

Measles in Minnesota

Kristen Ehresmann, RN, MPH

Director, Infectious Disease Epidemiology, Prevention, and Control Division

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Measles hits Minnesota March, 2017

Minnesota Sees Largest Outbreak of Measles in Almost 30 Years

By CHRISTOPHER MELE MAY 5, 2017

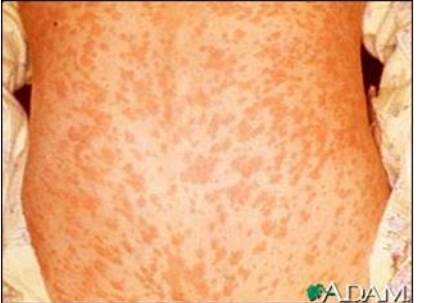
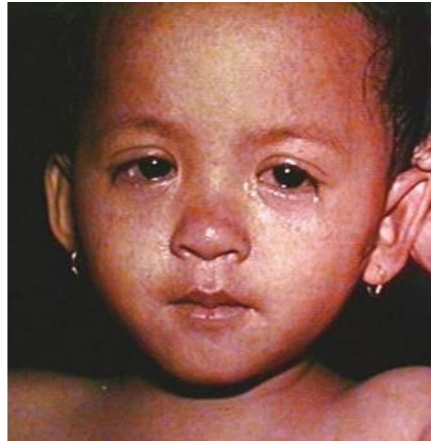
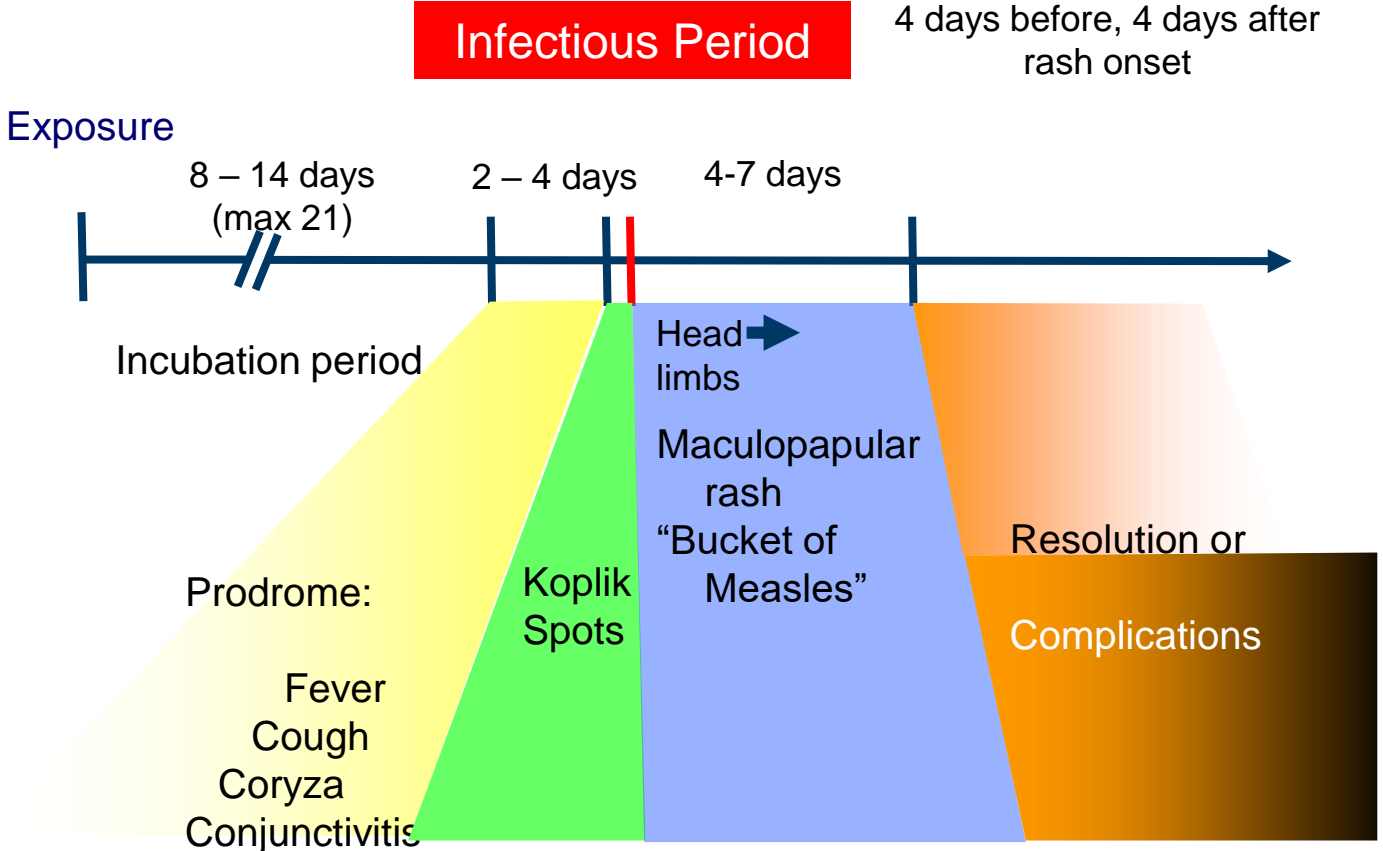


Anti-vaccine activists spark Minnesota's worst measles outbreak in decades



Suaado Salah comforts her 3-year-old son at their apartment in suburban Minneapolis. Lugman and his 18-month-old sister got measles during Minnesota's current outbreak. (Courtney Perry / For The Washington Post)

Clinical Symptoms

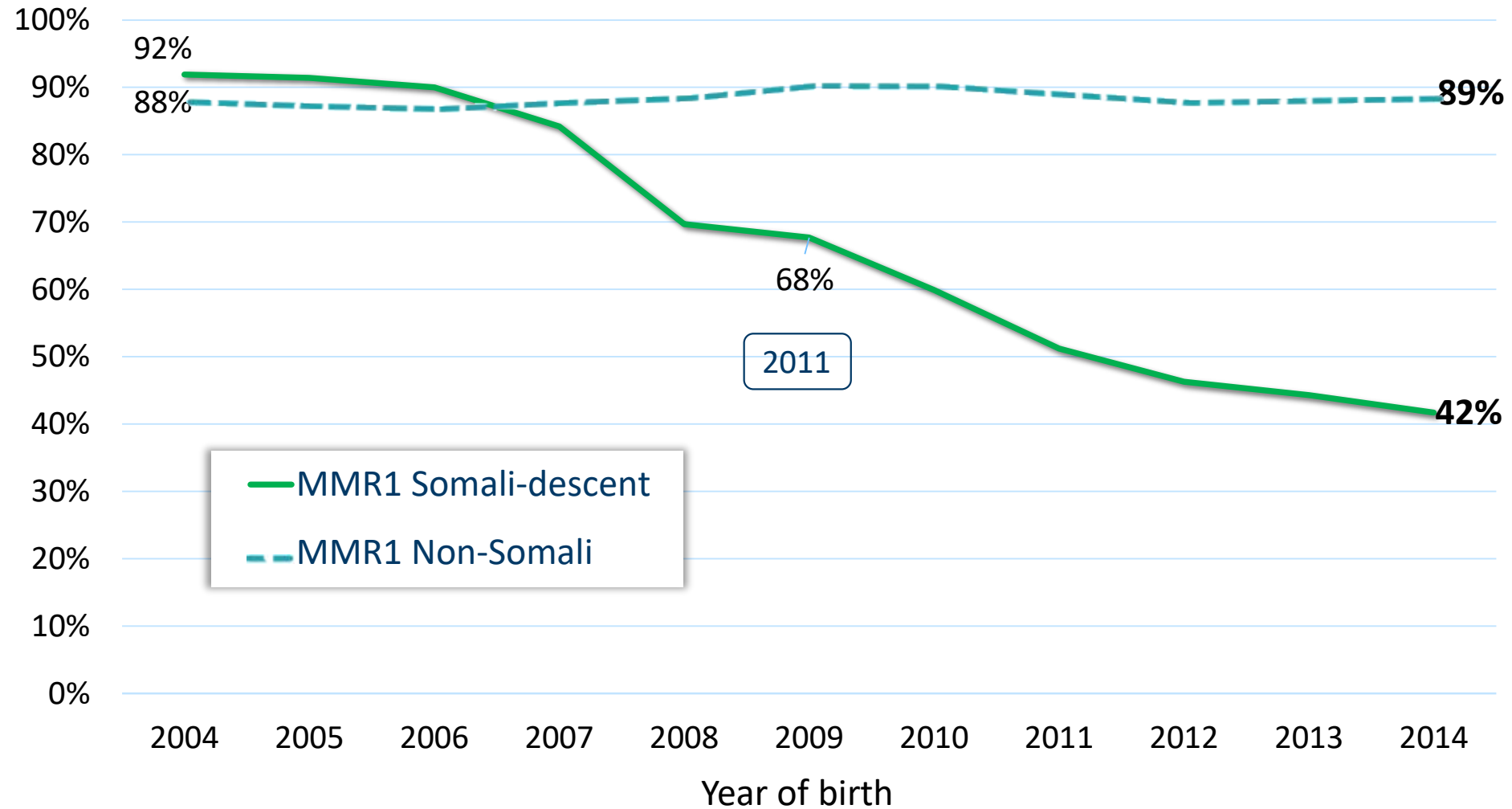


Somali Community and Autism Concerns

- **2000: Somali parents value immunizations**
- **2008: Local TV news story highlighted Somali parent concerns about disproportionate numbers of Somali children in special education programs.**
 - **“It’s the vaccines,” claimed a Somali parent**
- **Anti-vaccine groups reached out to community. Andrew Wakefield and others met with the community several times.**
- **MMR vaccine blamed; Parents began refusing MMR. ‘Triple letter vaccine,’ ‘1 year vaccines’**
- **Further studies looking at autism in Somali children have fueled concerns about autism in the community and reinforced fears of vaccine.**



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



Measles Epidemiologic Summary

- 75 cases of measles
- 61 (81 %) Somali descent
- Primarily affected young unvaccinated children, median age of 2 years, range 3 months to 57 years
- 68 (91 %) Unvaccinated
- 21 (28 %) Hospitalized
- Source—not identified, no travel history



Measles cases and MMR doses administered, 2017

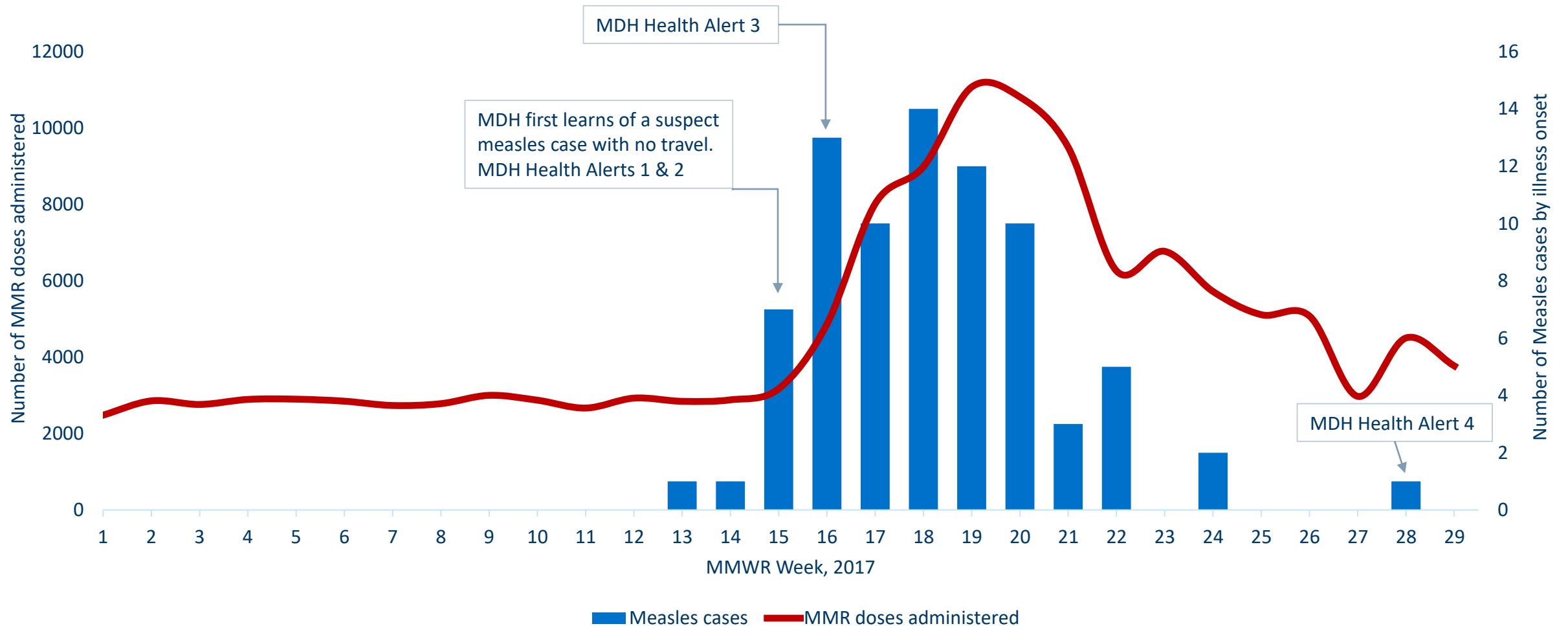
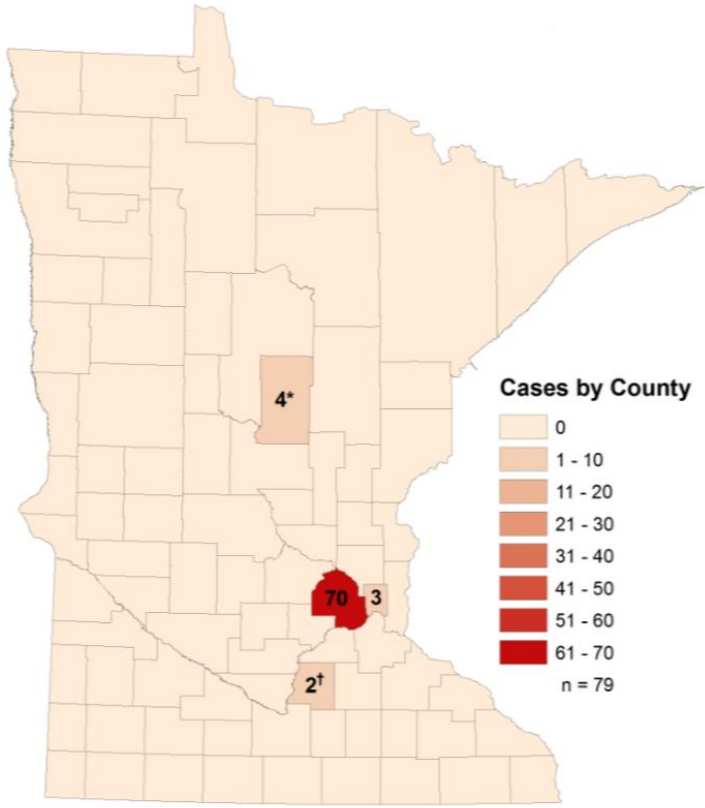
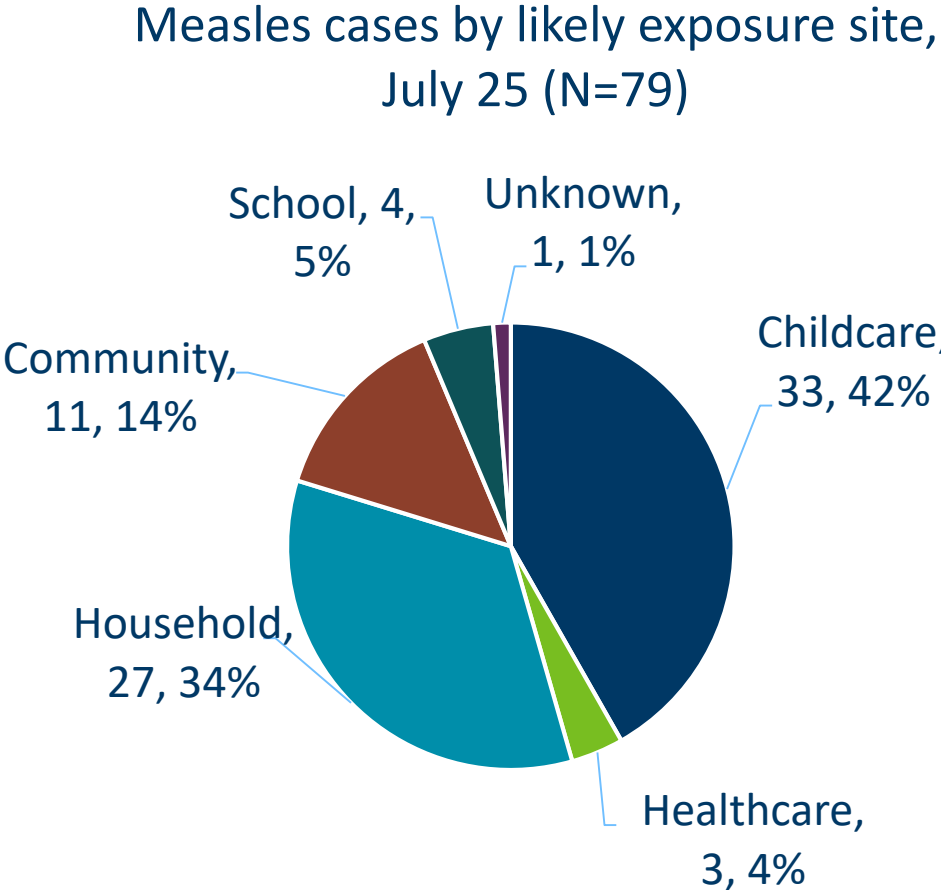


Figure: Measles cases by week, data from VPD Surveillance Unit. MMR vaccine administered by week, data from MIIC.

Measles cases: exposure sites and counties affected



* = Index case was exposed in Hennepin Co. Additional cases were all within index case household.
† = All cases were exposed to Crow Wing index case.

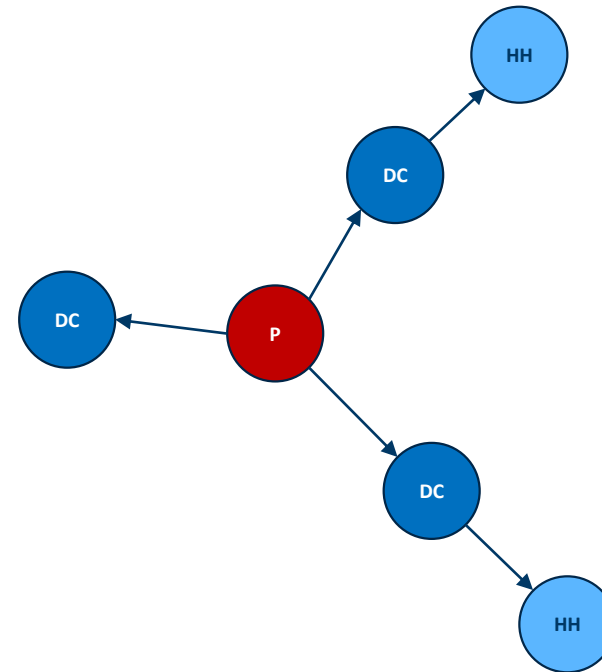
Measles Control: Basics of Exclusions







- CDC recommends susceptible individuals who are exposed to measles be excluded from schools, childcare and health care settings for 21 days (incubation period) from exposure.
- The purpose of exclusion is to limit future exposures if the individual becomes infectious with measles.
- MDH worked with schools and childcare in implement exclusion. Individuals were instructed to call either MDH (24/7 number provided) or call ahead before seeking health care.
- Used 'blanket exclusions:' when multiple cases were identified at the same time MDH excluded all susceptible/exposed children from the last day of exposure.



Day Care A: Compliant

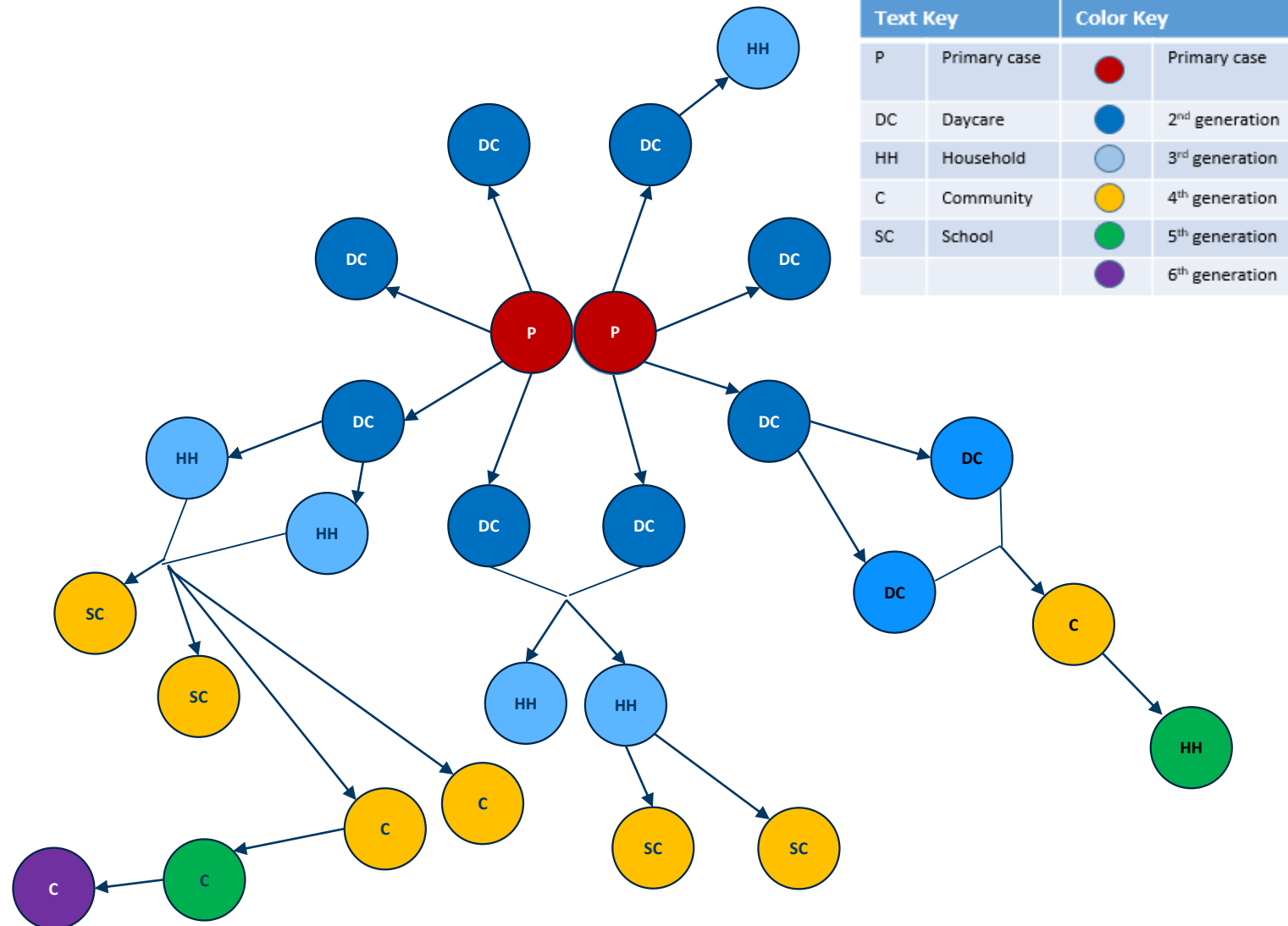
- Child care provided roster immediately
- MDH was able to do prompt exclusions
- Only 2nd generation cases within the day care, additional transmission limited



Text Key		Color Key	
P	Primary case		Primary case
DC	Daycare		2 nd generation
HH	Household		3 rd generation
C	Community		4 th generation
SC	School		5 th generation
			6 th generation

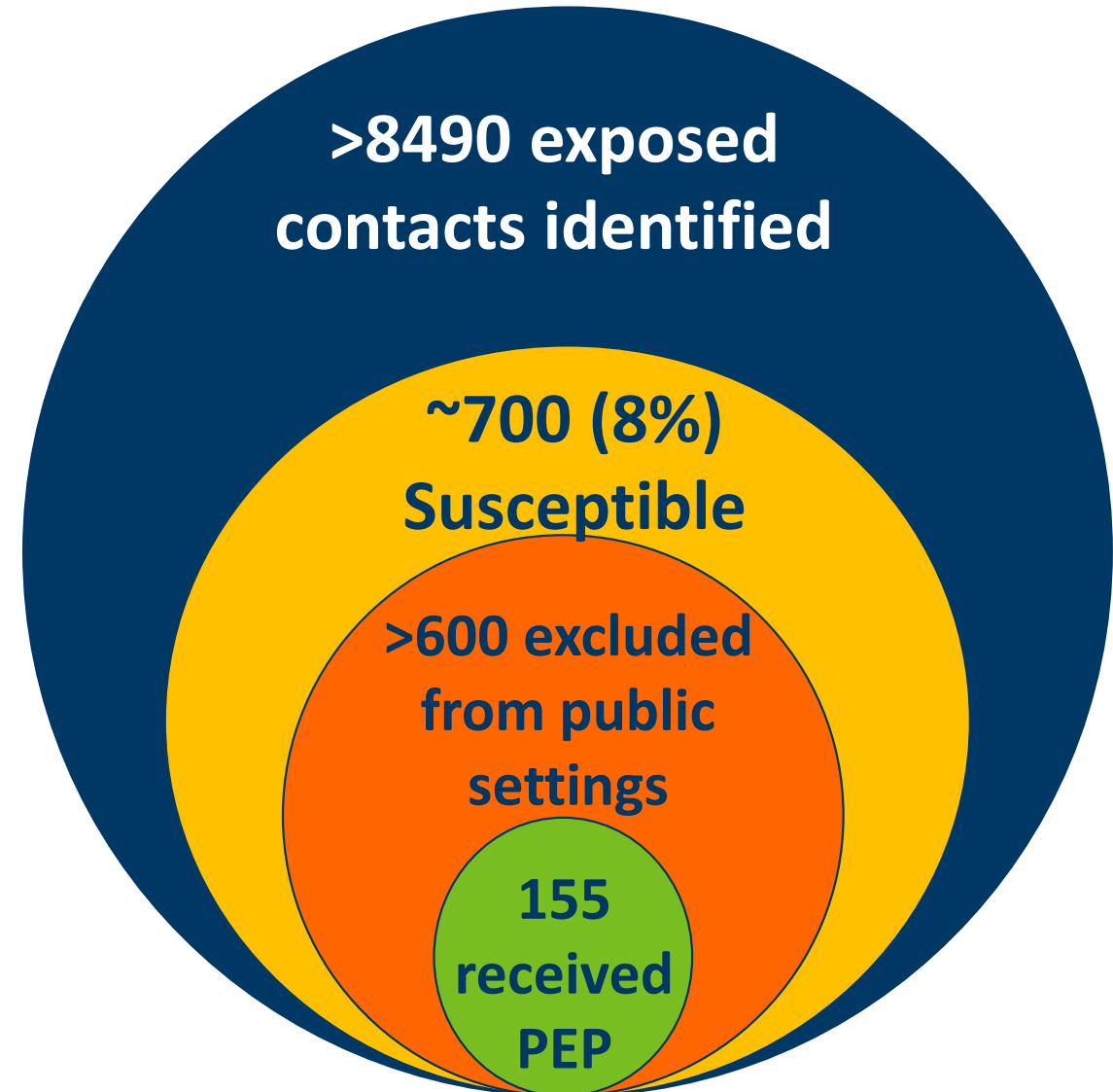
Day Care B: Non-compliant

- Approximately two weeks to get the full roster
- MDH could not exclude without roster information
- 2nd and 3rd generation cases within the day care, transmission to household contacts, schools and general community

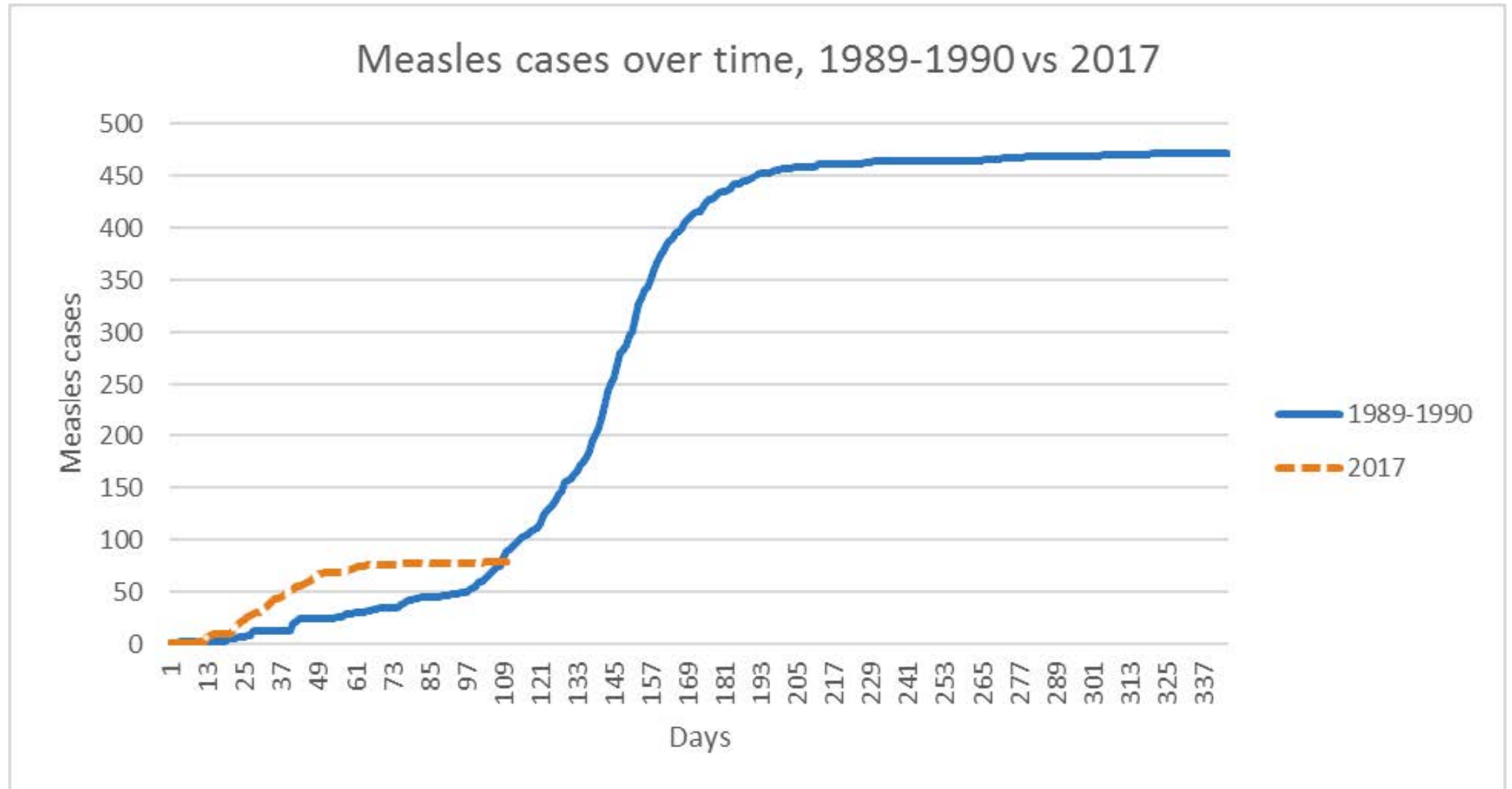


Contacts: Exposures and Exclusions

- **Total health care and child care exposures: 8,490**
- **Schools involved : 6**
- **Child care centers involved : 12**
- **Total exclusions associated with this outbreak: 649**
 - Excluded from health care: 63
 - Excluded from school/child care: 507
 - Excluded due to being a case: 79
- **No legal action necessary**



Impact of Public Health Interventions



Working with the Community

- **Autism is feared; cannot address immunization without addressing autism**
- **Parents want information:**
 - To understand normal child development
 - About ASD and its early signs
 - About the childhood diseases vaccines prevent
- **Message needs to come from respected community health professionals/leaders**



Pre-outbreak Activities

- **Formed interdivisional team**
- **Hired Somali staff**
- **Strategic activities included:**
 - **Community engagement/partnerships**
 - Somali Public Health Advisor convened
 - **Effective informational training and outreach**
 - Including autism and vaccine-preventable diseases
 - **Disease control/mitigation**
 - Targeted activities to organizations serving young children



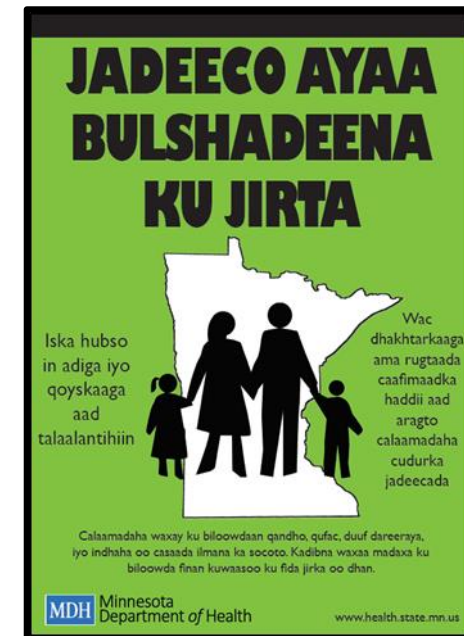
Outbreak Outreach Efforts

- **Disseminated key action messages to Somali Minnesotans**
- **Worked with Somali Public Health Advisors**
- **Focused prevention messages in certain settings:**
 - Child care
 - Schools/dugsi (faith schools)
 - Malls
 - Faith community



Outbreak Outreach Efforts

- Used Somali radio, TV, and chat lines
- Newspaper ads and articles
- Worked with MNAAP to facilitate Imam/health care provider informational sessions during Ramadan



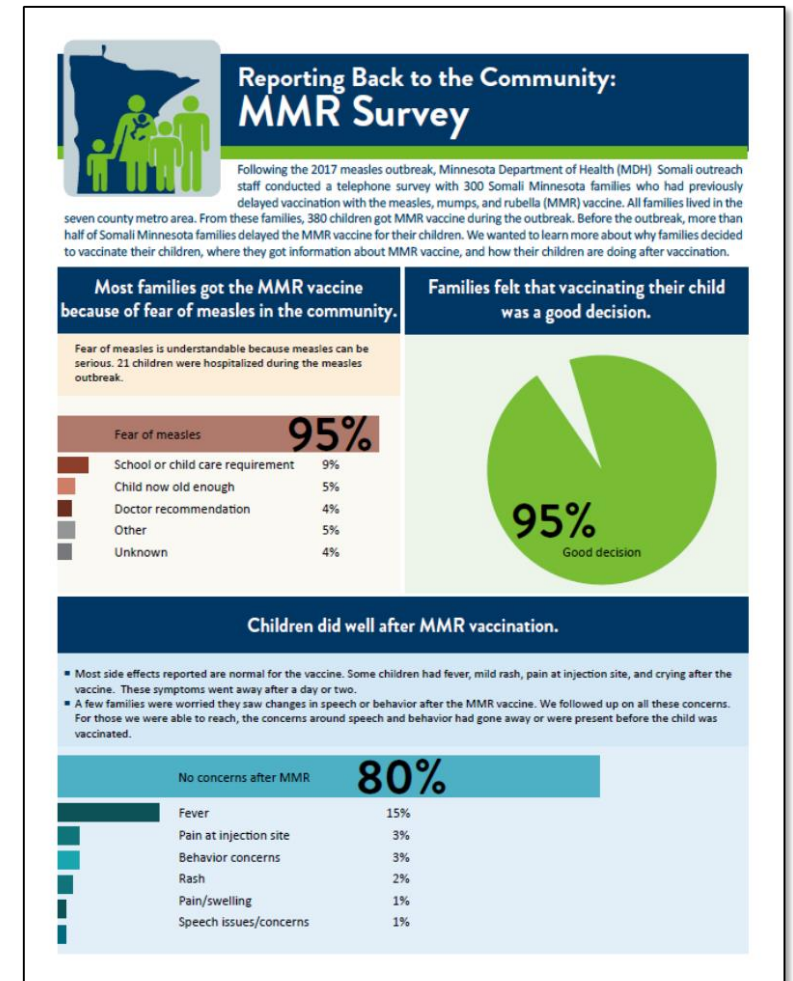
Ongoing Community Outreach

- **Continue:**
 - Targeted outreach to child care centers
 - Education/training,
 - Community engagement
- **Developing parent-to-parent training that includes video and discussion**
- **Supported paired information sessions with faith leaders and health professionals**



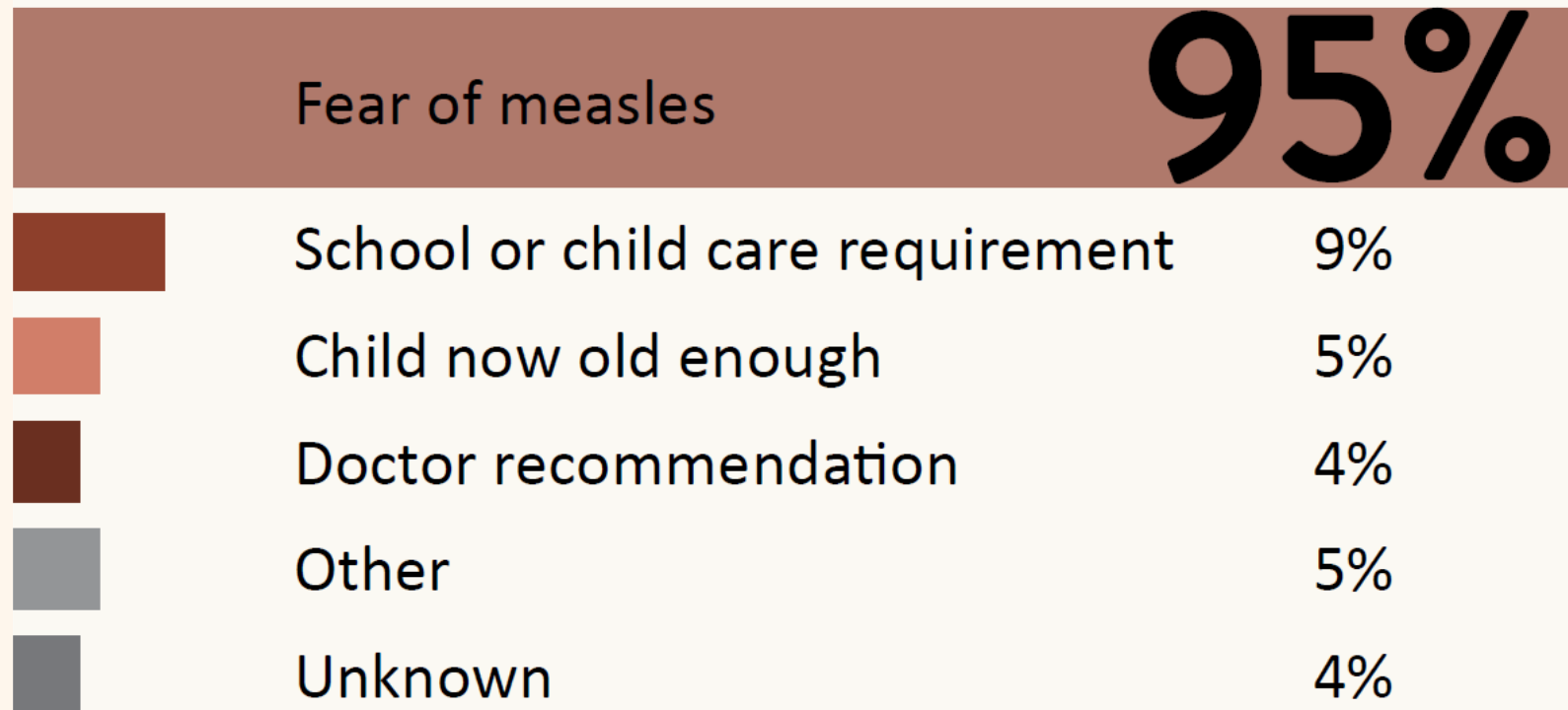
MMR Survey

- Following the 2017 outbreak, MDH Somali staff conducted a telephone survey with 300 Somali families who had previously delayed vaccination with MMR.
- Participants lived in the seven county metro area
- 380 children in these families got an MMR during the outbreak
- We wanted to learn why families decided to vaccinate their children, where they got information on MMR vaccine, and how their children were doing post-vaccination.



Most families got the MMR vaccine because of fear of measles in the community.

Fear of measles is understandable because measles can be serious. 21 children were hospitalized during the measles outbreak.

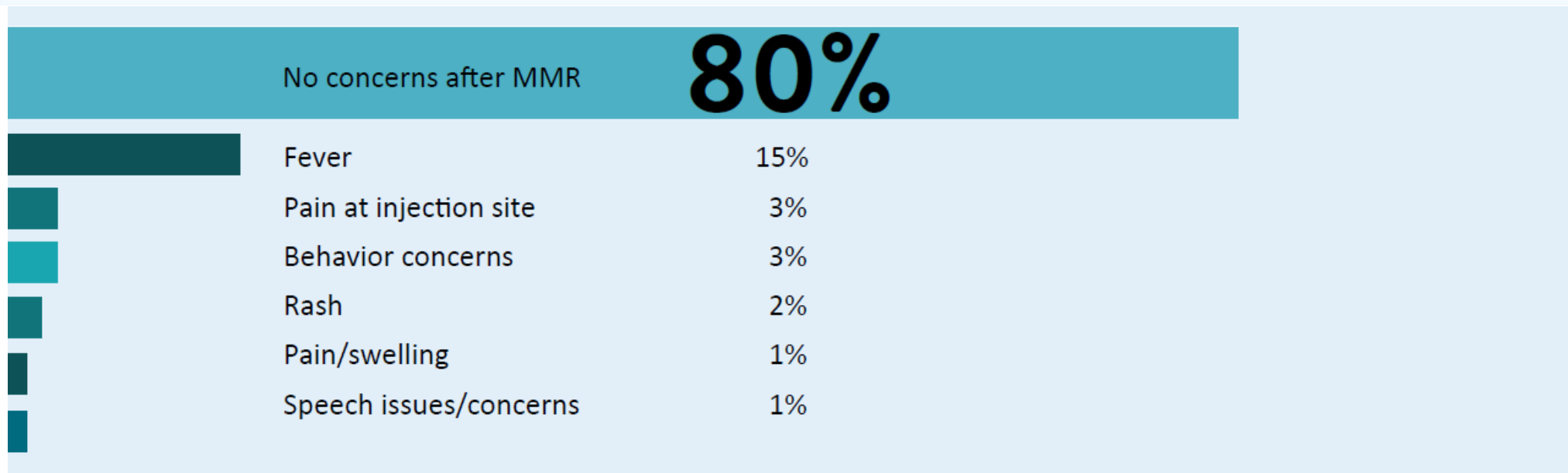


Families felt that vaccinating their child was a good decision.



Children did well after MMR vaccination.

- Most side effects reported were normal for MMR: fever, mild rash, pain at injection site, and crying after the vaccine. These symptoms went away after a day or two.
- A few families were worried they saw changes in speech or behavior after the MMR vaccine. We followed up on all these concerns. For those we were able to reach, the concerns around speech and behavior had gone away or were present before the child was vaccinated.



When getting their MMR most families had positive clinic experiences.

92%

of families had an overall good clinic experience.

- Especially when they received information about measles, MMR vaccine, what to expect after vaccination, and had time to ask the doctor questions.

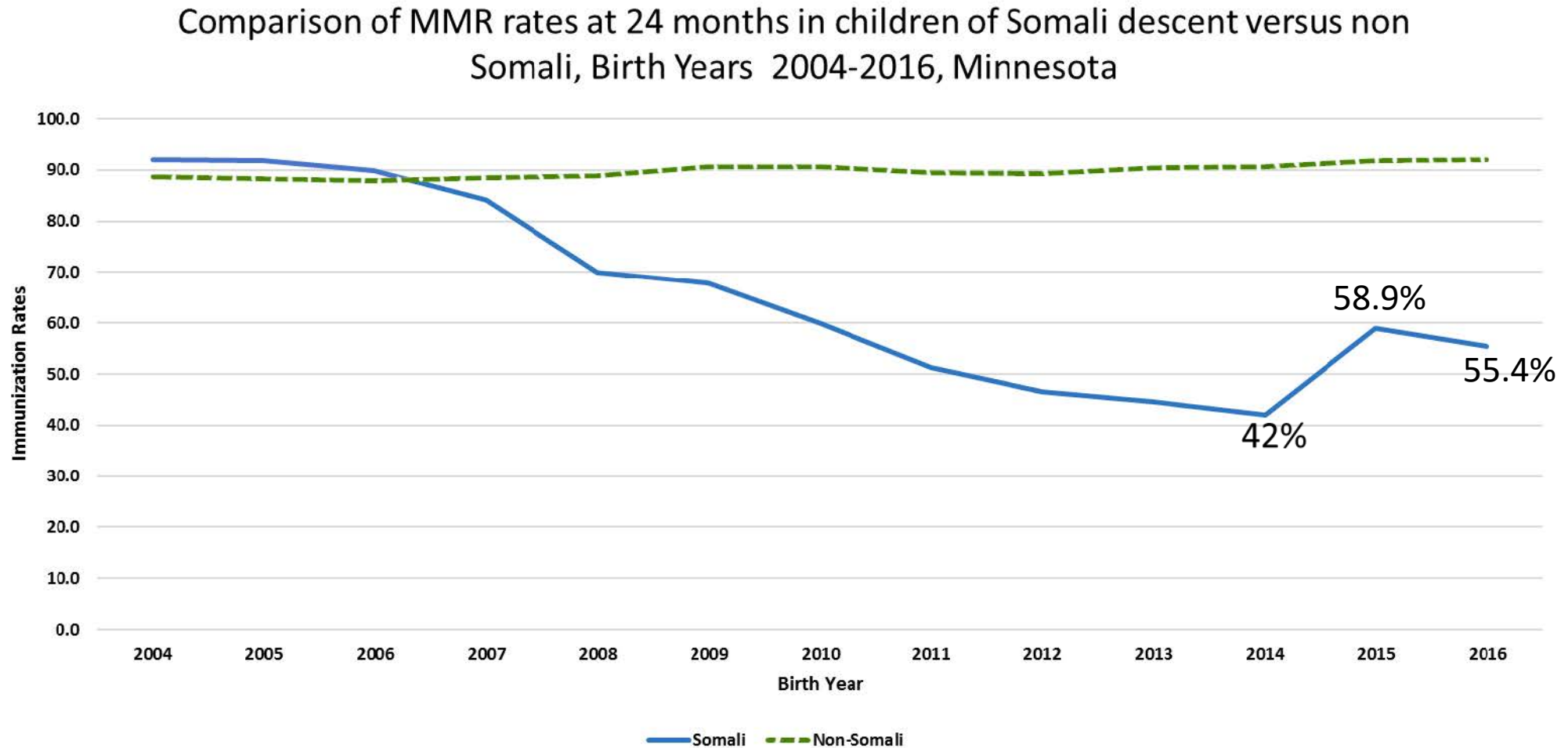


8%

of families had some bad clinic experiences.

- Especially when they felt judged for not vaccinating on time, did not receive information about MMR vaccine or side effects, and did not have things explained clearly.

Two Steps Forward and One Step Back



“When a lie gets out the truth cannot catch it.”

The Costs of Not Vaccinating

- **Known costs \$2.3 million (MDH \$600,000; Hennepin \$400,000; Children's Hospital \$1,300,000)**
- **Health care response: staff time for responding to exposures, costs for providing IG**
- **Schools and child care: staff time for identifying at risk children and enforcing exclusions, costs of homebound care**
- **Medical costs: clinic visits, ER visits, laboratory testing, IVIG, hospitalizations**
- **Direct cost for families of lost work staying home with excluded children**



In Summary

- Exclusion played important role in controlling the measles outbreak
- No simple answers to overcoming vaccine hesitancy in the Somali Community
- Trust building is critical and one-on-one relationships are important, but not scalable



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Thank you!

Kristen Ehresmann

Kristen.Ehresmann@state.mn.us