

Enhancing Measles Response through Coalition Engagement

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Presented By:



Introductions

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Disclosures

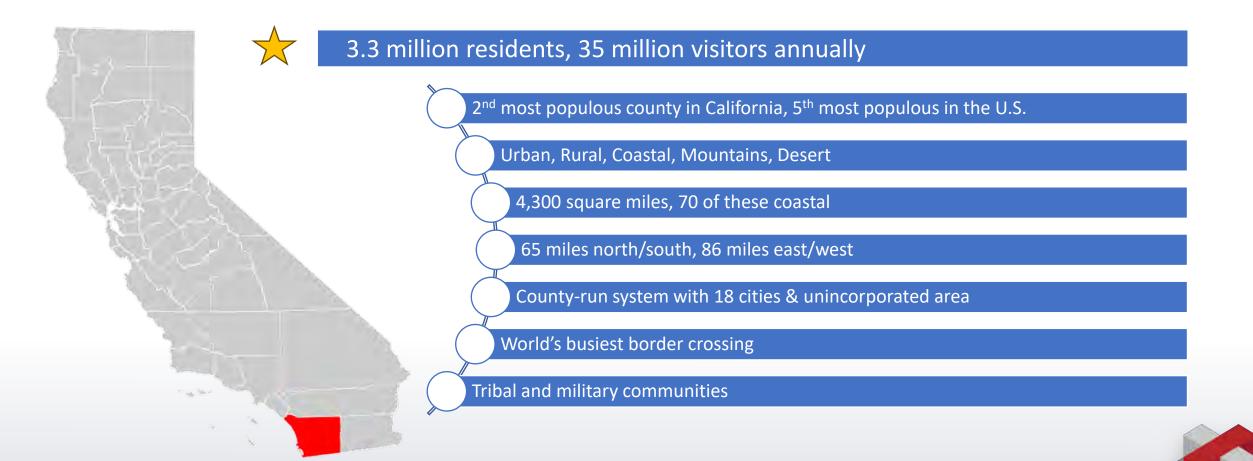
No relevant financial relationships to disclose.

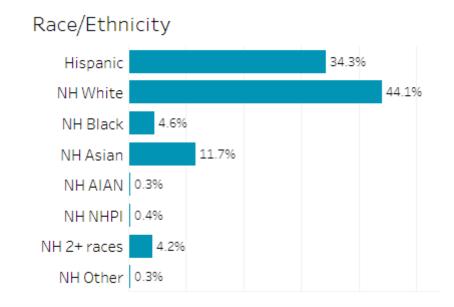


Agenda

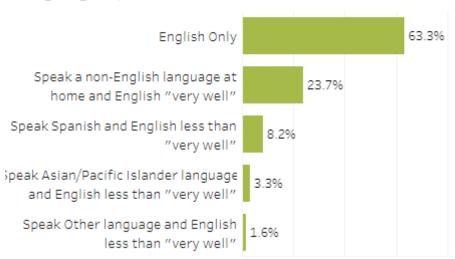
- 1. Background
- 2. Measles Response Activities
- 3. Measles Tabletop & Coalition Engagement
- 4. Strategies for Success
- 5. Tool Development
- 6. Opportunities







Language Spoken













California Children's
Services

Epidemiology & Immunizations Services

HIV/STD & Hepatitis

Maternal, Child & Family Health Services

Tuberculosis Control & Refugee Health

Public Health
Preparedness & Response

#NHCPC24

Background: Epidemiology and Immunizations Services Branch

EISB Mission: To protect community health, prevent communicable diseases, and provide a record of vital life events.





- Public Health Preparedness and Response
 - Improve public health, medical, and health care system capabilities by building and maintaining partnerships and systems to:
 - Prevent or reduce morbidity and mortality from unplanned events/emergencies
 - Achieve early recovery
 - PHPR fosters preparedness within communities by supporting health and medical system response through readiness activities:
 - Supports county efforts to respond to public health threats and events
 - Promotes preparedness





- Medical and Health Operational Area Coordinator Program
 - 24/7 Duty Officer for Health and Medical System
 - Coordinates with Emergency Medical Services Duty Officers
 - Bridges information and resources through region and State of California
 - Activates Medical Operations Center



MEDICAL OPERATIONS CENTER (MOC)

The Public Health (PH) Department Operation Center (DOC) is commonly known as the "Medical Operations Center" (MOC). The PH DOC [MOC] is responsible for the coordination of:

- Disaster medical operations:
 - Hospital evacuations, medical system functionality and capacity
 - Maintains communication with region and state agencies
- Procurement and allocations of medical resources.
- Transportation of casualties and medical resources.
- Hospital and clinic information exchange.





San Diego Healthcare Disaster Coalition (SDHDC)

Who We Are:

- The San Diego Health Care Disaster Coalition (SDHDC) has been in place since early 2002.
- During this time, it has more than tripled in membership
- Primary mission of building a regional organization to promote engagement, coordination, communication and situational awareness between community partners and private and public sectors prior to, during and after an incident/disaster.
- The SDHDC is a multidisciplinary partnership that consists of a collaborative network of healthcare organizations, and their respective public and private sectors.
- The coalition meets State and Federal guidelines as it relates to health care coalitions.



San Diego Healthcare Disaster Coalition (SDHDC): 313 members, 85 members from hospitals

- In compliance with ASPR-HPP guidance the SDHDC includes the following Core Members:
 - Acute Care In-patient Hospitals
 - **Emergency Medical Services**
 - **Hospital Association**
 - Office of Emergency Management
 - **Public Health Services**

- Other members may include:
- Ambulatory Surgery Centers American Red Cross

- Behavioral Health Representative (County and NGO or private or County funded)
- Blood Bánk
- Business Entities
 Department of Environmental Health
 Department of Social Services
- Dialysis
- Federal and State Partners
- Home Health Agencies
- Hospices
- Infectious Disease, Epidemiology (County, Hospital)
- Law Enforcement
- Long Term Care Providers/Facilities
- Military
- Non-Profit Organizations
- Outpatient providers including health care centers and community clinics
- Pharmacv
- Polinsky Center or other Pediatric entities (YMCA-child care
- San Diego County Dispatch
- Skilled Nursing Facilities
- Tribal Entities



San Diego Healthcare Disaster Coalition (SDHDC)

What We Do?

The primary purpose of the SDHDC is to engage the entire healthcare and disaster community to work together toward emergency/disaster preparedness, response, and recovery. It accomplishes this through the following efforts:

- Promoting quality in the delivery of disaster patient/victim care services by assessing the level of healthcare preparedness, identifying gaps, and making recommendations on activities to address gaps.
- Supporting the needs of healthcare organizations while ensuring the on-going needs of the community are met.
- Developing and implementing effective practices including planning, education, and evaluation as they
 relate to emergency preparedness.



San Diego Healthcare Disaster Coalition (SDHDC)

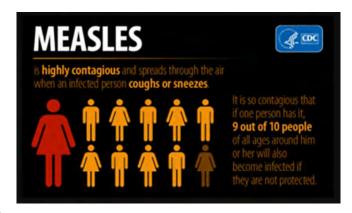
What We Do?

The primary purpose of the SDHDC is to engage the entire healthcare and disaster community to work together toward emergency/disaster preparedness, response, and recovery. It accomplishes this through the following efforts:

- Serving in an advisory capacity to the County Health Officer and Public Health Emergency Preparedness (PHEP) program by providing recommendations on county policies and procedures.
- Aligning with the National Response Framework Annex process: Emergency Support Function 8 (Public Health and Medical Services), the State of California Emergency Plan: Emergency Function 8 Public Health and Medical Annex and the California Department of Public Health Emergency Operations Manual process at the local level in accordance with NIMS and SEMS.

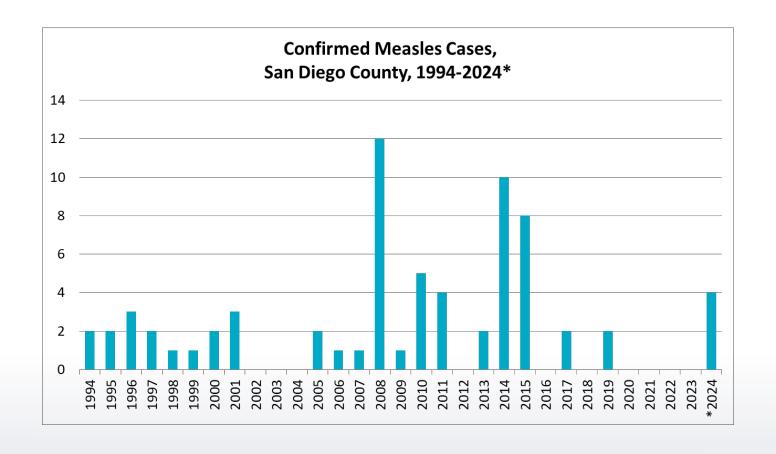


Background: Measles



- Acute, febrile rash illness caused by the rubeola virus.
- Transmitted by the direct contact with infectious droplets or airborne route.
- 2 doses of the MMR vaccine provide the best protection.
- Measles is highly contagious:
 - 90% of susceptible contacts will develop illness.
 - Ro is estimated to be 12-18 in a susceptible population.
- Measles cases require a coordinated and robust public health response.







- No cases since 2019
- Jan 2024 exposures, Feb 2024 response
- Abstract submitted
- 3 more unrelated cases
 - Unvaccinated (3 of 4)
 - Not due to vaccine hesitancy
 - International travel
 - Hospitalized, multiple healthcare encounters



Plan to be fully vaccinated against measles at least 2 WEEKS before you travel. If your trip is less than 2 weeks away, you should still get a dose of MMR vaccine.





For more information, visit IVE WELL sandiegocounty.gov/measles





- Jan 2024 exposures, Feb 2024 response
 - Ped clinic & hospital
 - Concurrent monitoring of exposures on flight to LA
 - Simultaneous LA and Long Beach response
- March Clinic & ED, hospital admission, 3 grocery store exposures, sports park, 2 restaurants, large religious service
- May Clinic, ED, admission
- Aug 2 different hospital admissions and pediatric ED





	<u>1st Case</u> February 2024	2nd Case March 2024	3rd Case May 2024	4th Case August 2024
Contacts*	295	490	105	475
MMR PEP	13	7	10	8
IG PEP (IM/IV)	15 (12/3)	0	4 (4/0)	20 (20/0)
IgG Testing	24	53	3	34

^{*} Contacts traced by EISB team; Employees exposed at healthcare facilities were managed by the facility where exposures happened.



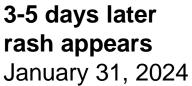
- Goals:
- Reach all exposed individuals prior to incubation period to determine immunity:
 - Vaccine registry (CAIR) or medical records
 - IgG testing if documentation not available
- Assist with needed public health activities:
 - Post Exposure Prophylaxis (PEP) MMR and IG
- Monitor contacts for measles symptoms



Exposure before January 21, 2024

uary 28, 2

Onset of prodromal symptoms: high fever, cough, coryza January 28, 2024





7-21 days after the index case's rash, contacts monitored for symptoms



From exposure to onset of prodromal symptoms, typically 8-12 days

Infectious period:

Starts 4 days before rash through 4 days after rash onset.

Monitoring period:

February 3, 2024 – February 17, 2024

All contacts and exposure locations identified for this time frame January 27, 2024 – February 4, 2024



Notification of suspect case

Local hospital reported to public health department in a timely manner

Timely coordination of collection of specimens and testing at SDPHL Immediate notification to CDPH, EISB and local hospital leadership

Index case interview

Identification of close contacts and exposure locations during infectious period

2 medical facilities and 2 community locations identified Working with exposure sites to create list of exposed individuals

Creation of staffing structure

Identified staff to create contacts in database, investigators, team leads

Held just in time (JIT) training with investigators to provide contact trading overview

Initiated contact tracing efforts



Identification of Exposure Sites

- Needed an estimate of the number of individuals exposed and staffing needs
- Collaboration amongst community partners to assist with tracing efforts

Determination of Immunity

- High or low risk contacts
- Next steps if unable to determine immunity
- Quarantine vs. exclusion

Prioritization of Contact Tracing Efforts

- Those who would need to start on quarantine/exclusion first
- Those still eligible for post-exposure prophylaxis (PEP)
- Those needing titers (IgG) drawn





Supply Planning



Staff Coordination



Event Planning



Testing Coordination





Blood – Rubeola IgM & IgG



Throat or NP Swabs - PCR



Urine - PCR







Phone Duty



Afterhours



Suspect Cases

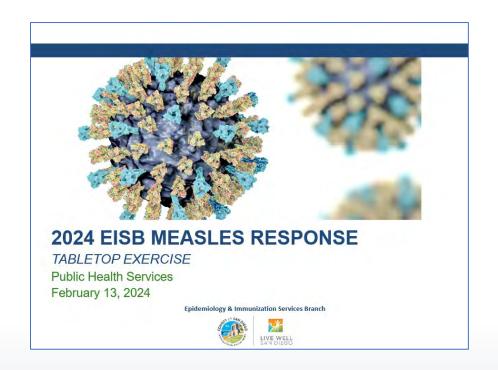


Measles Tabletop Exercise

- Preplanned Measles TTX 2/13/24 concurrent with initial response
 - Discussion of timely injects & rapid integration of new solutions
 - Surge staff planning
 - Inclusivity in messaging and accessing services for AFN community
 - Prompt aggregation of findings

Capabilities

- Capability 1: Community Preparedness
- Capability 8: Medical Countermeasure Dispensing and Administration
- Capability 13: Public Health Surveillance and Epidemiological Investigation

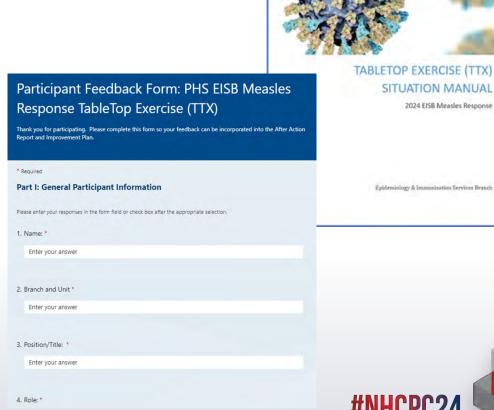




Measles Tabletop Exercise

- Brought up old plans to review/consolidate
 - Surge Plan
 - MCM Plan
 - Infectious Disease Plan

- Exercise AAR
 - Participant Feedback Form
 - Exercise Evaluation Guides
 - Hot Wash Notes







TTX findings communicated with San Diego Healthcare Disaster Coalition



Measles updates and education continued at subsequent meetings



Coalition reaches a broader audience then normal communication methods





- Monthly Public Health
 Officer Reports including
 time for questions and
 answers for all Health and
 Medical topics
- CAHAN issued to coalition and healthcare community members

Measles

- 1 year old unvaccinated child traveled to lraq and contracted measles
- · Resulted in 300 exposures
- · County Immunization Unit providing PEP
- Do not wait for laboratory confirmation before reporting a suspect case.
 - Notify the County Immunization Program immediately about any suspect cases during office hours by calling (866) 358-2966 (press 5 at the prompt) Monday-Friday 8AM-5PM and (858) 565-5255 after hours and on weekends.
- Avoid sending patients to a reference lab for testing unless isolation precautions can be taken.
 - For patients presenting ≤7 days of rash onset, PCR testing of a throat swab and urine through the SDPHL is recommended and preferred over serology.
 - DO NOT send specimens directly to the SDPHL or to the CDPH laboratory without consulting the County Immunization Program.
- Patients are up-to-date with all immunizations, including MMR.

SANDIEGOCOUNTY.GOV/HHSA







To: CAHAN San Diego Participa Date: February 2, 2024 From: Public Health Services

Health Advisory: First Measles Case in San Diego County, since 2019

Key Mess

- An infant who had not yet received the first MMR vaccination has returned from overseas travel and has
 developed laboratory confirmed measles. The case may have exposed others at locations on dates and times
 listed helow.
- Los Angeles County has also reported its first measles case for 2024 on February 1, 2024. That case was returning from overseas travel, but at this time has no known epidemiologic linkage to the infant case in Disec County.
- All patients with fever and rash should be screened at the point of entry to a healthcare facility. Provider should immediately institute airborne precautions on patients suspected of measles to prevent healthcan
- Measles should be considered when individuals present with an acute febrile illness and maculopapular ras
 Francisco thould impreciately specification and acute febrile illness and maculopapular ras
- Providers should immediately report any suspect measles case to the County Immunization Program. Do no wait for laboratory confirmation.
- Recommended vaccinations prior to international travel include one dose of MMR for infants from 6 to 12
 months of age, and two doses at least 28 days apart for those over 12 months of age.

County Measles website
 Measles 2024 (sandiegocounty.gov)

#NHCPC24

Measles

- State and National increase in travel related measles.
- Fever, rash, cough, coryza, conjunctivitis.
- Immunize US residents older than 6 months of age without evidence of immunity who plans to travel internationally with MMR.
- Ensure pediatric immunizations are up to date including MMR.
- Local CAHAN

- Immediately report any suspected measles cases to the County Immunization Program during office hours by calling (866) 358-2966 (press 5 at the prompt) Monday-Friday 8AM-5PM and (858) 565-5255 after hours and on weekends.
- Measles 2024 (sandiegocounty.gov)



- Contact Information always included
- Up to minute guidance shared with entire Coalition







Information from State and National shared including links with Coalition

CDPH Measles Health Advisory

- CDPH Health Advisory on 3/14/24
- Immediately mask suspected measles patients.
- Suspected measles patients should be airborne precautions.
- Immediately place suspected measles patients in respiratory isolation.







CDC Measles Health Alert

- One person infected with measles can infect 9 out of 10 unvaccinated individuals with whom they come in close contact.
- From January 1 to March 14, 2024, CDC has been notified of 58 confirmed U.S. cases of measles across 17 jurisdictions.
- Among the 58 cases reported in 2024, 54 (93%) were linked to international travel.
- Most cases reported in 2024 have been among children aged 12 months and older who had not received measles-mumpsrubella (MMR) vaccine.
- All U.S. residents traveling internationally, regardless of destination, should be current on their MMR vaccinations.
- Healthcare providers should ensure children are current on routine immunizations, including MMR.



Distributed via the CDC Health Alert Network March 18, 2024, 12:30 PM ET CDCHAN-00504

Increase in Global and Domestic Measles Cases and Outbreaks: Ensure Children in the United States and Those Traveling Internationally 6 Months and Older are Current on MMR Vaccination

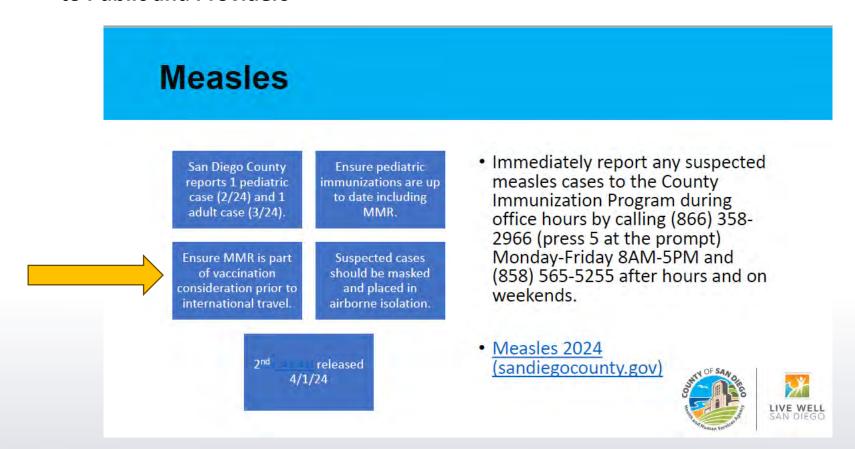
Measles Cases and Outbreaks | CDC







Communicating with the Coalition can assist in Amplification of Important Messages to Public and Providers





Healthcare System Collaboration





Healthcare System Collaboration

- How the LHJ can support Coalition members
 - Build a resilient community
 - Communication
 - To the public
 - Within facilities
 - Education
 - Partnership in both preparedness and response
 - Remember the pre-hospital providers
 - Exercise in collaboration





- Describe measles responses for your healthcare system
- What was your experience working with the local health department
- How did being a Coalition member help the responses
- How could the Coalition have helped (and how can it help in the future) with these or other communicable disease responses
- Lessons learned/suggestions for other facilities and systems (clinic, hospital)
- Anything else you would like to share





- Describe measles responses for your healthcare system
 - Between HID incidents
 - Updated response plans with current information
 - Infection Control & Facilities included in planning process
- What was your experience working with the local health department
 - Better understanding of LHD operations off-hours = updated call response with internal alert and contact tree alignment with LHJ Duty staff
- How did being a Coalition member help the responses
 - Contacts at fingertips, and resources in e.g. other hospitals, colleagues





- How could the Coalition have helped (and how can it help in the future) with these or other communicable disease responses
 - Coalition committee formed and response improved through County & healthcare facilities
 - Guidance and equipment
- Lessons learned/suggestions for other facilities and systems (clinic, hospital)
 - Review your HID plans; reach out to colleagues in other systems and learn from their different planning strategies & experiences





- Describe measles responses for your healthcare system
 - 2/3 classic presentation, 1 atypical
 - Symptom and travel screening on entry
 - Quick connection with IPs and LHJ
 - Something missed each time
- What was your experience working with the local health department
 - Communication improved internally and with PH
 - Clear delegation of responsibility
 - Improved workflow each time





- How did being a Coalition member help the responses
 - Relationships
- What are priorities for these responses
 - Identify patients & staff at risk from exposure, evaluate risk
 - Identify patients needing PEP
 - Assess immune status of in-patients; coordinate testing/interview
 - Assess isolation needs
 - Communicate with patients, families, internal/external partners and MDs
 - Manage exposed patients days 21-28 with system flag



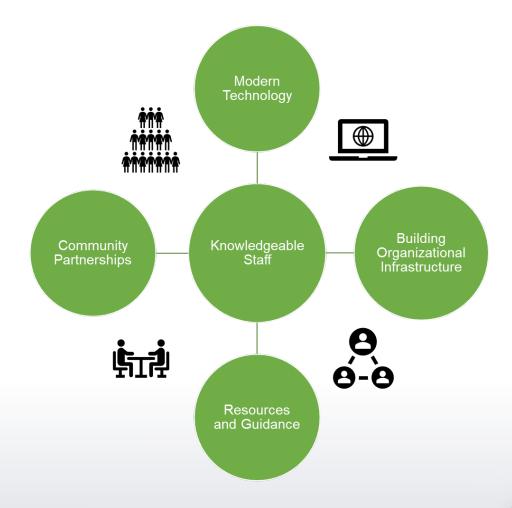


- Lessons learned/suggestions for other facilities and systems (clinic, hospital)
 - PEP education to families re: IGIM volume
 - Earlier assessment of in-patients and their family support system
 - Isolation capacity; plan and contingency plan
 - Improve internal communications with families and in-patient MDs
 - Educate staff on importance and accuracy of 3Is; use EHR tools
 - Improve vaccination record-keeping of MDs and travelers
 - Evaluate policies on testing 'source parents' (families in isolation with child)
 - Shared tracking document with Public Health
 - Have LHJ add in their communications that response is a coordinated effort



Pathway to Success: Collaboration

- Widespread VPD immunization coverage
- Expertise from other Coalition members
- Out-of-jurisdiction transfers
- ICS
- Contracted response partners

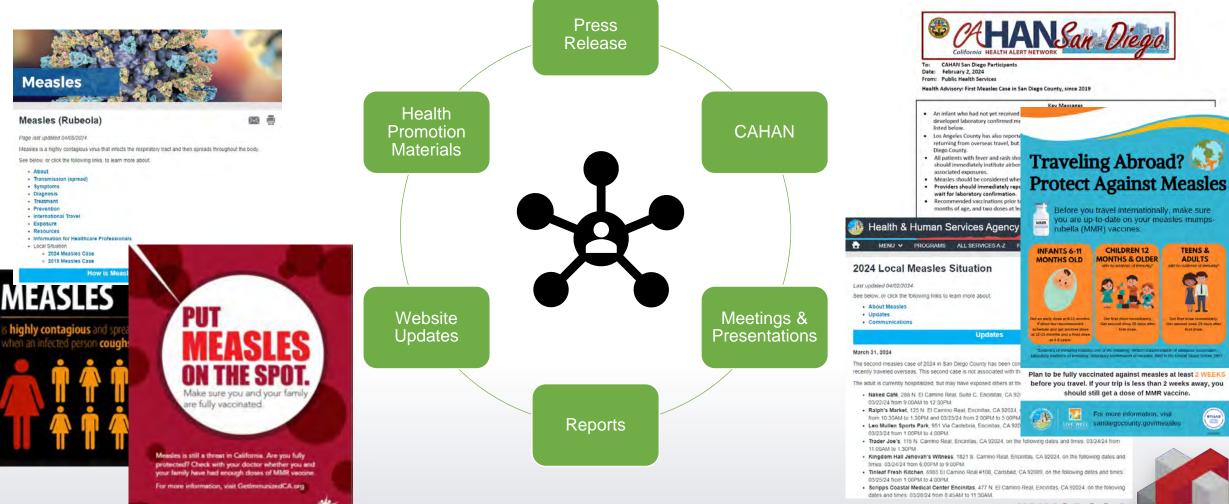


Pathway to Success: Facility level

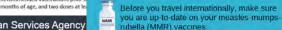
- Healthcare exposure/contact lists
- Ventilation and access design improvements and awareness
- Infection Preventionists
- Occupational health and safety capacity and handling of staff exposures
- Reporting and consultation



Pathway to Success: Communication







CHILDREN 12

MONTHS & OLDER

should still get a dose of MMR vaccine.

For more information, visit

were sandlegocounty.gov/measles

- . Trader Joe's, 115 N. Camino Real, Encinitas, CA 92024, on the following dates and times. 03/24/24 from
- · Kingdom Hall Jehovah's Witness, 1821 S. Camino Real, Encinities, CA 92024, on the following dates and
- . Tipleat Fresh Kitchen, 6985 Fl Camino Real #108, Carlshad, CA 92009, on the following dates and times:





TEENS &

ADULTS



Tool Development

- Surge staffing algorithm
- Epi Duty Officer checklists
- WebCMR Measles Just-in-Time Training
- Contact Tracing Checklists
- Q&A document



Tool development : Contact Tracing Tracking Report

Measles Contact Investigation Summary

Date and Time of Query: 2/15/2024 7:23:36 AM

Date Range of Query: 1/28/2024 - 2/15/2024

Associated with Case Numbers: 18733946

	Number	Percent
otal Contacts Created and Registered	295	
Interviewed	258	87.5%
First attempt pending	4	1.4%
At least one attempt made but no interview	33	11.2%
Contact Investigations by Process Status		
Clearance Testing	3	1.0%
Open	2	0.7%
Ready to Close	1	0.3%
Under Investigation	289	98.0%
Contact Investigations by Investigator		

Record of Immunity	Yes	No	Unknown	Missing	Not Applicable
Ever received the measles vaccine	245	19	18	10	3
Public Health Actions	Yes	No	Unknown	Missing	Not Applicable
Blood Drawn	23	238	2	29	3
Number with IgG Results available	19				
Number with results still pending	4				
Received PEP	29	229	4	30	3
If Received PEP, what type?					
IMIG Received	12				
IVIG Received	3				
MMR Received	13				
Missing	1				
Quarantine Recommended	43	225	1	23	3
Number on quarantine	25				
Number released from quarantine	17				
Exclusion From Work Recommended	40	213	1	38	3



Conclusion

Successful responses are a collective achievement

Communication internally & externally is critical

NATIONAL HEALTHCARE COALITION PREPAREDNESS CONFERENCE

Visions of Progress: Sustainable Strategies for Emergency Preparedness & Resilience

Learn from and adapt available resources

 Preparedness sets the stage for resilience



References

- Measles (Rubeola) | Measles (Rubeola) | CDC
- Measles 2024 (sandiegocounty.gov)
- Home (sdhdc.org)
- The basic reproduction number (R0) of measles: a systematic review The Lancet Infectious Diseases
- San Diego Healthcare Disaster Coalition partners Rady Children's Hospital and Scripps Health
- County of San Diego Immunizations Program



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