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Promoting Measles Prevention and Awareness

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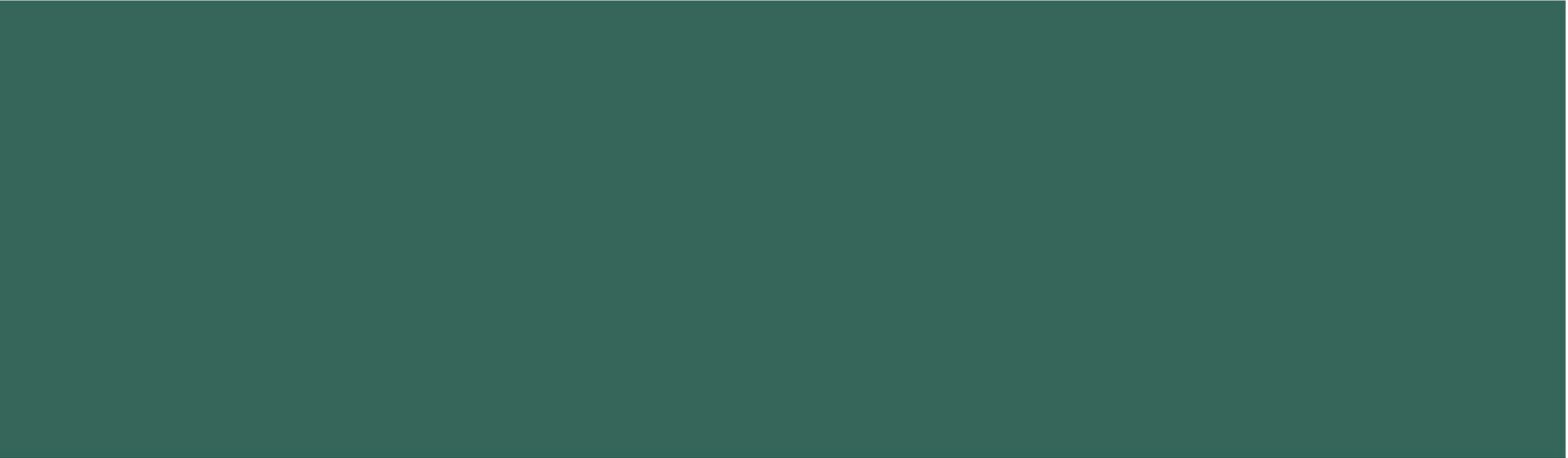
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PROMOTING MEASLES AWARENESS AND PREVENTION

ELIZABETH LANATA – FAMILY MEDICINE CLERKSHIP – MAY 2019 – STOWE FAMILY PRACTICE

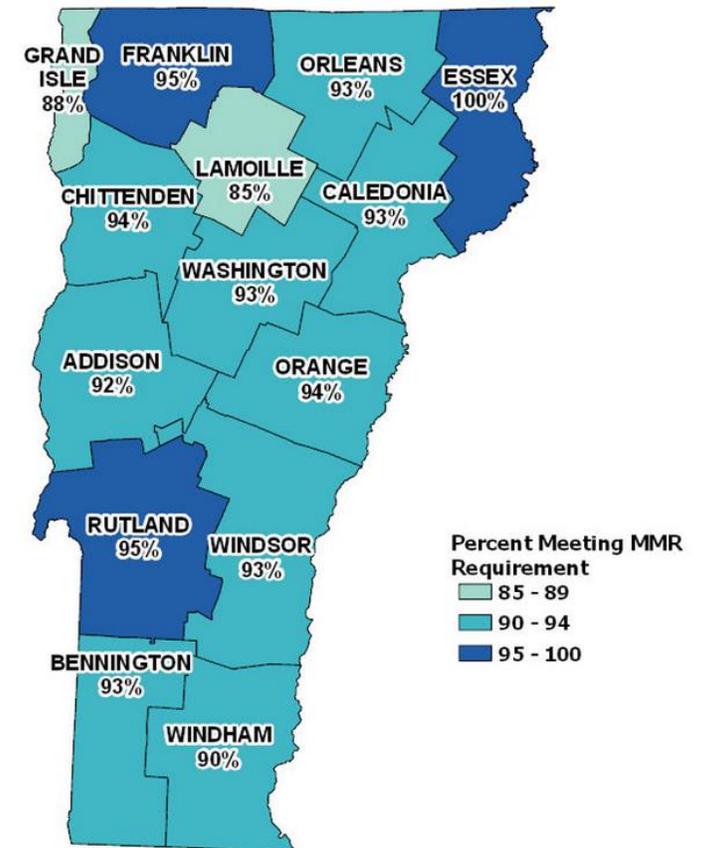
FACULTY MENTOR: KATIE MARVIN, MD



PROBLEM IDENTIFICATION

- Measles cases in the United States are highest since measles was declared eliminated in 2000
 - From January 1, 2019 to June 6, 2019 there have been 1,022 confirmed measles cases spanning 28 states – including states near and surrounding Vermont [1]
- The World Health Organization reported that there has been a 300% increase in the number of measles cases worldwide (comparing the first 3 months of 2019 to the first 3 months of 2019) [2]
- The MMR vaccine is the best way to protect against the measles infection [3]
- Lamoille County MMR vaccination compliance rate is the lowest in the state of Vermont [4]

2018-2019 Kindergarten MMR Rates by County



PUBLIC HEALTH COST

- Even small declines in vaccination coverage in children, owing to vaccine hesitancy, may have substantial public health and economic consequences [5]
- A 2017 study found that a 5% reduction in measles, mumps, and rubella vaccination coverage resulted in a 3-fold increase in annual measles cases with an additional \$2.1 million dollars in public sector costs (study only included children ages 2-11, does not include infants, adolescents or adults) [5]
- During July 2016–January 2017, two single, unrelated measles cases were diagnosed in the Denver Metropolitan Area, each exposing hundreds of persons, prompting a complex and coordinated response by multiple public health agencies, costing in excess of \$68,000. [6]
- Published cost estimates of public health agency response to a single measles case range from \$5,655 through \$181,679 [6]

COMMUNITY PERSPECTIVE

“As of May, 2019 twenty-eight states have reported measles cases. None have been reported in Vermont, but we are at an increased risk since most of the states surrounding us have at least one case. It’s important to take steps now to prevent spread of this disease into our communities. In order to achieve widespread immunity to measles, at least 95% of the population must have acquired protection from the disease either through infection or vaccination. Ensuring that precautions are in place in healthcare settings and that the public is educated on the effectiveness and safety of vaccines is paramount.”

Suzanne Masland, MS, District Director, Vermont Department of Health

Rhonda Desrochers, RN, MSN, Vermont Department of Health

Joyce Larro, RN Immunizations and Infectious Disease, Vermont Department of Health

COMMUNITY PERSPECTIVE

“It’s unfortunate that individuals make decisions about their health based on intuition and not scientific fact. I have no incentive other than providing sound medical advice and I fully endorse vaccinations. Vaccines are proven safe and effective. As a physician I’m happy to listen to the concerns of parents and will continue to try to promote vaccine compliance within my practice and the greater population. Patient education and outreach is vital.”

Robert Quinn, MD
Family Medicine Physician, Stowe Family Medicine

INTERVENTION AND METHODOLOGY

- Developed an educational brochure aimed at improving patient knowledge of measles and increasing MMR compliance
 - Measles overview, signs and symptoms, at risk populations, complications, prevention/MMR vaccine
 - The brochure was placed in the patient waiting areas as well as directly given to patients at the Stowe Family Practice
 - It will also be used by the Vermont Department of Health to educate patients outside of Stowe Family Practice (within Lamoille County)
- Identified and contacted parents of patients in need of first or second MMR vaccine
 - Helped to clarify questions parents had regarding measles and the MMR vaccine
 - Assisted in scheduling MMR vaccine administration
 - Provided the Vermont Department of Health with an up to date list of MMR vaccine compliance at Stowe Family Practice
- Created quick reference cards to help front desk staff quickly recognize signs and symptoms of a potential measles case as well as activate correct protocol for managing potential cases over the phone and via walk in
- Created quick reference cards with CDC protocol for suspected measles cases (to be used by providers)

RESULTS

- Favorable response from both providers and patients at Stowe Family Practice
 - Spoke with clinical staff, at Stowe Family Practice, who felt that the brochure was helpful for patient education as well as a good tool for promoting MMR vaccine compliance
 - Patients who received the brochure were enthusiastic and interested in learning more; some asked for additional copies/electronic copy to help promote awareness
- Vermont Department of Health Lamoille County Division plans to use the educational brochure to help promote awareness and prevention via online communications (Facebook, direct patient outreach)

EVALUATION OF EFFECTIVENESS AND LIMITATIONS

- Evaluation of Effectiveness:
 - Evaluate the percentage change in MMR vaccine compliance rate across the Stowe Family Medicine Practice (prior to and after educational promotion, updated MMR compliance list and direct patient outreach), could further expand this to include Lamoille County if educational brochure is distributed widely
 - Provide patients with a pre and post-brochure survey to evaluate the effectiveness of the educational component
- Limitations:
 - Short duration of time, unable to complete evaluation process
 - Educational materials may not reach all patients, especially those that do not come to the clinic often
 - Failure to connect via phone with some patients – unable to have a conversation regarding measles/schedule MMR vaccine administration

RECOMMENDATIONS FOR FUTURE INTERVENTIONS



- The brochure could be further used to improve measles education in schools, summer camps and at community events
 - Each year schools send home a notice of missing vaccines, could also send the measles brochure with the notification letter to help parents better understand the signs/symptoms, outcomes and prevention/MMR vaccine
- Potential to hold MMR vaccine clinic at local schools or health care offices
 - Can use the brochure to promote on local forums (Front Porch Forum), schools, camps, community events
 - Obtain updated MMR vaccine non-compliance lists from Vermont Department of Health, directly reach out to those families via mail with included copy of educational brochure – promote MMR vaccine clinic attendance

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CONSENT

Consented ✓

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