



PROGRAM PRACTICES
2019 SUBMISSION FORM

IMMUNIZATION PROGRAM PRACTICES INFORMATION

Name: Colorado Immunization Data Unit Kindergarten MMR Dashboard
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Program: Colorado
Does AIM have permission to share this information on the publicly accessible AIM website? All materials submitted will be posted on the AIM website. [x] Yes [] No

BULL'S-EYE AWARD

The Bulls-Eye Award for Innovation and Excellence in Immunization recognizes immunization strategies that "hit their mark" and achieve immunization goals with special consideration for practices that are innovative and easily replicated.

Would you like for this submission to be considered for the 2019 AIM Bull's- Eye Award? (due by Oct. 7, 2019) [x] Yes [] No

PROGRAM PRACTICE INFORMATION

Title
Colorado IIS Kindergarten MMR Dashboard

Keywords (up to 5 main terms/phrases that describe the practice)
Immunization data, coverage, improving immunization rates, assessment, IIS

Is this practice Evidence / Guideline Based? (if yes, please include reference below) [x] Yes [] No

Reference: https://www.thecommunityguide.org/findings/vaccination-programs-immunization-information-systems
Vaccination Programs: Immunization Information Systems
Intervention: Support effective interventions such as provider assessment and feedback, determine vaccination status to aid decisions made by clinicians, health departments, and schools.

Background (scope of the immunization need or problem)
Colorado continues to rank at the bottom of immunization coverage rates in the United States. For the 2018-2019 school year, Colorado's kindergarten coverage rate measles, mumps and rubella (MMR) was 87.4%, a 1.3% decrease from the previous year when Colorado ranked as the worst state in the nation. Per Executive Order B 2019 006 (June 12, 2019) and the Colorado Department of Public Health and Environment's strategic plan, our division is pursuing several initiatives to meet our Wildly Important Goal of reversing the downward trend and increasing the percent of kindergartners protected against MMR from 87.4% to 90% (1,669 more kids) by June 30, 2020, and to 95% by June 30, 2023. Prior to the implementation of the LPHA Kindergarten MMR Dashboard, there was nothing available as a consolidated, user-friendly tool to assist our LPHA partners in both identifying county-level

immunization targets and measuring near-real-time immunization data for kindergarten-aged children living within their jurisdictions.

Program Practice Description

Describe the practice goals and objectives. Design and implement a dynamic local public health agency (LPHA) Kindergarten Dashboard that pulls information from The Colorado Immunization Information System (CIIS), and the Colorado School and Childcare Immunization Data Reporting system (SCCIDR). Combine data from the two large immunization datasets into one tool to actively inform and measure LPHA activities related to increasing kindergarten MMR coverage across the state.

The dashboard identifies and visualizes county targets to assist them in planning and performing activities in their communities, and provides a near real-time report card, updated daily, showing each county's progress in meeting its specific immunization goals based on MMR doses administered to kindergarten-aged children as reported to the Colorado Immunization Information System (CIIS).

What were the main implementation activities? Our Immunization Data Unit integrated real-time vaccination data from CIIS into the kindergarten dashboard to inform activities to increase this year's kindergarten MMR rate. The data unit analyzed the number of kindergarten-aged children immunized for MMR, by county, using CIIS data from December 2, 2017 - December 1, 2018 (the reporting deadline for the 2018-19 school survey in SCCIDR) as a baseline. In order to increase MMR rates for the 2019-2020 school year, increases will need to be made by the reporting deadline of December 1, 2019.

The data unit then incorporated the number of kindergarten-aged children needing to be immunized by county in addition to each county's baseline to determine monthly MMR immunization targets for our LPHA partners. These monthly targets are displayed for the selected county, and each county has access to their own report card showing progress in meeting those targets based on near real-time reporting to CIIS. While CIIS is a different data source than the school survey data, it serves as a meaningful proxy for our LPHA partners to measure their progress between now and December 1. This dashboard allows us to "roll up" the county-level report cards into a statewide report card to know how close we are to meeting this year's target of 90% kindergarten MMR coverage.

Access to the dashboard is only available to our LPHA partners, but it gives us the ability to provide updated data to our Governor and stakeholders in near-real time.

Where and when did the practice take place? June 2019-August 2019

How much staff time was involved? Three key data unit staff spent a majority of their time (approximately 30 hours per week x 3) over a three week period developing and testing this system.

What were the costs associated with the activity? What was the funding source? The cost of the development of this data base was staff time, which is funded by a combination of state and federal funding.

Identify the target population that the practice affected. Kindergarten-aged children likely to start school during the 2019-2020 school year are the primary target, with focus on students with 0 or 1 MMR in CIIS starting 8/1/19.

If partners were involved, include who was involved, and how. This activity was initiated by an executive order from our Governor. Our primary partners in meeting the goal are the local public health agencies (LPHAs) for all 64 Colorado counties. A total of 53 agencies contract with CDPHE to provide immunization activities in their county(s). We started with the 10 counties having the most children in need of additional doses of MMR vaccine by having phone conferences and discussing potential activities they might implement to increase MMR rates in kindergarten students. The LPHA were introduced to the dashboard and report card, given a toolkit with communication tools, and given a list of strategies with an evidence base that have been shown to improve immunization rates. The next set of counties we are working with are those that have the highest percentage of children missing one or more doses of MMR, using similar strategies.

Timeframe of Implementation (Start and Stop Dates)

Formulation of this dashboard started in response to the Executive Order in June, 2019. Public activities including the goal, dashboard and report card began with a presentation by our Division Director to the Colorado Association of Leaders in Public Health Organizations (CALPHO) in mid-August. The immunization

branch presented to all LPHA immunization staff on our monthly LPHA call the last week in August. Starting mid-August, we began reaching out and scheduling phone conferences with the LPHAs showing the most children in need of additional MMR doses based on our data. This work will continue through December 1, 2019 which is the data reporting deadline. The dashboard and report card will continue to be active and available as improving MMR rates for kindergarten students is a goal through June 30, 2024.

Evaluation Data: Was the implementation and/or effectiveness of this practice assessed? (if “yes” or “limited,” provide any data that is available) -Yes -No -Limited

Data: The data from the dashboard will be available at a state level (as well as at a county level) and we will be able to measure success for this school year. LPHA can watch their own progress on an ongoing basis, and we will be able to measure success for this school year after the data has been submitted. As of 9/27/19, we met our goal for September 1st, and are at 98.6% of our October 1st goal. Access to ongoing data provides this measurement towards the goal.

Conclusions / Lessons Learned / Key Factors for Success

The Immunization Data Unit’s design and implementation of a dynamic LPHA Kindergarten MMR Dashboard is innovative for several reasons. First, the dashboard identifies and visualizes each county’s specific contribution to a statewide 90% kindergarten MMR coverage rate (e.g., how many additional kindergarten-aged children they need to immunize) and provides listings of schools with low kindergarten MMR rates within each county to better address incomplete and missing kindergarten immunization record counts. Second, the dashboard provides each LPHA with monthly immunization targets to assist them in planning and performing activities in their communities. Finally, the dashboard includes a near real-time report card, updated daily, showing each county’s progress in meeting its specific immunization goals based on MMR doses administered to kindergarten-aged children as reported to the Colorado Immunization Information System (CIIS). The data unit provided information and data that most LPHAs lack the internal staff or resources to support and maintain independently. Because the Immunization Data Unit provided this information for all LPHAs, the analysis was uniform and consistent across jurisdictions.

The dashboard and report card provide a quick way to measure progress, create some reasonable targets to foster accountability and, ultimately, gives our LPHA partners actionable data that they can use.

To our knowledge, this marks the first time our department has used population health data sources and technology solutions to both inform and measure the implementation of activities by our LPHA partners in near real-time to support our strategic priorities.

Feedback from our LPHA partners to date has been consistently positive, and we have already had questions about additional data we may be able to help them gather and visualize. Most of our top ten counties are already seeing additional, focused efforts to improve MMR rates in kindergarten-aged students.

Check if any of the following are being submitted to complement your submission:

(All materials will be posted on the AIM website)

- | | |
|---------------------------------------------------------|------------------------------------------------------------------------------|
| <input type="checkbox"/> Testimonials | <input type="checkbox"/> Project photo(s) |
| <input type="checkbox"/> Quote from partner/participant | <input type="checkbox"/> Publication (e.g., news story, journal article) |
| <input type="checkbox"/> Sample of materials produced | <input type="checkbox"/> Video/audio clip |
| <input type="checkbox"/> Press release | <input type="checkbox"/> Website URL |
| <input type="checkbox"/> Promotional materials | <input checked="" type="checkbox"/> Tables or graphs (examples of dashboard) |
| | <input type="checkbox"/> Other — Explain: _____ |