Quad-County Measles Protocol & Toolkit Development

for the Portland, Oregon Metro Area

By Maayan Simckes[3], Kelly Howard[1,2], and Amy Sullivan[1]

[1]Multnomah County Health Department; [2]Centers for Disease Control and Prevention (CDC); [3]University of Washington, School of Public Health

Public Health Issue

High rates of nonmedical exemptions in the Portland, Oregon Metro Area.

Facility-level clustering of un-immunized children in specific schools and childcare facilities created a vulnerability to a school-based measles outbreak.

91% of kindergartners in Multnomah County up-to-date on the required 2 doses of measles vaccine in 2014.

29% (48/167) of kindergarten facilities **had fewer than 90% of children up-to-date on the measles vaccine** (herd immunity threshold is 90-95%).

Goals and Objectives

Goal 1: Conduct a stakeholder-engaged process to develop a measles case report response plan

1.1: Identify gaps across multiple agencies and education partners

1.2: Achieve up-front buy-in on response plan from community partners

1.3: Provide a forum for agencies and partners to network

Goal 2: Develop an accessible, easy-to-use toolkit for LHA use in responding to a measles case report or cluster

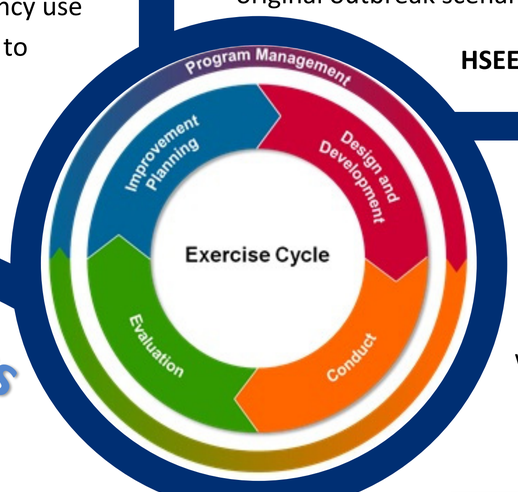
2.1 Use stakeholder knowledge & experience to develop realistic and acceptable tools for public health agency use

2.2: Use public health preparedness best practices to develop a routine public health response plan

Implementation

The planning process was founded on Homeland Security Exercise and Evaluation Program (HSEEP) guidelines- with a strong emphasis on the improvement planning section of the exercise cycle. Process featured:

- Tabletop exercise for measles exposure in a high-exemption school with regional, multi-agency participation
- After-Action Report & Improvement Plan (AAR/IP) to identify areas for improvement
- Protocol Development Workgroups
- Repeat Tabletop Exercise to test protocol tools against the original outbreak scenario



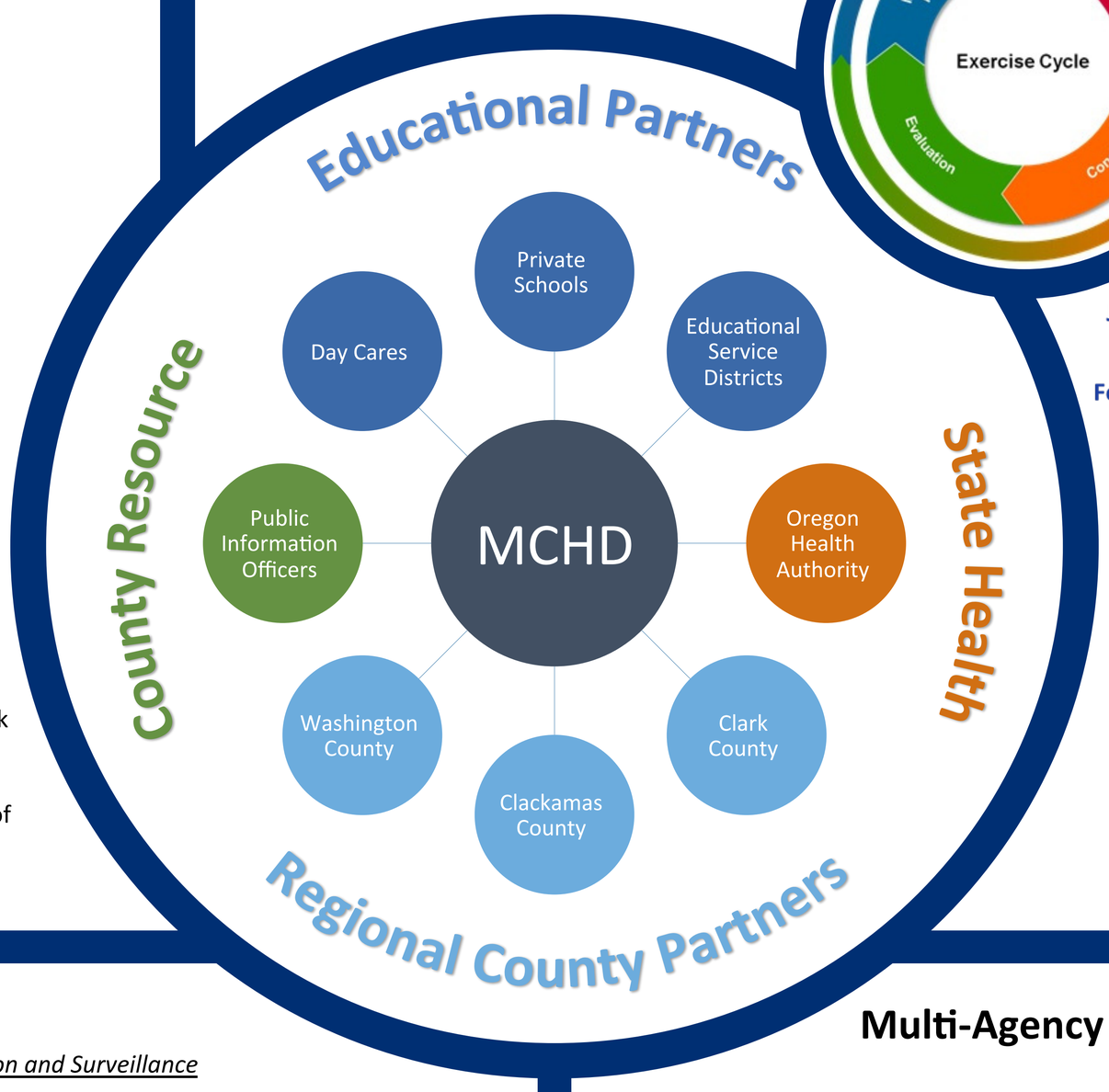
HSEEP Cycle, FEMA.gov

Public Health Impact

Using a HSEEP framework for planning more routine public health response protocols was an effective way to organize and track a multi-stakeholder process.

In addition to yielding a protocol and related materials for a response, benefits of the process included:

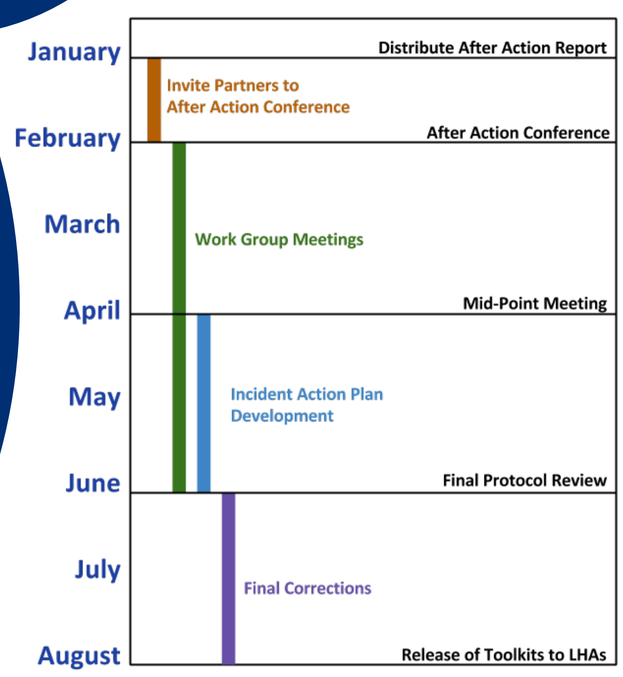
- Promoting regional consistency across multiple jurisdictions for a local measles outbreak response
- Preparing education partners for what to expect in the case of an outbreak
- Assuring a realistic protocol through educational partner involvement
- Establishing new working relationships for all participants through cross-organizational work groups
- Replication of the process for other diseases of concern to schools (Pertussis planning started in January 2016)



Timeline

Following the tabletop exercise, the protocol and toolkit development were completed in a 6 month timeline.

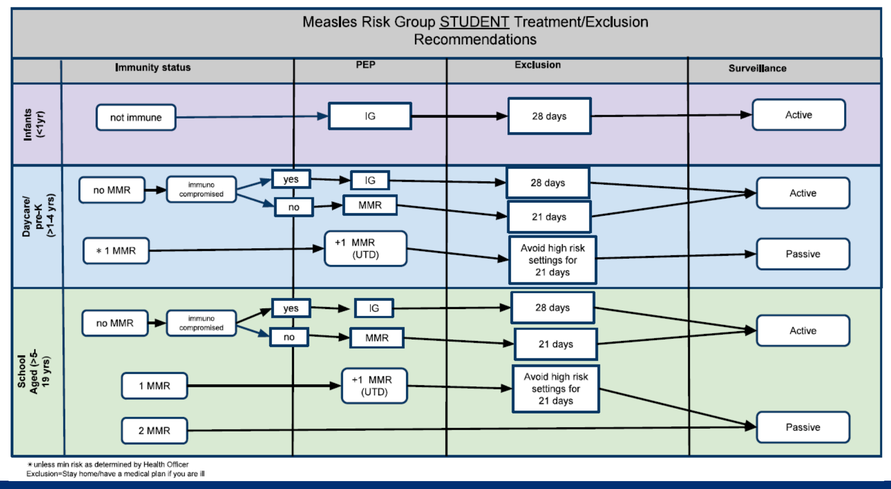
2015 Milestones



Product Example

Algorithms for Post-Exposure Prophylaxis, Exclusion and Surveillance

The protocol development process yielded multiple tools that can be adapted for use by different public health agencies. For example, the Medical Assessment Work Group developed the following swim lane diagram to simplify protocol for post-exposure prophylaxis among different groups, here, students:



Multi-Agency Work Groups

Areas for improvement were summarized into six categories for workgroups to develop protocol content. This multi- workgroup structure successfully incorporated conversations with the necessary expertise, allowing for prior agreement on communication, authority, and information sharing that might otherwise delay response.

Medical Assessment	• Medical assessment of suspect cases
Waiting Window	• Waiting for laboratory confirmation • Contact gathering templates
Exclusions	• Algorithms for exclusion and re-admission
Contact Management	• Ongoing contact management timelines and scripts
Prophylaxis	• Immunization clinic tools
Communications	• Communications plan

Acknowledgements

Archdiocese of Portland: Chris Vancil; **Beaverton School District**: Janet Larsen; **CDC/CSTE Applied Epidemiology Fellowship; Clackamas County**: Sarah Present, Alejandra Cheney, Ami Fladoos; **Clark County**: Monica Czapla; **Kindercare/ Knowledge Universe**: Jill Rankin; **Multnomah County**: Amy Zlot, Jennifer Vines, Jennifer Green, Julie Sullivan-Springhetti, Laura Reynolds, Linda Zumwalt, Loreen Nichols, Marc Harris, Melissa McKinney, Rachel Davis, Rita McConathy, Robert Johnson, Robin Holm, Rochelle Paquette, Taylor Jones Pinsent, Virginia Schmitz; **Multnomah Education Service District**: Ann Ochi, Ann Vrabel, Kathy Mahaffey-Dietrich, Steve Moore; **New Day School (Anada Marga)** Wendy Rattel; **Oregon Health Authority**: Jena Fellenzer; Juventila Liko; Kathy Scott; Mimi Luther; Richard Leman; Stacy Matthews; **Public Health Associate Program, Office for State, Tribal, Local and Territorial Support, CDC; Renaissance School of Arts and Sciences**: Lisa Ortiz; **St. John Fisher School**; **Washington County**: Ivette Torres, Christina Baumann, Trevor Hostetler; **Workplace Design + Connectivity at Nike:** Gerry Morgan.