

## 2008 SELECTIVE REVIEW RESULTS

### CALIFORNIA DEPARTMENT OF HEALTH SERVICES, IMMUNIZATION BRANCH

#### Introduction

The annual selective review conducted each spring provides information on compliance with the California School Immunization Law. The purpose of this review is to evaluate the enforcement of the immunization requirements and the follow-up of students who have not received all required immunizations. This report presents results from this year's selective review and the attached tables present comparisons of immunization coverage among the selected child care centers and schools.

#### Methods and Participants

This year's selective review was conducted in a sample of approximately 2.5% of California's child care centers, 3.5% of kindergartens and 5% of seventh grades. Local health department staff visited 285 child care centers, 264 schools with kindergartens, and 182 schools with seventh grades. During the site visits a short interview was conducted with child care providers and school administrators. In addition, a complete review of student immunization records was performed. For child care centers and kindergartens, data were analyzed by comparing immunization coverage rates reported by centers and schools during the fall and those reported by local health departments during the spring. For seventh grade, schools did not report on immunization coverage rates during the fall.

#### Results and Discussion

Overall, results of the 2008 selective review indicate that child care centers and schools are in compliance with the California School Immunization Law. Over 89% of child care, kindergarten and seventh grade students had received all the required immunizations. Coverage for each required vaccine was above 95% for public schools and 88% for private schools.

Over 70% of centers and schools surveyed had a workable follow-up system for children who had not received all required immunizations at entry and were admitted conditionally. An additional 10-13% had workable follow-up systems after local health department staff provided more support and training. As indicated below, the most commonly used method of follow-up was keeping a list or worksheet of conditional entrants as a reminder for staff to notify parents if their child's immunization due date passes.

Methods used to follow-up on conditional entrants

	Child Care n=285	Kindergarten n=264	Seventh Grade n=182
Keep list/worksheet	53.3%	63.6%	62.1%
Separate file of California State Immunization Records	13.3%	15.2%	13.2%
Flags the record	23.2%	31.4%	26.9%
Entries on calendar or desk	11.9%	13.3%	18.7%
Periodic check of records	22.5%	14.8%	19.2%
Computer alert	17.9%	15.5%	13.2%
Other	14.4%	7.2%	6.6%

### Child Care (Table 1)

Selective review of child care centers occurs biennially. The percentage of children with all required immunizations measured during this year's spring selective review ( $93.8 \pm 1.2\%$ ) was similar to that measured during the fall assessment ( $91.8 \pm 1.5\%$ ). Estimates of immunization coverage in the selected child care centers were also similar across different types of facilities (public, private, or Head Start).

### Kindergarten (Table 2)

The percentage of kindergarten students with all required immunizations measured during the spring selective review ( $94.8 \pm 1.0\%$ ) was similar to that measured during the fall assessment ( $92.3 \pm 1.6\%$ ). As in previous years, estimates of immunization coverage in the selected kindergartens varied by the type of school (public or private). In the spring, the percentage of students with all required immunizations was higher in public schools ( $95.3 \pm 1.1\%$ ) than in private schools ( $89.8 \pm 3.0\%$ ).

### Seventh Grade (Table 3)

The percentage of seventh grade students with all required immunizations measured during the spring selective review was  $95.3 \pm 1.2\%$ . Only  $2.95 \pm 1.08\%$  of seventh grade students were missing one or more of the required immunizations. The percentages of students with permanent medical exemptions and personal beliefs exemptions were  $0.06 \pm 0.05\%$  and  $1.66 \pm 0.45\%$ , respectively.

### Conclusion

Maintaining compliance with the California School Immunization Law is labor intensive and requires child care providers and school administrators to have a thorough understanding of the immunization requirements. Selective review provides an opportunity to emphasize the importance of following up on students who are missing required immunizations. Higher coverage levels measured in the spring could be an indication that follow-up of conditional entrants is occurring. Similar or lower estimates of coverage measured in the spring could be an indication that follow-up is not occurring or that there may be a great deal of student movement with continuing enrollment of students with conditional entry throughout the school year. Overall, the results indicate that child care centers and schools are in compliance with the California School Immunization Law.

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Table 1: Childcare Immunization Coverage, Comparison of Fall 2008 Assessment and Spring 2008 Selective Review

	All Facilities n = 285		Public Facilities n = 68		Private Facilities n = 166		Head Start Facilities n = 51	
	Fall 2007 Assessment	Spring 2008 Selective Review	Fall 2007 Assessment	Spring 2008 Selective Review	Fall 2007 Assessment	Spring 2008 Selective Review	Fall 2007 Assessment	Spring 2008 Selective Review
Total Enrollment	16,152	17,119	4,467	4,960	9,097	9,521	2,588	2,638
All Required Immunizations	91.8% $\pm$ 1.5%	93.8% $\pm$ 1.2%	94.8% $\pm$ 2.0%	95.4% $\pm$ 1.9%	88.7% $\pm$ 2.3%	91.7% $\pm$ 1.9%	97.7% $\pm$ 1.1%	98.3% $\pm$ 1.0%
Conditional Entrants	6.48% $\pm$ 1.37%	4.41% $\pm$ 1.11%	4.16% $\pm$ 1.92%	3.51% $\pm$ 1.75%	8.89% $\pm$ 2.12%	5.76% $\pm$ 1.74%	2.01% $\pm$ 1.09%	1.25% $\pm$ 0.84%
Permanent Medical Exemptions	0.16% $\pm$ 0.11%	0.06% $\pm$ 0.04%	0.11% $\pm$ 0.12%	0.04% $\pm$ 0.05%	0.22% $\pm$ 0.18%	0.06% $\pm$ 0.05%	0.04% $\pm$ 0.08%	0.08% $\pm$ 0.11%
Personal Belief Exemptions	1.54% $\pm$ 0.50%	1.76% $\pm$ 0.51%	0.90% $\pm$ 0.73%	1.07% $\pm$ 0.70%	2.21% $\pm$ 0.81%	2.50% $\pm$ 0.82%	0.27% $\pm$ 0.18%	0.38% $\pm$ 0.36%
DTaP (4+) <sup>1</sup>	94.8% $\pm$ 1.1%	96.1% $\pm$ 1.0%	96.8% $\pm$ 1.6%	97.2% $\pm$ 1.3%	92.7% $\pm$ 1.6%	94.8% $\pm$ 1.6%	98.5% $\pm$ 0.7%	98.9% $\pm$ 0.8%
Polio (3+) <sup>2</sup>	96.4% $\pm$ 0.9%	97.1% $\pm$ 0.8%	98.7% $\pm$ 0.5%	98.1% $\pm$ 1.0%	94.6% $\pm$ 1.4%	96.0% $\pm$ 1.4%	99.1% $\pm$ 0.6%	99.4% $\pm$ 0.6%
MMR (1+) <sup>3</sup>	96.8% $\pm$ 0.8%	96.9% $\pm$ 0.9%	98.6% $\pm$ 0.6%	97.9% $\pm$ 1.0%	95.1% $\pm$ 1.3%	95.7% $\pm$ 1.4%	99.3% $\pm$ 0.5%	99.2% $\pm$ 0.6%
Hib (1+) <sup>4</sup>	97.5% $\pm$ 0.7%	97.8% $\pm$ 0.7%	98.8% $\pm$ 0.5%	98.0% $\pm$ 1.0%	96.5% $\pm$ 1.1%	97.2% $\pm$ 1.1%	99.1% $\pm$ 0.8%	99.5% $\pm$ 0.5%
Hep B (3+) <sup>5</sup>	95.6% $\pm$ 1.0%	96.2% $\pm$ 1.4%	97.8% $\pm$ 1.0%	97.5% $\pm$ 1.2%	93.4% $\pm$ 1.6%	94.6% $\pm$ 2.4%	99.2% $\pm$ 0.7%	99.3% $\pm$ 0.6%
Var (1+) <sup>6</sup>	95.5% $\pm$ 1.1%	96.7% $\pm$ 0.9%	97.5% $\pm$ 1.6%	97.8% $\pm$ 1.2%	93.5% $\pm$ 1.6%	95.4% $\pm$ 1.4%	99.3% $\pm$ 0.7%	99.4% $\pm$ 0.5%

1. Four or more doses of any diphtheria and tetanus toxoids and pertussis vaccines including diphtheria and tetanus toxoids, and any acellular pertussis vaccine

2. Three or more doses of any poliovirus vaccine

3. One or more doses of measles, mumps, and rubella vaccines, separately or combined on or after the 1st birthday

4. One or more doses of *haemophilus influenzae* type b vaccine on or after the 1st birthday

5. Three or more doses of hepatitis B vaccine

6. One or more doses of varicella vaccine, adjusted for history of varicella disease

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Table 2: Kindergarten Immunization Coverage\*, Comparison of Fall 2007 Assessment and Spring 2008 Selective Review

	All Schools n = 264		Public Schools n = 183		Private Schools n = 81	
	Fall 2007 Assessment	Spring 2008 Selective Review	Fall 2007 Assessment	Spring 2008 Selective Review	Fall 2007 Assessment	Spring 2008 Selective Review
Total Enrollment	14,904	14,888	13,356	13,417	1,548	1,471
All Required Immunizations	92.3% $\pm$ 1.6%	94.8% $\pm$ 1.0%	92.5% $\pm$ 1.7%	95.3% $\pm$ 1.1%	90.0% $\pm$ 3.7%	89.8% $\pm$ 3.0%
Conditional Entrants	6.04% $\pm$ 1.50%	3.11% $\pm$ 0.75%	5.85% $\pm$ 1.63%	2.64% $\pm$ 0.78%	7.62% $\pm$ 3.47%	7.41% $\pm$ 2.75%
Permanent Medical Exemptions	0.20% $\pm$ 0.13%	0.16% $\pm$ 0.10%	0.18% $\pm$ 0.14%	0.16% $\pm$ 0.11%	0.32% $\pm$ 0.42%	0.14% $\pm$ 0.18%
Personal Belief Exemptions	1.50% $\pm$ 0.49%	1.96% $\pm$ 0.64%	1.43% $\pm$ 0.54%	1.89% $\pm$ 0.70%	2.07% $\pm$ 1.08%	2.65% $\pm$ 1.09%
DTaP (4+) <sup>1</sup>	94.3% $\pm$ 1.3%	96.1% $\pm$ 0.8%	94.5% $\pm$ 1.4%	96.5% $\pm$ 0.9%	92.3% $\pm$ 3.1%	92.0% $\pm$ 2.6%
Polio (3+) <sup>2</sup>	94.6% $\pm$ 1.2%	96.4% $\pm$ 0.8%	94.9% $\pm$ 1.3%	96.8% $\pm$ 0.9%	92.1% $\pm$ 3.1%	92.4% $\pm$ 2.6%
MMR (2+) <sup>3</sup>	94.9% $\pm$ 1.2%	96.2% $\pm$ 0.8%	95.3% $\pm$ 1.3%	96.6% $\pm$ 0.9%	91.5% $\pm$ 3.3%	92.4% $\pm$ 2.4%
Hep B (3+) <sup>4</sup>	96.8% $\pm$ 0.8%	97.1% $\pm$ 0.8%	96.9% $\pm$ 0.8%	97.3% $\pm$ 0.8%	96.3% $\pm$ 1.8%	95.9% $\pm$ 1.5%
Var (1+) <sup>5</sup>	97.0% $\pm$ 0.8%	97.4% $\pm$ 0.7%	97.1% $\pm$ 0.8%	97.5% $\pm$ 0.8%	96.3% $\pm$ 1.8%	96.1% $\pm$ 1.4%

\* Immunization coverage for individual antigens is unavailable for students with Personal Beliefs Exemptions and therefore may be underestimated;

Anecdotal evidence suggests a small percentage of students may have some but not all required immunizations.

1. Four or more doses of any diphtheria and tetanus toxoids and pertussis vaccines including diphtheria and tetanus toxoids, and any acellular pertussis vaccine
2. Three or more doses of any poliovirus vaccine
3. Two or more doses of measles, mumps, and rubella vaccines, separately or combined on or after the 1st birthday
4. Three or more doses of hepatitis B vaccine
5. One or more doses of varicella vaccine, adjusted for history of varicella disease

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Table 3: Seventh Grade Immunization Coverage\*, Spring 2008 Selective Review

	All Schools n = 203	Public Schools n = 105	Private Schools n = 98
	Spring 2008 Selective Review	Spring 2008 Selective Review	Spring 2008 Selective Review
Records Reviewed	10,257	8,345	1,912
All Required Immunizations	95.3% $\pm$ 1.2%	96.1% $\pm$ 1.3%	92.1% $\pm$ 2.4%
Conditional Entrants	2.95% $\pm$ 1.08%	2.66% $\pm$ 1.27%	4.24% $\pm$ 1.56%
Permanent Medical Exemptions	0.06% $\pm$ 0.05%	0.02% $\pm$ 0.03%	0.21% $\pm$ 0.24%
Personal Belief Exemptions	1.66% $\pm$ 0.45%	1.23% $\pm$ 0.41%	3.50% $\pm$ 1.67%
MMR (2+) <sup>1</sup>	95.9% $\pm$ 1.0%	96.6% $\pm$ 1.1%	92.9% $\pm$ 2.3%
Hep B (3+) <sup>2</sup>	96.8% $\pm$ 1.0%	97.3% $\pm$ 1.2%	94.6% $\pm$ 2.1%

\* Immunization coverage for individual antigens is unavailable for students with Personal Beliefs Exemptions. and therefore may be underestimated; anecdotal evidence suggests a small percentage of students may have some but not all required immunizations.

1. Two or more doses of measles, mumps, and rubella vaccines, separately or combined on or after the 1st birthday
2. Three or more doses of hepatitis B vaccine