

## Local Health Department-Based Interventions to Reduce Conditional Entrants in California Schools

**Keywords:** immunization, conditional entrant, intervention, school

### Background

California schools are required to report student compliance with state immunization laws to the California Department of Public Health (CDPH). Based on immunization status, students are classified into the following categories: All Required Immunizations, Conditional Entrants (CEs), Permanent Medical Exemptions, and Personal Belief Exemptions. The classification of CE should be assigned to children who have not received all required immunizations for age or grade but cannot yet receive one or more of their catch-up doses.

In the fall of 2014, almost 37,000 kindergartners were admitted conditionally in California. Analysis of a retrospective survey suggests that over 90% of these children failed to meet the criteria for conditional admission and should have been excluded from school until they received the doses that were due at the time of admission. Schools appear to be having difficulty interpreting and implementing school immunization law in regards to classification of conditional entrants.

Additionally, in 2015 the State Controller's Office added an immunization component to the required financial and compliance audits of local educational agencies. As outlined in the Education Audit Appeals Panel (EAAP) 2015-2016 audit guide, schools that reported conditional entrant rates greater than 25% in 2015-2016 will be subject to audit and may lose average daily attendance (ADA) funding for any day a student is found to be in attendance inappropriately.

### Program Practice Description

*Describe the practice goals and objectives.*

To improve compliance with immunization requirements, CDPH initiated the Conditional Entrant Intervention Project in which local health departments (LHDs) participated voluntarily. CDPH targeted eight jurisdictions to take part in the project based on their respective numbers and percentages of conditional entrant students, though all LHDs were encouraged to participate. CDPH asked LHDs to:

- Identify 2-10 schools with high numbers of conditional entrants.
- Offer support and technical assistance to school staff responsible for implementing school immunization law.
- Train school staff on school immunization law and implementation practices.
- Offer and make available resources to schools.

LHDs were also supplied with a spreadsheet of kindergartens with reported conditional admission rates over 25% in 2014-2015 to guide their selection of schools on which to perform interventions.

*What were the main implementation activities?*

In total, 16 local health departments (LHDs) performed interventions with 161 schools. There were 2,293 non-intervention schools. Most LHDs chose to target schools with reported conditional entrant (CE) rates of at least 10%. The types of interventions varied across LHDs and from school to school, depending on a particular school's needs, but generally offered support, technical assistance, and training to school staff responsible for implementing school immunization law. The most common intervention activities were face-to-face meetings, providing materials, email, and phone calls. Face-to-face meetings included one-on-one or group training sessions, often guiding school staff on how to

review school immunization records, identify and follow up with CE students, and find/utilize necessary or helpful resources. The point of contact was usually the school clerk/registrar or school nurse, though many interactions involved the health aid, district nurse, principal/superintendent, or administrator/manager.

*Where and when did the practice take place?*

Interventions occurred preceding and throughout the fall reporting period for the 2015-2016 school year (January – November, 2015).

*How much staff time was involved?*

Most interventions required 1-3 hours of local health department staff time per school, including follow up.

*What were the costs associated with the activity? What was the funding source?*

N/A

*Identify the target population that the practice affected.*

School immunization reporting staff

*If partners were involved, include who was involved, and how.*

Local health department staff

### **Timeframe of Implementation (Start and Stop Dates)**

1/1/2015 – 11/30/2015

**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:**

After the conclusion of the assessment reporting period, representatives from local health departments (LHDs) that participated in the project were interviewed over the phone to collect quantitative and qualitative data. Quantitative analysis of intervention and non-intervention schools was conducted with schools that submitted immunization assessment reports in 2014-2015 and 2015-2016. Non-intervention schools were defined as schools with kindergartens in the participating counties and the rest of the state where participating LHDs did not target as part of this project. Schools reporting conditional admission rates less than 5% in 2014-2015 were omitted from both intervention and non-intervention groups, as they had little room for improvement. The difference between intervention and non-intervention schools was calculated by subtracting reported conditional entrant (CE) rates in 2014-2015 from those reported in 2015-2016 for each school, then finding the sample mean (Figure 1). CDPH objectively classified interventions for each school as low, medium, or high based on the criteria shown in Table 1. Subgroup analysis of intervention effectiveness by level of intervention was not possible given the small subgroup sizes of “low” (N = 14 schools) and “medium” (N = 12 schools).

Compared to the 2014-2015 school year, the proportion of students reported to be CEs in all California kindergartens decreased by 2.5 percentage points from 6.9% (36,931/535,234) to 4.4% (24,249/551,123) in 2015-2016.

A comparative analysis of conditional admission rates from 2014-2015 and 2015-2016 in intervention and non-intervention schools (Figure 1) shows that the mean percentage point change of conditional admission rate was 17.5% in intervention schools and 7.9% in non-intervention schools (p = 0.0001).

Looking only at intervention and non-intervention schools that reported  $\geq 25\%$  conditional admission rates in 2014-2015, the mean percentage point change of conditional admission rate was 32.1% in intervention schools, which was significantly higher than in non-intervention schools (22.8%;  $p = 0.0011$ ). Lastly, intervention and non-intervention schools that reported  $< 25\%$  conditional admission rates in 2014-2015 had a mean percentage point change of conditional admission rate of 4.4% in intervention schools and 4.6% in non-intervention schools ( $p = 0.8734$ ).

## Lessons Learned

Based on the sizeable reduction in conditional admission rates observed in California schools with kindergartens that received an intervention, it is apparent that the interventions performed by local health departments (LHDs) were successful. The differences between conditional admission rates of intervention vs. non-intervention groups in the stratified samples (Figure 1) reveal that intervention efforts are most effective when aimed at schools reporting high ( $\geq 25\%$ ) conditional admission rates. As decreases were also observed in non-intervention schools, additional factors may have contributed to incentivizing schools to change reporting behavior, including (but not limited to):

- Communications from CDPH about the addition of the immunization component to the EAAP audit guide
- Threat of school audit and loss of average daily attendance (ADA) funding
- Dissemination of newly developed resources by CDPH addressing conditional entrants for schools
- Expansion by CDPH in fall of 2015 of reporting categories to include “excluded but enrolled” as an alternate to conditional entrant
- Increased attention to school immunization because of 2014-2015 measles outbreaks and SB 277.

Representatives from LHDs that participated in interviews reported on the importance of building relationships with the school staff responsible for reporting. Depending on the school, this may be the school clerk/registrar, health aid, or school nurse. Garnering support from school leadership (County Office of Education, superintendent, and principal) was advantageous to many interventions. Many LHD representatives organize or attend regularly scheduled district/county school nurse meetings, and find that this facilitates relationship building with the schools and allows LHDs to conduct surveys, identify knowledge gaps, conduct trainings, provide materials, and answer questions. When approaching schools, it was beneficial to communicate that the LHD representative has the intention to provide assistance and be a resource to staff – this strategy can help to minimize the resistance or defensiveness put forth by school staff that may fear punitive action.

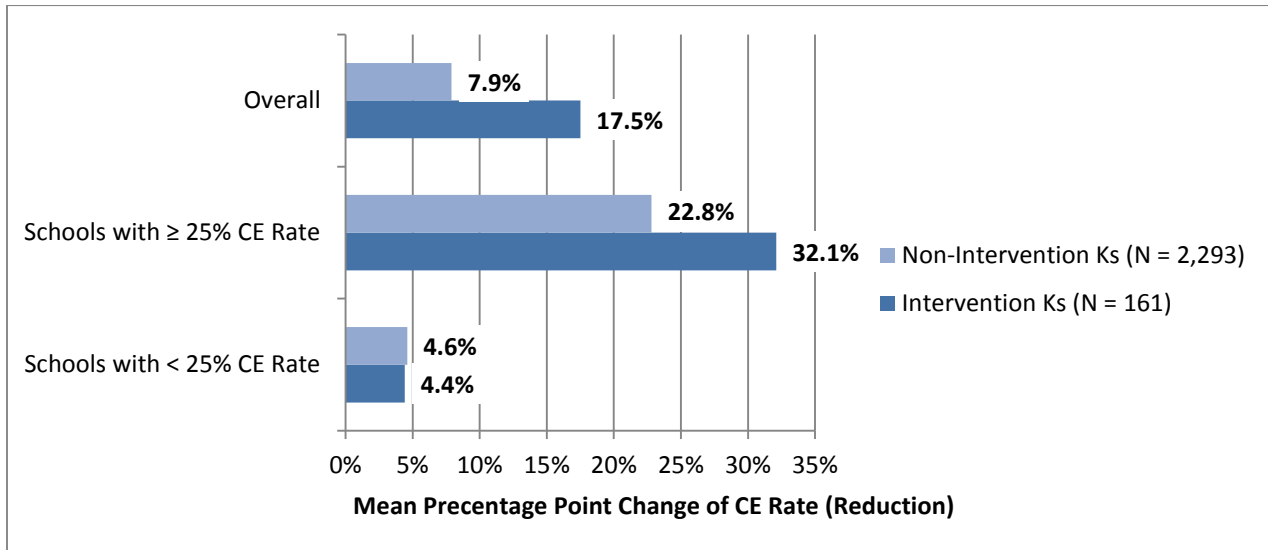
The California Immunization Registry (CAIR) was an underutilized resource in the project, as only four of 16 LHDs reported using an immunization registry in their review of records. These LHDs used CAIR (or a local registry) to verify school immunization records, and frequently found that students classified as conditional entrants (CE) had received more doses than were recorded on school immunization records, sometimes even changing the status of the student from “CE” to “All Required Immunizations.” With the new version of CAIR (CAIR2) launching in the fall of 2016, CDPH plans to take steps to improve school utilization of the registry.

## Supplemental Materials

**Table 1: Criteria for intervention level classification**

Level of Intervention	Intervention Activity	Tailored Messaging	Time Spent
Low	email, phone call, providing materials	No	< 30 min
Medium	email, phone call, providing materials	Yes	30-60 min
High	email, phone call, providing materials, face-to-face meeting	Yes	≥ 60 min

**Figure 1: Mean Percentage Point Change of Conditional Entrant (CE) Rates in Intervention and Non-Intervention Schools with Kindergartens 2015-2016 vs. 2014-2015**



The project is subject to limitations that include:

- Intervention schools were not systematically selected. While schools with CE rates >25% were the intended target for the intervention, there were differences between jurisdictions in how they implemented the intervention leading to some schools with low CE rates receiving the intervention.
- Some interventions occurred in schools classified as “non-intervention” because not every jurisdiction reported intervention activities.
- Schools within the same district and county may not be independent, and this lack of independence was not accounted for in the analysis.
- Potential confounders were not controlled for in the analysis, e.g., demographic differences among kindergartners across schools.
- Intervention activities were self-reported by LHDs, and hence subject to recall and response bias, and may have varied across LHDs and between schools.

## Resources

[www.ShotsforSchool.org](http://www.ShotsforSchool.org)

[Guide to Immunizations Required for School Entry](#)

[California Immunization Handbook](#)

[Notice of Immunizations Needed](#) template letter

[No Shots? No Records? No School](#) poster

[IZ Requirements 101](#) slide deck

[2015-2016 Guide for Annual Audits of K-12 Local Education Agencies](#)