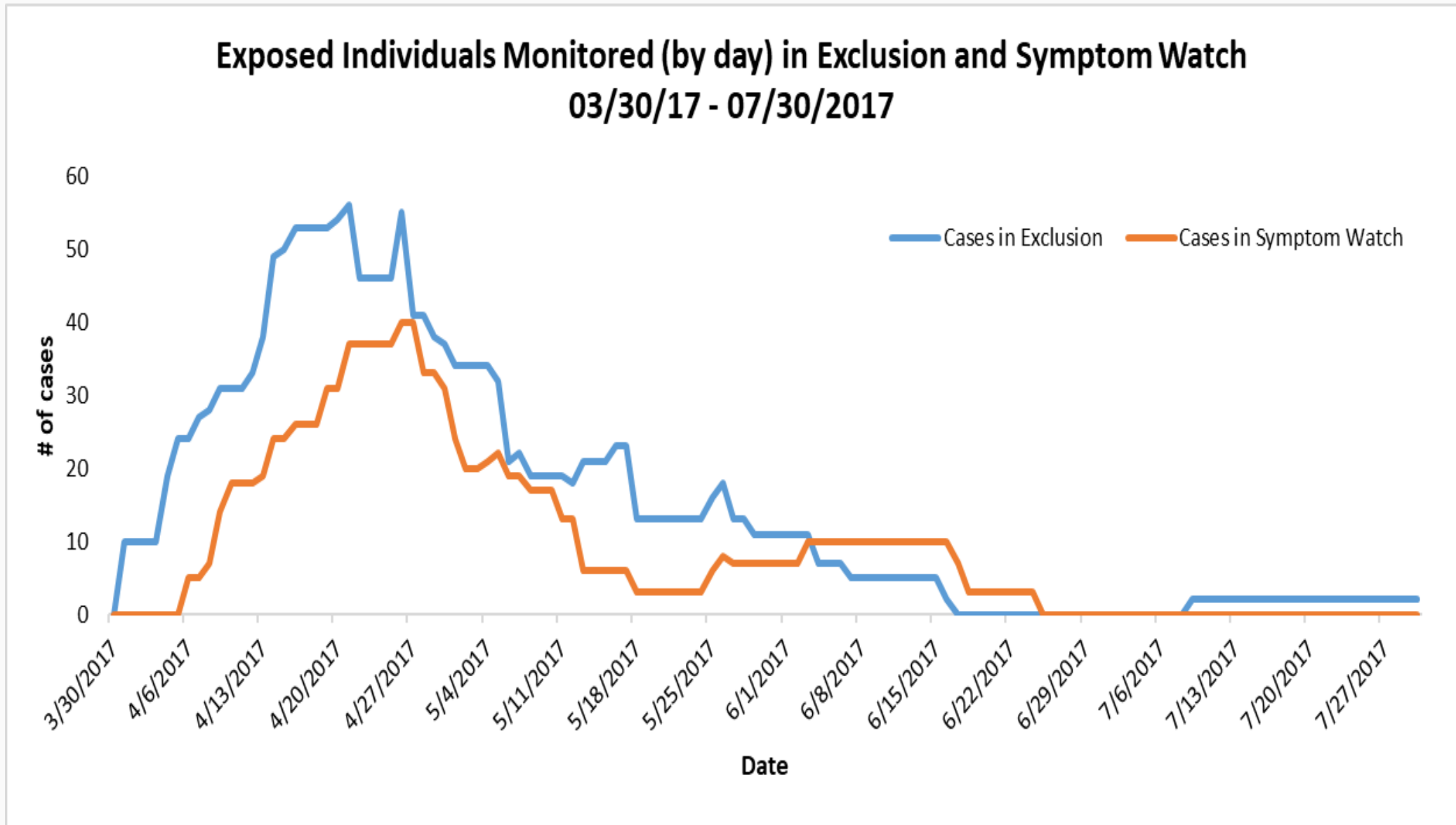
All persons are forbidden to enter or leave these premises without the permission of the HEALTH OFFICER under PENALTY OF THE LAW.

This notice is posted in compliance with the SANITARY CODE OF CONNECTICUT and must not be removed without permission of the HEALTH OFFICER.

Form D-1-M

_____ Health Officer.

Monitoring and Symptom Watch



Exposure Settings





CDC Public Health Preparedness Capabilities

- Capability 1: Community Preparedness
- Capability 3: Emergency Operations Coordination
- Capability 4: Public Information and Warning
- Capability 6: Information Sharing
- Capability 8: Medical Countermeasures
- Capability 11: Non-pharmaceutical Interventions
- Capability 13: Public Health Surveillance and Epidemiology
- Capability 14: Responder Safety & Health
- Capability 15: Volunteer Management

Incident Management

- Org Chart
- Incident Action Planning / Planning P
- Strategies and tactics
- Planning and resource tracking
- Just In Time orientation and training
- Daily Situation Reports
- Data Gathering and GIS
- Demobilization Planning

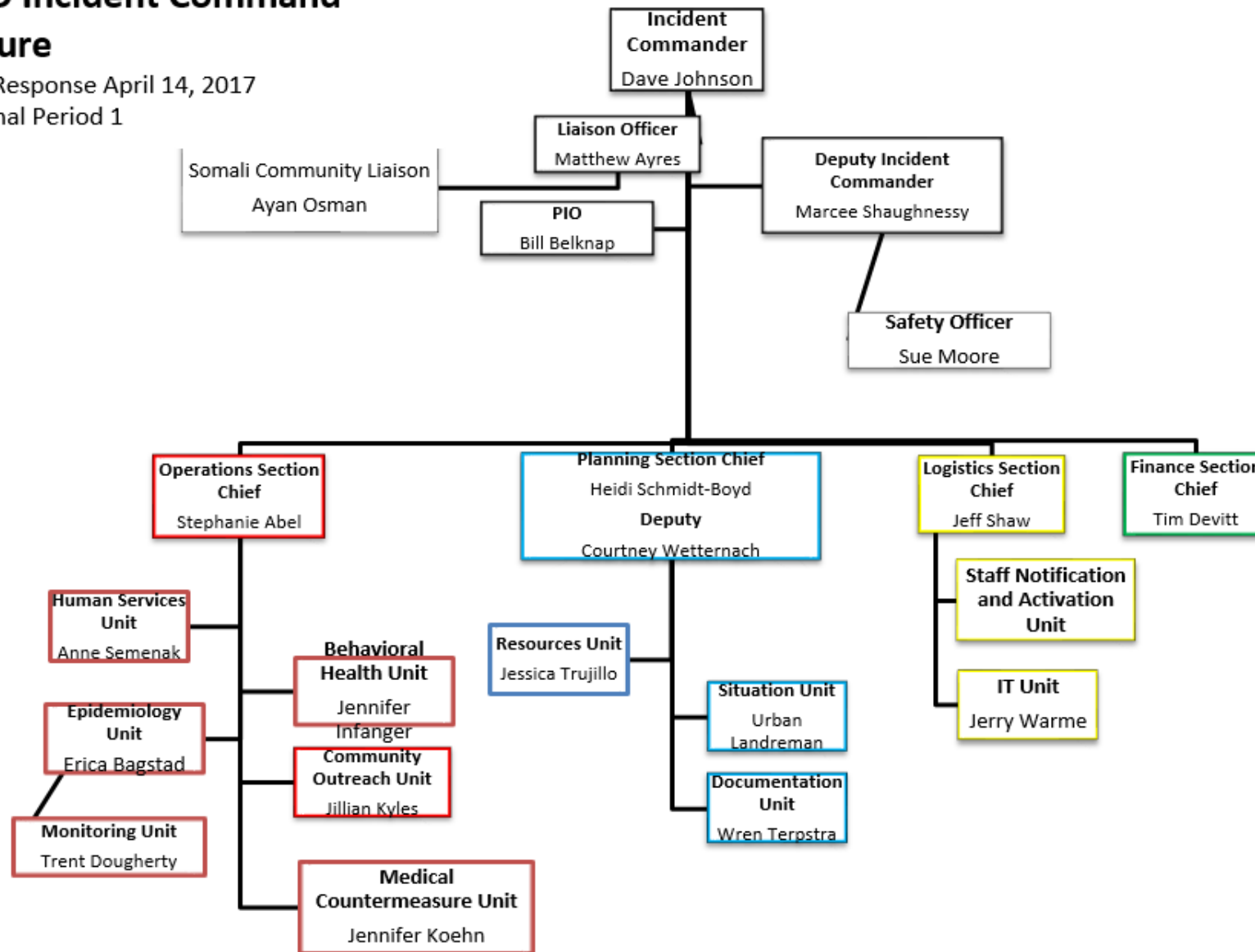


Department Operations Center (DOC)



HSPHD Incident Command Structure

Measles Response April 14, 2017
Operational Period 1

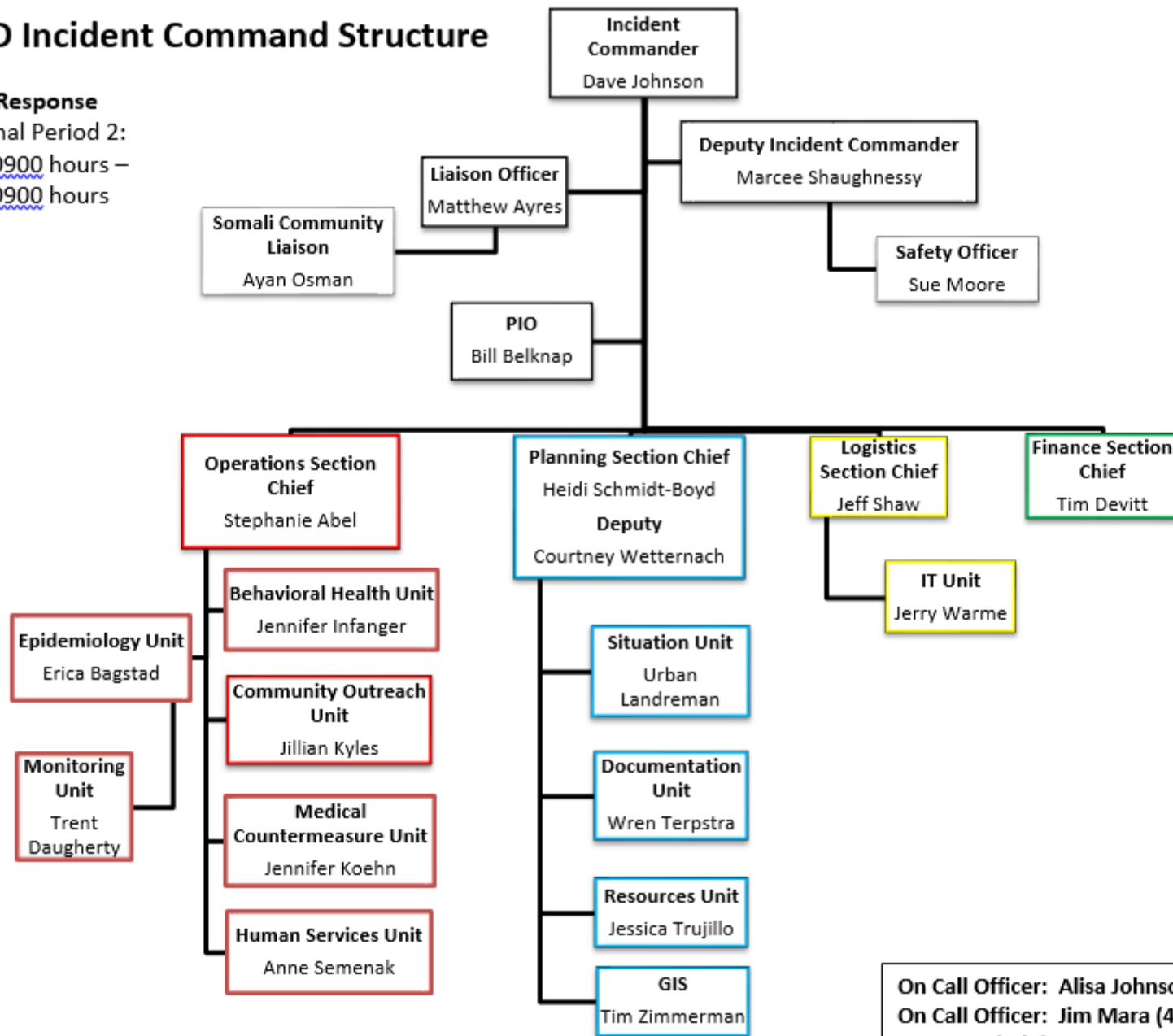


On Call Officer: Alisa Johnson (4.14.17 – 4.20.17)
Agency Administrator: Gary Harmon

HSPHD Incident Command Structure

Measles Response

Operational Period 2:
4.18.17 0900 hours –
4.24.17 0900 hours

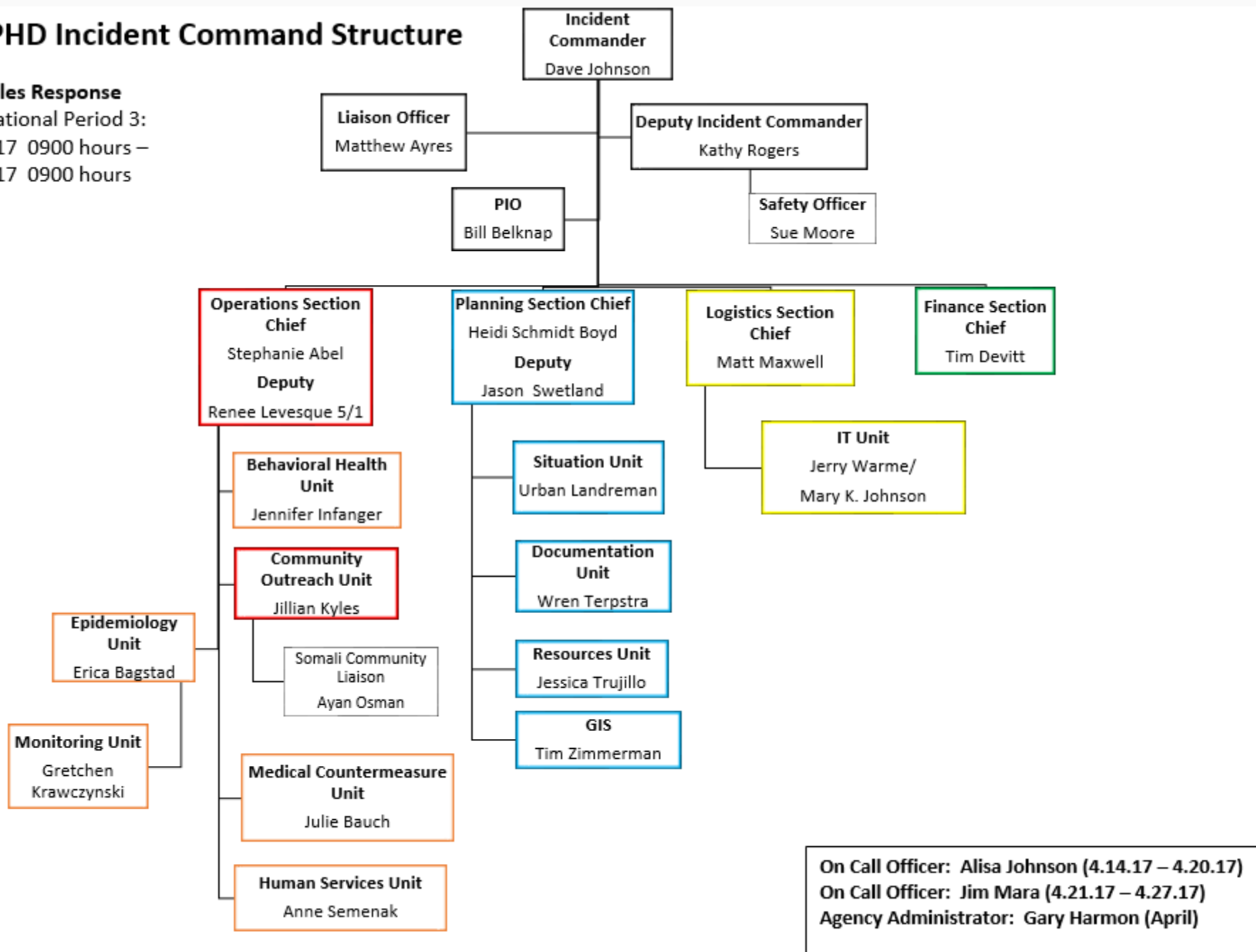


On Call Officer: Alisa Johnson (4.14.17 – 4.20.17)
On Call Officer: Jim Mara (4.21.17 – 4.27.17)
Agency Administrator: Gary Harmon (April)

HSPHD Incident Command Structure

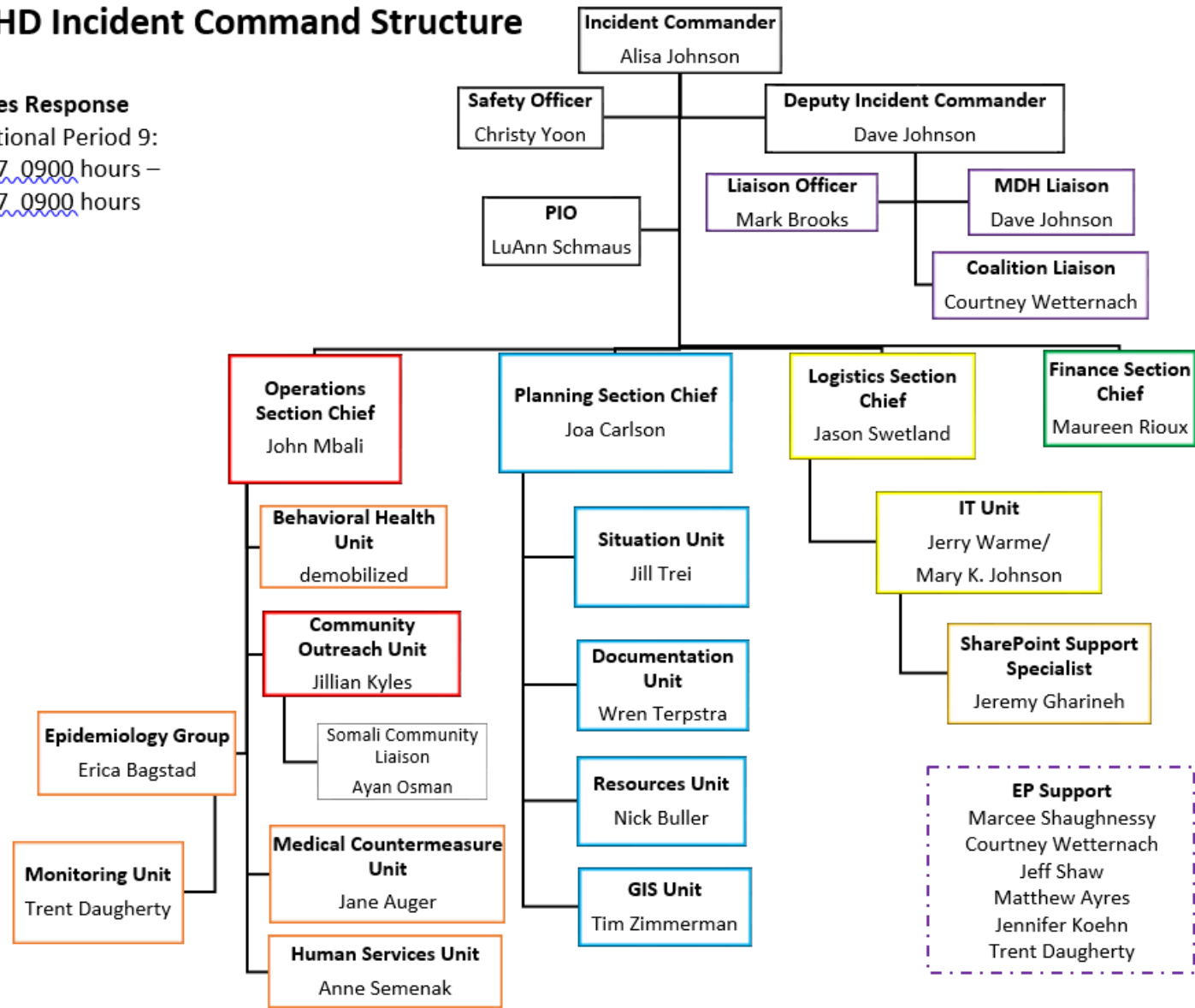
Measles Response

Operational Period 3:
4.24.17 0900 hours –
5.01.17 0900 hours



HSPHD Incident Command Structure

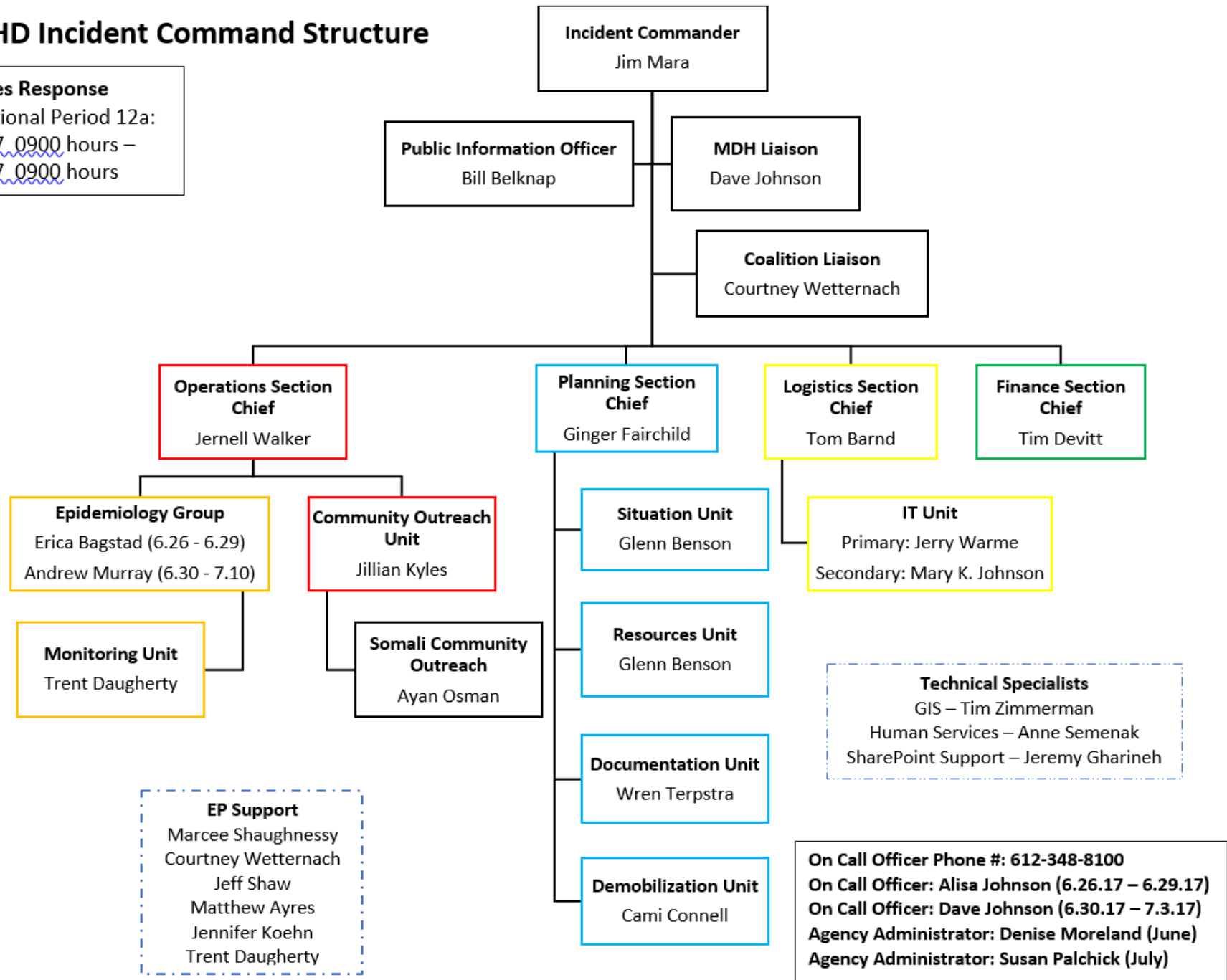
Measles Response
 Operational Period 9:
 6.05.17 0900 hours –
 6.12.17 0900 hours



On Call Officer Phone #: 612-348-8100
 On Call Officer: Lisa Mueller (6.5.17 – 6.8.17)
 On Call Officer: Casey White (6.9.17 – 6.12.17)
 Agency Administrator: Denise Moreland (June)

HSPHD Incident Command Structure

Measles Response
 Operational Period 12a:
 6.26.17 0900 hours –
 7.03.17 0900 hours



HSPHD Incident Command Structure

Measles Response

Operational Period 13:
7.10.17 0900 hours –
7.29.17 0900 hours

Incident Commander

July 10-11: Marcee Shaughnessy
July 12-17: Courtney Wetternach
July 18 - 29: Marcee Shaughnessy

Coalition Liaison

Courtney Wetternach

MDH Liaison

Dave Johnson

On Call Officer Phone #: 612-348-8100

On Call Officer: Jim Mara (7.10.17 – 7.13.17)

On Call Officer: Lisa Mueller (7.14.17 – 7.20.17)

On Call Officer: Kathy Rogers (7.21.17 – 7.24.17)

Agency Administrator: Susan Palchick (July)

Coordinated Public Health Response

- State & County Health Department collaboration
- Coordination with healthcare through Metro Health and Medical Preparedness Coalition



INTENDED FOR COALITION PARTNERS ONLY
NOT FOR EXTERNAL DISTRIBUTION

Metro Health & Medical Preparedness Coalition Situation Report

Incident Name: Measles 2017
Date of Report: 06/08/2017
Time of Report: 1100
Compiled By: Seth Jones

Coalition Contact Information
Name: Seth Jones, RHPC
Phone: (612) 873-7520
Email: seth.jones@hcmcd.org

Situation Summary: (Source MDH EPI Summary)
June 7 ICS Update 10:00 a.m.

▪ Case Count on 6/7:	76 Cases	Latest Rash Onset Date	All Clear Date
	▪ Hennepin:	67	6/1 7/17

Response Staffing

- Scheduling
- Call-up procedure standardization
- Trainings: Measles 101 & ICS Refresher
- Pre-assignment shadowing or meeting with incumbent
- Position transfer checklist
- Key positions that did not change:
MDH Liaison, Coalition Liaison, Epi Group Lead,
Community Outreach Unit Lead, Human
Services Unit Lead



Medical Countermeasures

- MCM: Immune Globulin and MMR vaccine
- Point of Dispensing (POD) Strategy and decision-making
- Closed Point of Dispensing (CPOD) i.e., Immune Globulin Clinic
- Mobile MCM



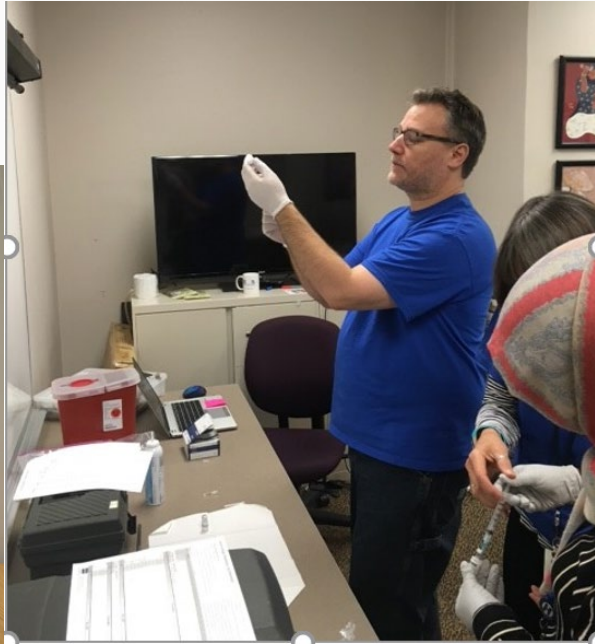


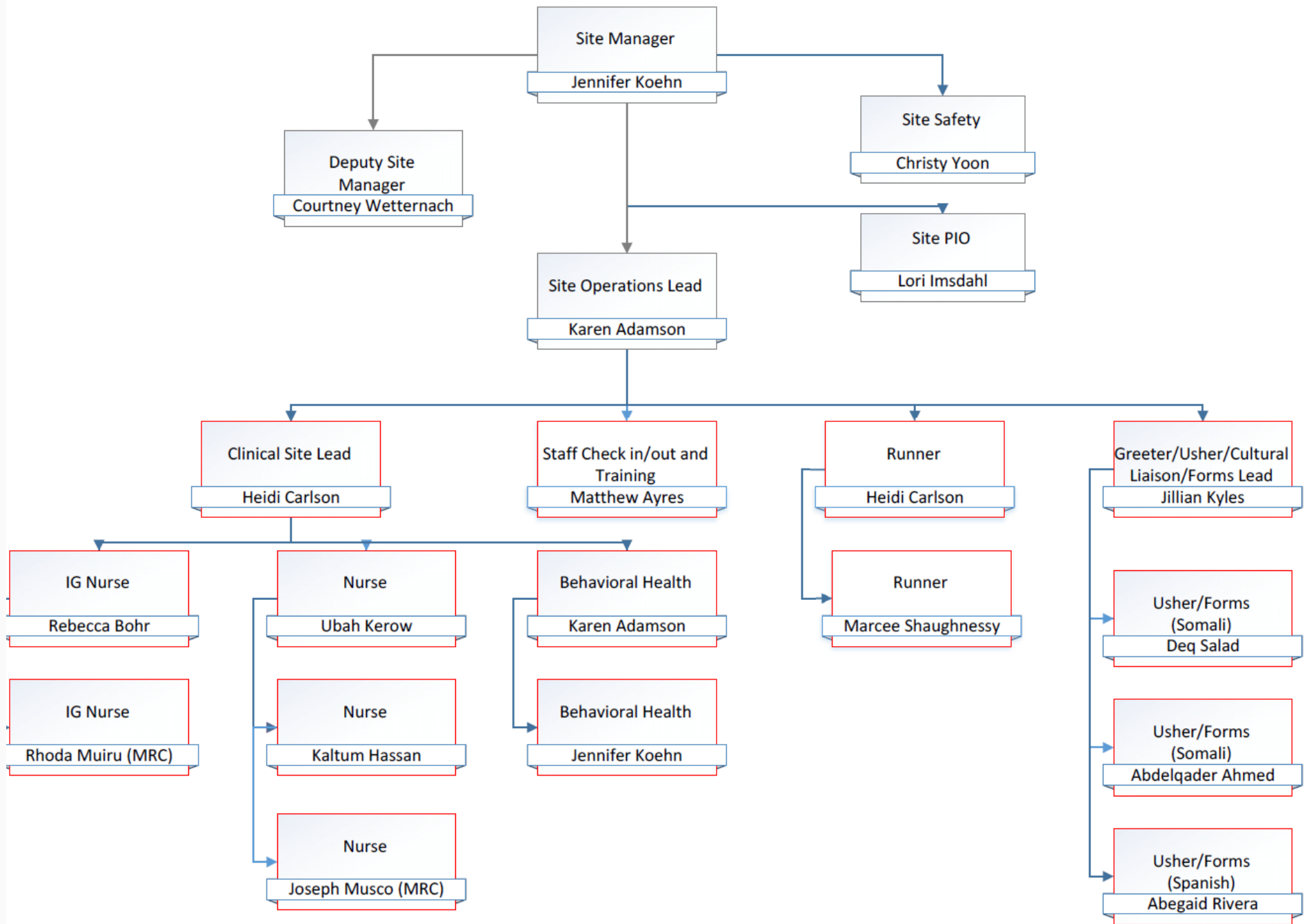
Home Visits



Closed POD

5/20/2017





Culturally Responsive Messaging and Outreach



Face-to-face

One-on-one

About Immunization, NOT
Immigration

Social media





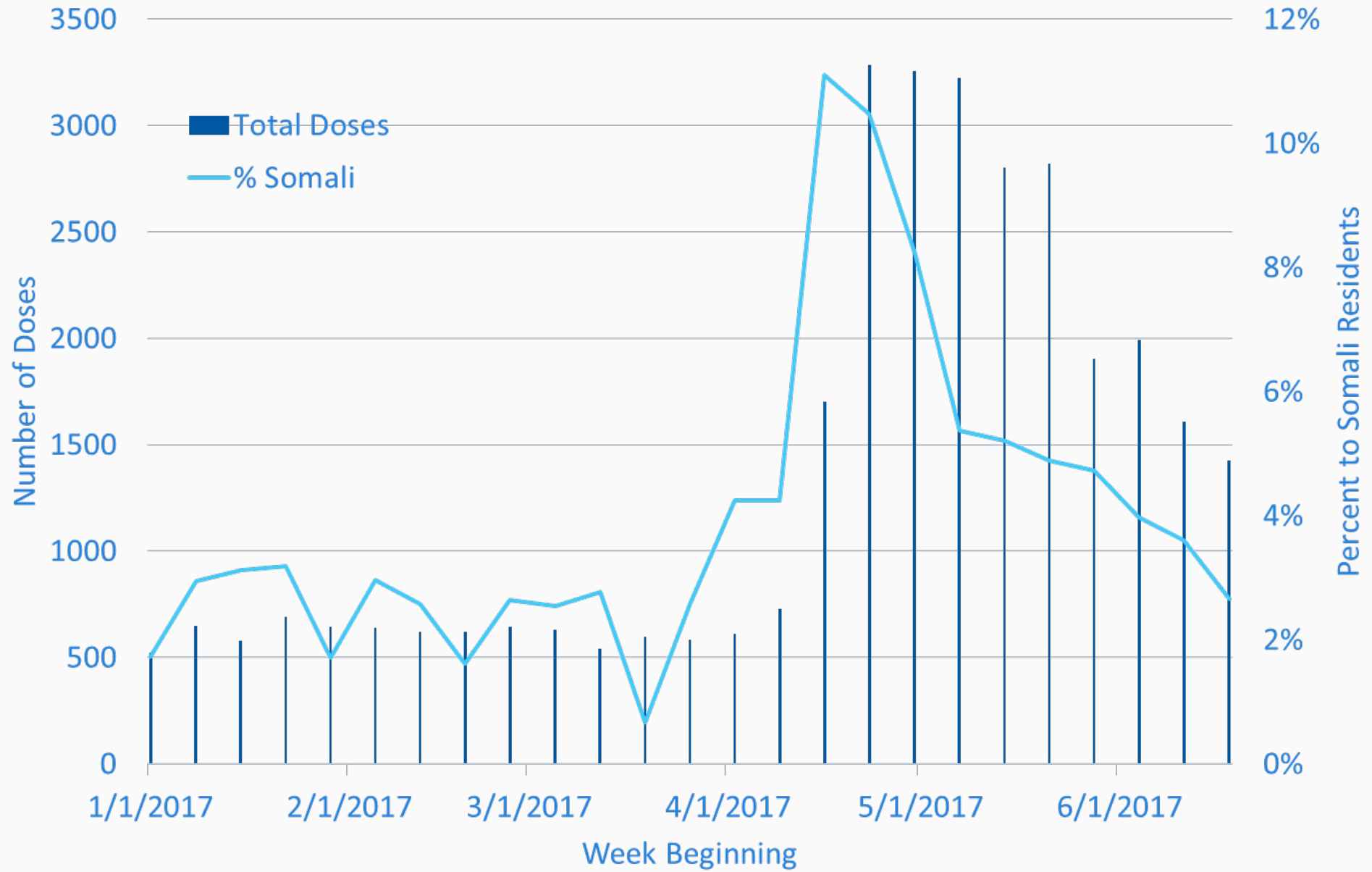
Community Leaders are best messengers



MEASLES OUTBREAK Measles Outbreak Town Hall
Minneapolis



MMR Doses Administered to Hennepin County Residents and Percent of Total to Somali Residents by Week, 2017



Human Services: Essential Services



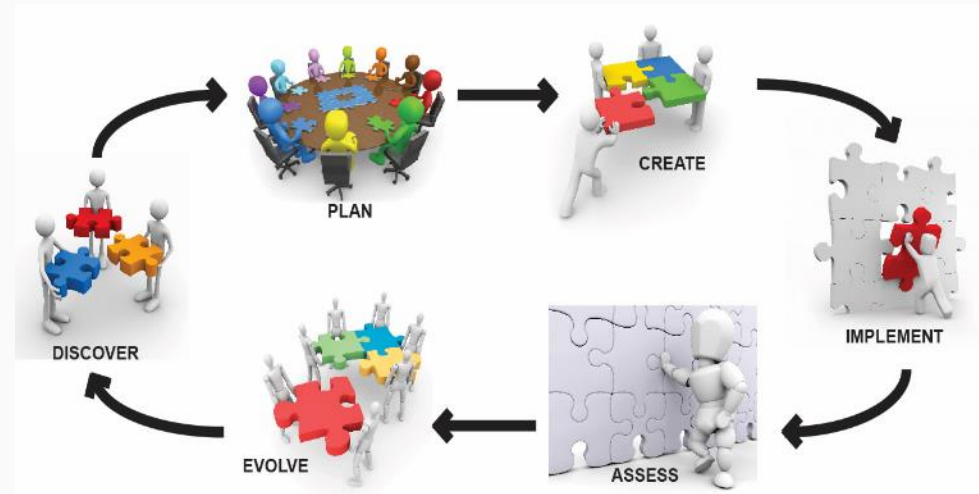
Case Study



- Non-immune child was excluded from daycare for 21 days following exposure to measles
- Mother said she would not comply with Exclusion and had to return to work and had no other options
- Essential Services contact person set up an in-home nanny service
- Be flexible (our plans vs. how things play out in the real world)

Plans and Tools Developed

- Command Team role transition checklist
- Data dashboard
- Situation Report
- Incident Action Plan
- Shelter Plan
- IG POD Plan
- Community Outreach strategy and activity log
- Measles Essential Services process
- Measles Epidemiology emergency response process



Cost of Not Vaccinating



~ **\$400,000** response-related costs



~ **\$1,000,000** response-related costs



Other Activities and Considerations



- Communications and media
- MN Department of Human Services child care policy change
- Enforcement of required exclusion
- Exposures in homeless shelters
- Cross-jurisdictional response
- Metro Health & Medical Preparedness Coalition "activation" and coordination



- Placed a high value of **preventing** one case of measles
- Manage expectations
- On-going **support** from leadership
- Keep the **message** focused and consistent
- **Staff** from Somali Community was critical; learned that the MESSENGER was even more important than the message

- Awareness of **plans**
- Be **flexible**- you will need to make adjustments as you go
- EP **coaches/mentors** for teaching, transition, and continuity
- Day-to-day job vs. response role
- An extended public health response is different than typical response scenarios that we plan and train for
- Opportunity to **train** staff, **develop** procedures and tools, and **enhance partnerships** with Coalition partners



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