

COMBATING MEASLES IN CENTRAL NEBRASKA

Melanie Menning, MD¹, Brady Beecham, MD MPH², and Aravind Menon, MBBS MPH²

(1) Department of Family Medicine, University of Nebraska Medical Center, Omaha, NE, (2) Lexington Regional Health Center, Lexington NE

OBJECTIVES

1. Identify specific populations at high risk for measles outbreaks in Nebraska
2. Identify reasons for MMR hesitancy within the Somali community and ways to increase vaccination rates

INTRODUCTION

- Measles is a highly contagious RNA virus
- Usually mild to moderate course but can have severe complications including death
- A highly effective measles vaccine became available in 1963
- 92-95% of the population must be vaccinated against measles to confer herd immunity
- Despite widely available vaccination we continue to have outbreaks
 - 2017-Hennepin County, MN: 79 measles cases highly concentrated in unvaccinated, Somali population
- Somali population within Hennepin County saw a decrease in MMR vaccination rate from 92% to 42% over 10 years
- Fears of autism are driving vaccination hesitancy

METHODS

- NESIIS data for Lexington Regional Health Center queried for patients between 15 and 72 months missing recommended childhood immunizations
- Vaccination rates calculated overall for clinic as well as based on ethnicity and age
- Statistical analysis completed using chi-square testing

Demographic characteristics of Lexington Regional Health Center patients between 15 and 72 months.

Total patients	1182
Gender	
Female	540 (46%)
Male	642 (54%)
Ethnicity	
Hispanic	483 (41%)
Somali	180 (15%)
Other	519 (44%)
Age (months)	
15 to 23	209 (18%)
24 to 35	287 (24%)
36 to 47	242 (20%)
48 to 59	210 (18%)
60 to 72	234 (20%)

ONE ON ONE INFORMAL INTERVIEWS

- Fear of autism and learning problems identified as primary concern for receiving MMR vaccination
- Distrust of medical/government entities (fear contraception in vaccines)

NEXT STEPS

- Partnerships with Minnesota Health department, local Somali leadership, Nebraska Department of Health-Refugee Coordinator
- Focus groups with Somali parents who refused MMR vaccination and parents who previously refused MMR vaccination but subsequently accepted
- Education providers and Somali interpreters on MMR vaccination rates, measles and ability to prevent outbreaks with an emphasis on interpreters taking on a role as community health workers
 - Will reevaluate vaccination rates this July

CONCLUSIONS

- MMR distinct vaccine hesitancy within Lexington Regional Health Center patient population
 - Most prominent among Somali population
- Lexington Regional Health Center patient population fails to meet vaccination rates to achieve herd immunity and therefore at risk for a measles outbreak
- Fear of autism is the main driver of vaccine hesitancy in the Somali population

WORKS CITED

- Bahta, L., & Ashkir, A. (2015). Addressing MMR vaccine resistance in Minnesota's Somali community. *Minnesota Medicine*, 98(10), 33-36
- Dyer, O. (2017). Measles outbreak in Somali American community follows anti-vaccine talks. *BMJ (Clinical Research Ed.)*, 357, j2378.
- Gahr, P., DeVries, A. S., Wallace, G., Miller, C., Kenyon, C., Sweet, K., et al. (2014). An outbreak of measles in an undervaccinated community. *Pediatrics*, 134(1), e220-8.
- LaFond, A. (2006). Deterrents to immunisation in Somalia: A survey of mothers' attitudes. *Development in Practice*, 3(1), 27-35.
- Sabella, C. (2010). Measles: Not just a childhood rash. *Cleveland Clinic Journal of Medicine*, 77(3), 207-213.
- Tomlinson, N., & Redwood, S. (2013). Health beliefs about preschool immunisations: An exploration of the views of Somali women in the UK. *Diversity and Equality in Health and Care*, 10, 101-113.
- Wolff, E. R., & Madlon-Kay, D. J. (2014). Childhood vaccine beliefs reported by Somali and non-Somali parents. *Journal of the American Board of Family Medicine: JABFM*, 27(4), 458-464.

