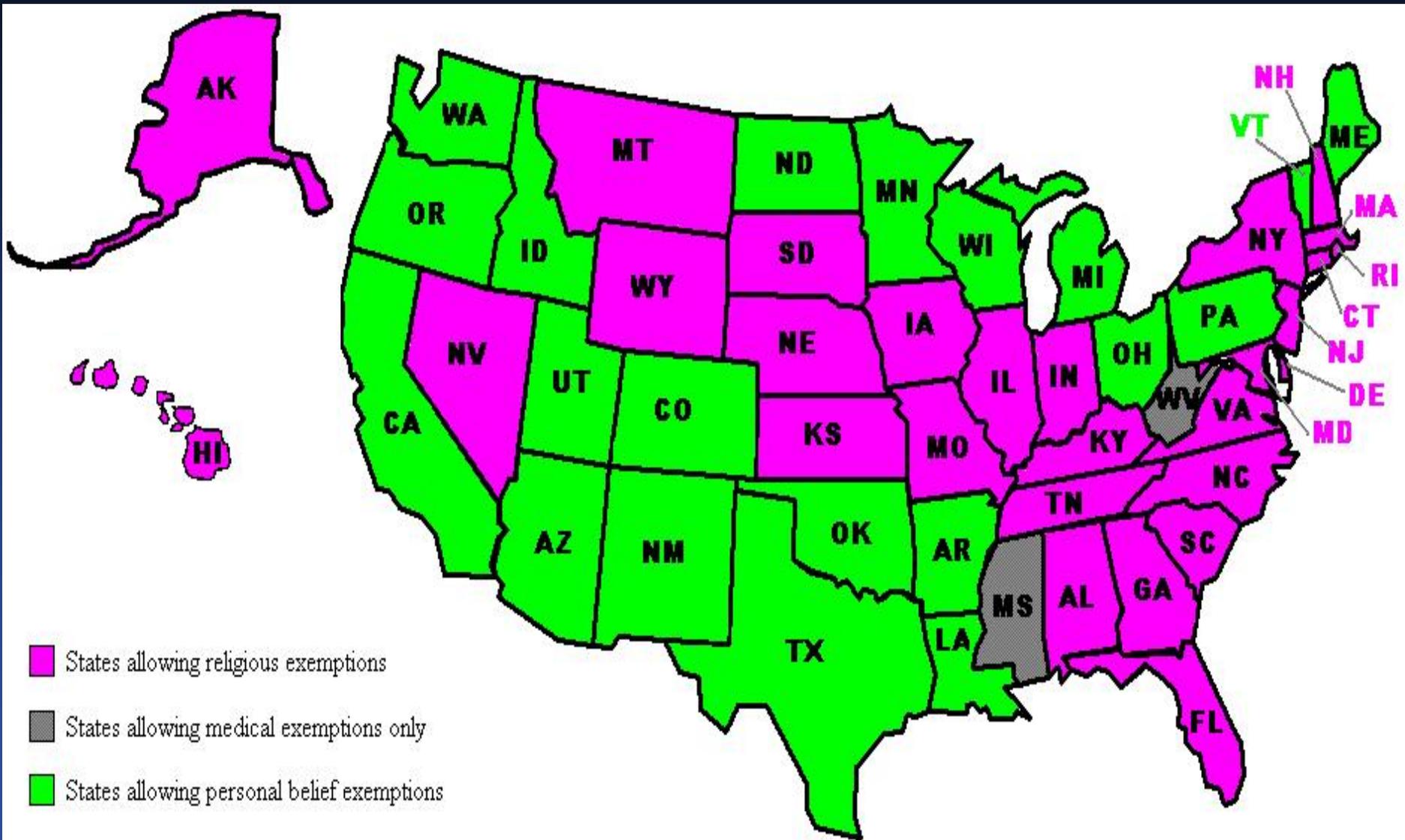


CALIFORNIA SCHOOL CODES AND REGULATIONS



Immunization Exemption Type by State



History of CA School Law

1972 Diphtheria, Tetanus, Pertussis
1961 Polio
1967 Measles
1980 Mumps, Rubella

Broad regulatory
authority to DHS

1991

Hib

1994

Hep B, 7th Gr

1999

1977

Enforcement,
implementation
strengthened;
Day care added

1992-6

Family
Childcare

1997

Hep B at K

2001

Varicella

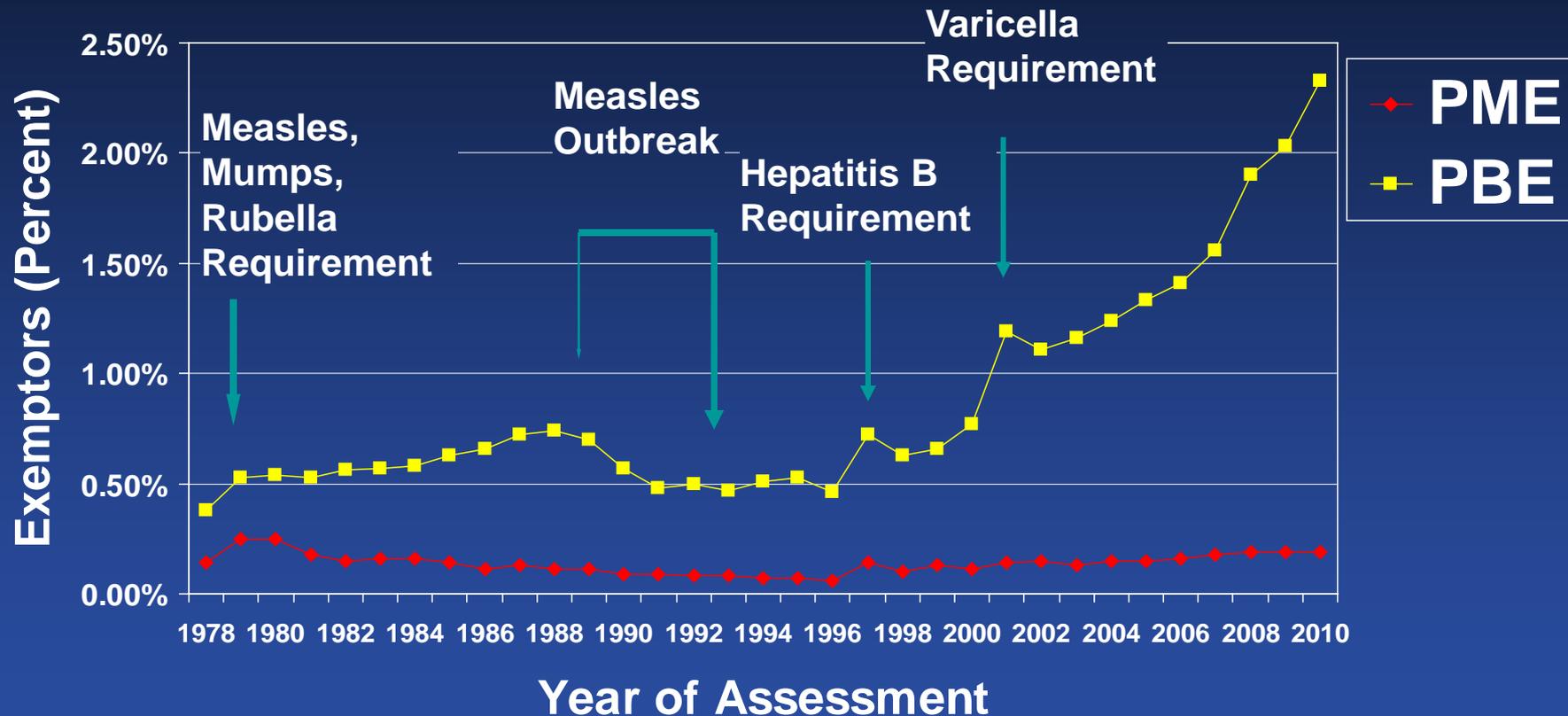
CA School Immunization Law

- **Immunization Requirements at Kindergarten Entry:**
 - 4+ DTP, 3+ Pol, 2 MMR, 3 Hep B, 1 Var
- **Exemptions and Procedure**
 - Permanent and Temporary Medical
 - Personal Beliefs (PBE)
 - “shall be granted upon filing with the [school] a letter or affidavit from the pupil’s parent...that such immunization is contrary to his or her beliefs”

School Assessment Overview

- In Fall, schools with Kindergartens are required by law (CHSC§120375(c) & CCR§6075) to report the immunization status of new entrants – most of reporting (99%) is now submitted online
- In Spring, 3% to 5% of schools with kindergarten are randomly selected for follow-up validation of immunization status.
 - LHD staff conduct school site visits, interview school staff, xerox official School IZ Records, and IZ data entered into a database.
 - Data are used to estimate age-specific, e.g. 19-35 mos., immunization status of this CA cohort

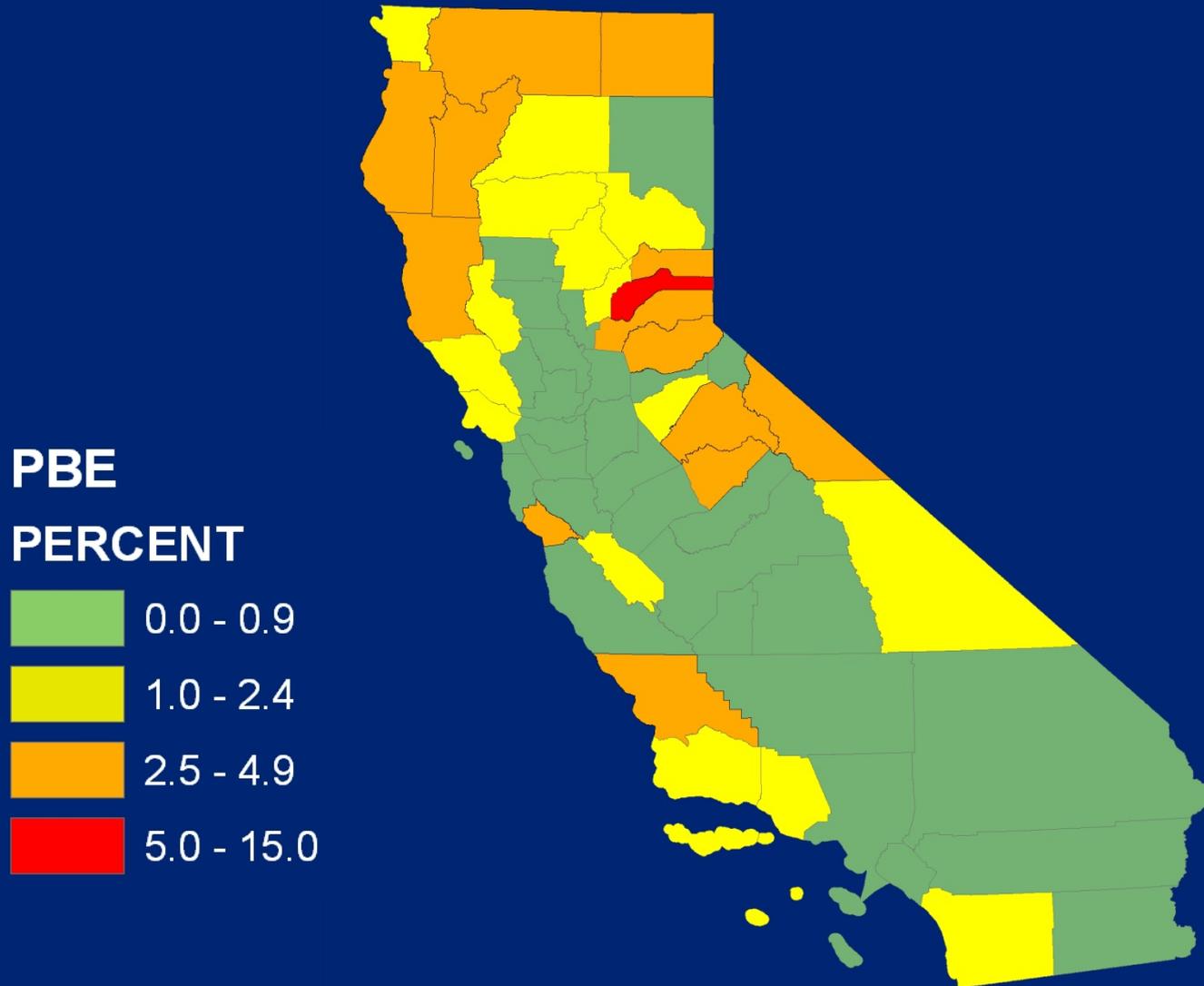
Permanent Medical Exemptions (PME) and Personal Beliefs Exemptions (PBE) Among Kindergarten Students, California 1978-2010



PBEs: Key Points

- Perception that children had a low susceptibility to the diseases
- Severity of the diseases was low
- Efficacy and safety of the vaccines was low
- The most frequent reason was non-vaccination, stated by 69% of the parents, was concern that the vaccine might cause harm.

Rates of PBEs Among Children Entering Kindergarten by County, 2000



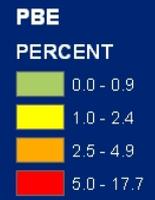
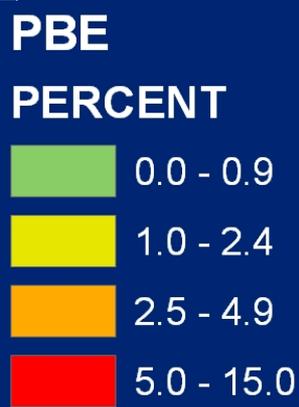
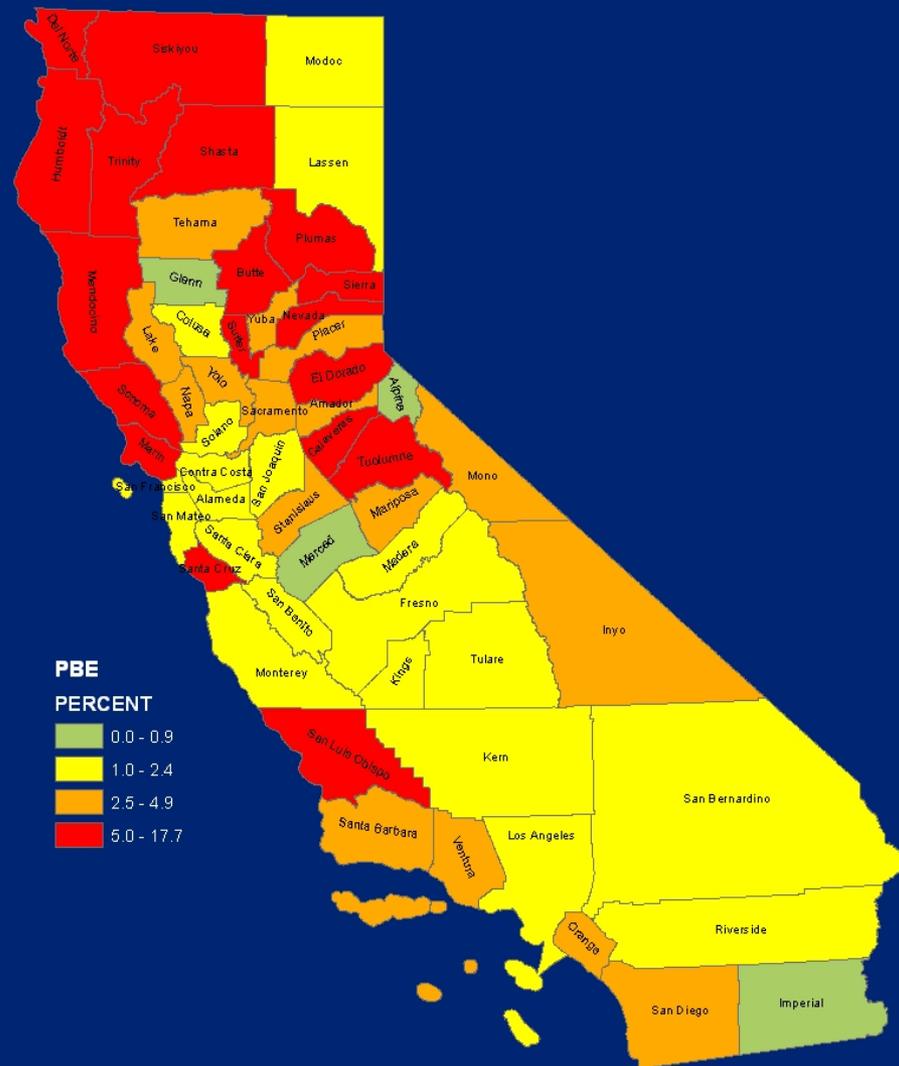
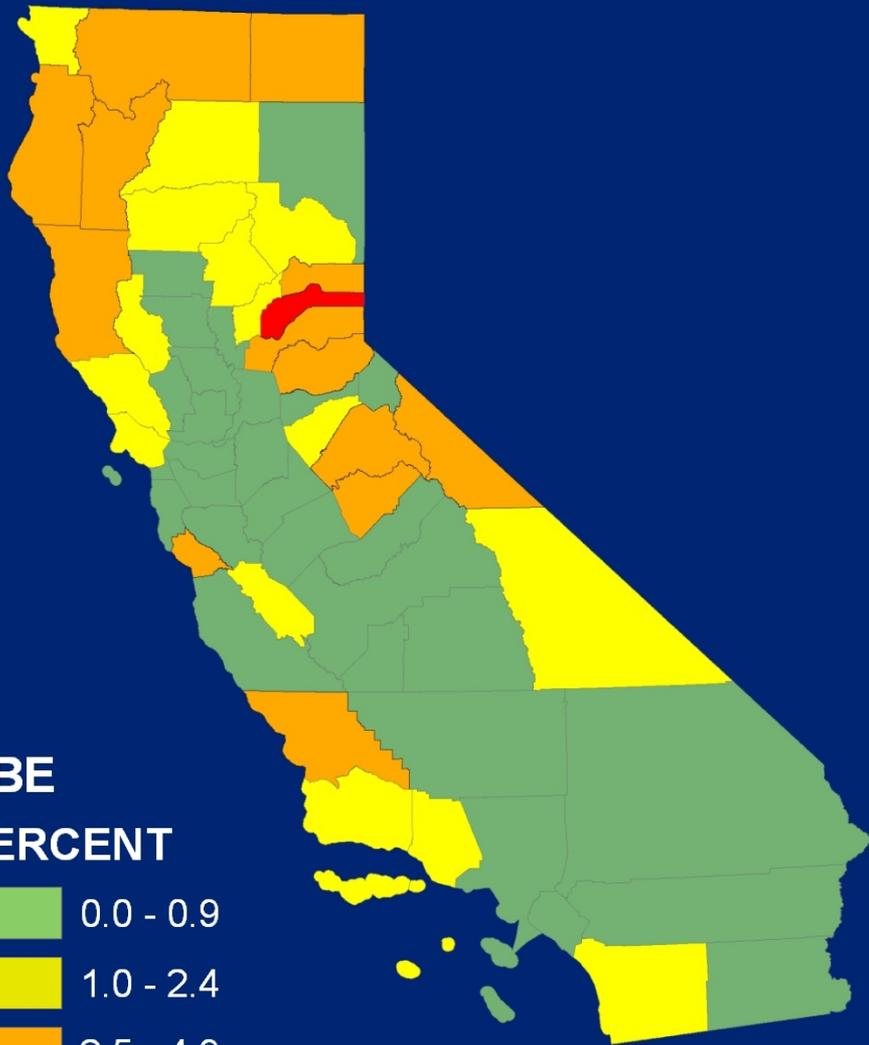
Number and Percent PBEs Among Children Entering Kindergarten by County, 2010



PBEs Among Children Entering Kindergarten

2000

2010



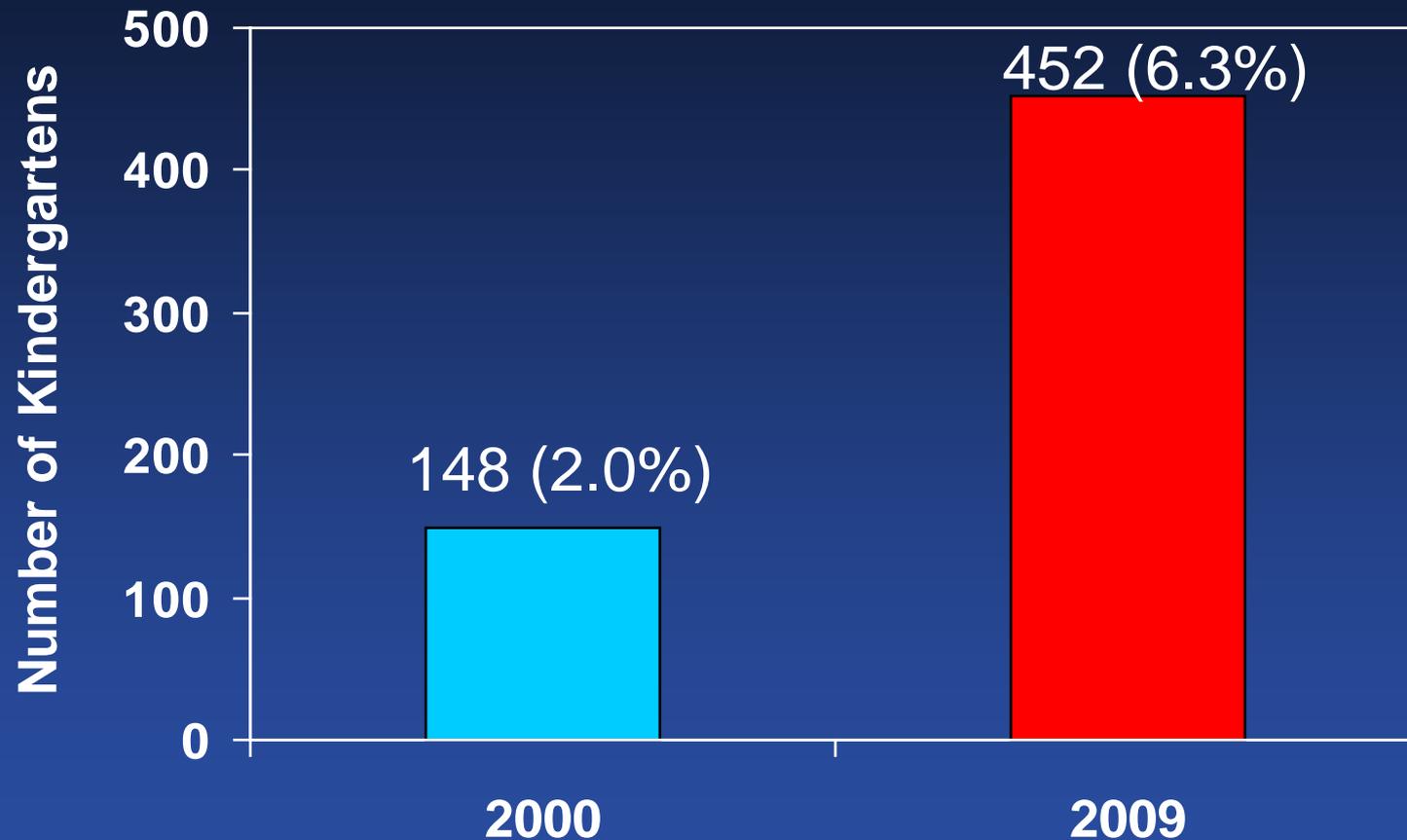
PBEs: Key Points

- Multiple studies show an increase in the local risk of diseases when there is geographic clustering of exemptions.
 - Michigan : The odds ratio for the likelihood that a census tract included in a pertussis cluster would also be included in an exemptions cluster was 2.7.
 - Colorado: county-level incidence of measles and pertussis in vaccinated children from 1987 through 1998 was associated with the frequency of exemptions in that county.³⁵ At least 11% of the nonexempt children who acquired measles were infected through contact with an exempt child.³⁵
 - School-based outbreaks in Colorado have been associated with increased exemption rates; the mean exemption rate among school with outbreaks was 4.3%, as compared with 1.5% for the schools that did not have an outbreak (P=0.001).³⁵

PBEs: Key Points

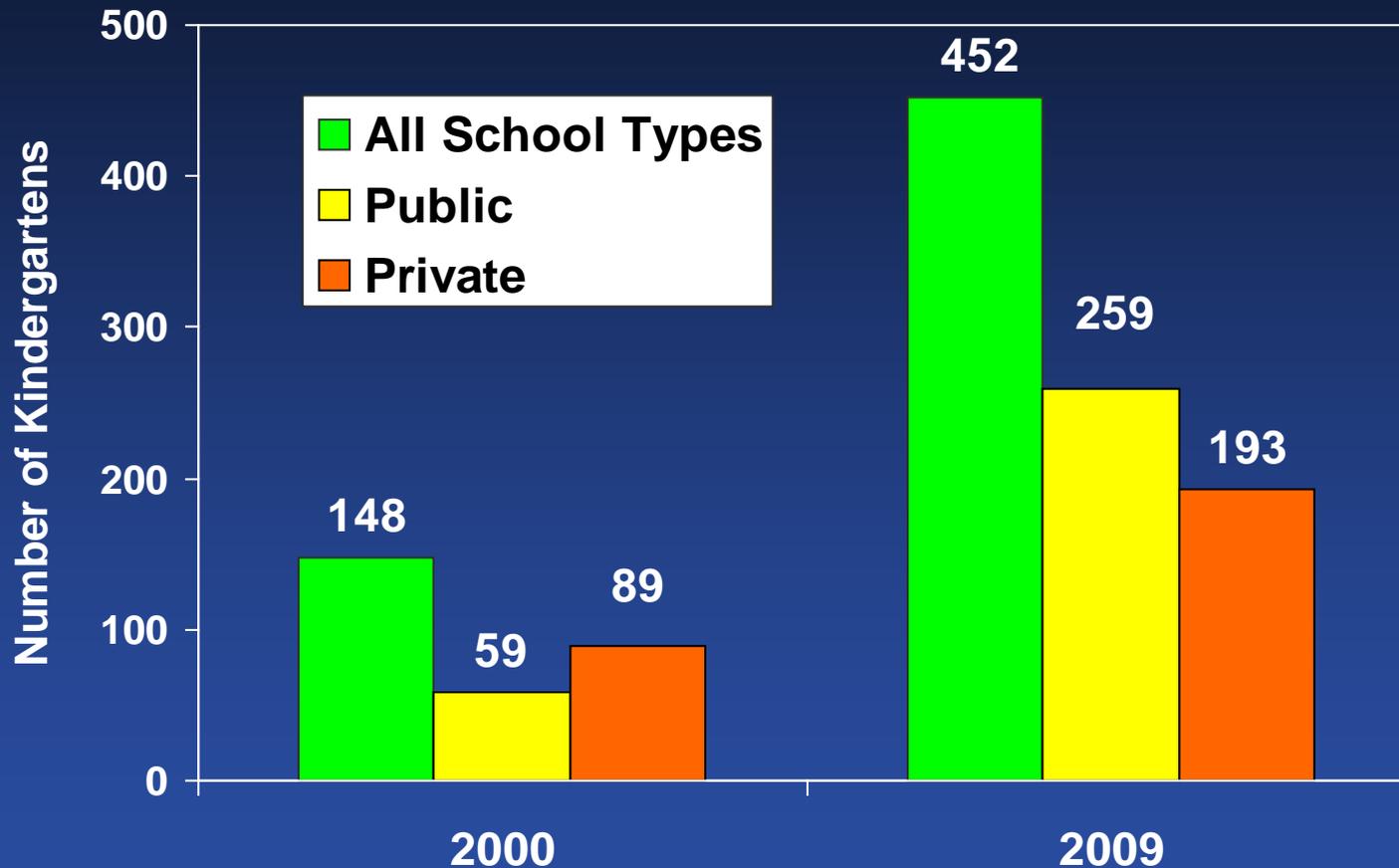
- Reasons for the geographic clustering of exemptions are not fully understood, but may include:
 - characteristics of the local population (e.g., cultural issues, socioeconomic status, or educational level),
 - the beliefs of local health care providers and opinion leaders, and local media coverage.
- The factors known to be associated with exemption rates are
 - heterogeneity in school policies and
 - the beliefs of school personnel who are responsible for compliance with the immunization requirements.²⁹

Number and Percentage of CA Kindergartens* with $\geq 10\%$ PBEs, 2000 vs. 2009



*Kindergarten Enrollment ≥ 10 students

Number and Percentage of CA Kindergartens* with $\geq 10\%$ PBEs, 2000 vs. 2009



*Kindergarten Enrollment ≥ 10 students

PBE Study California 2009

- **Two-fold Purpose**
 - To evaluate vaccination status of kindergarten PBEs
 - Determine whether 'high' PBE schools were different from 'standard' PBE schools
- **Method**
 - Collected and analyzed PBE records from:
 - a **Random sample** of kindergartens and
 - the **Top 50 PBE** kindergartens

Comparison of PBE Rates, School Size, and % Private in Random Sample and Top 50 PBE Kindergartens, California 2009

Group	Total Students	Personal Beliefs Exemptions		Average School Size	% Private Schools
	No.	No.	%	No.	%
Random Sample	15,471	247	1.9 0.22	70	29
Top 50 PBE Sample	3,489	1,117	31.8 1.55	60	22

Fall Kindergarten Assessment 2010 Data

School Type	Number of Schools* with > 10% PBE	Total Schools with Enrollment \geq 10	Percent of Schools with > 10% PBE rate
Public	321	5507	6%
Private	218	1656	13%
Total	539	7163	8%
*Schools with enrollment \geq 10			

Survey Results

Questions	Random (%)	Top 50 (%)	P-value
School informs parent of exemptor that child will be excluded if there's a vaccine preventable disease outbreak.	84.5	66.0	< .01
Parents given option of signing PBE statement as short-term alternative while they seek current records to complete student's required immunizations	7.8	30.0	< .0001

Conclusions

- 'High' PBE schools may further potentiate undervaccination by encouraging selection of the PBE option by parents lacking documentation or with underimmunized children at kindergarten enrollment
- As PBEs rates continue to increase, public health officials will need to pay particular attention to 'high' PBE schools as they are sites of concentrated vaccine-preventable disease risk

PBEs: Key Points

- The complexity of procedures for obtaining exemption has been shown to be inversely associated with rates of exemption.
- Moreover, between 1991 and 2004, the mean annual incidence of pertussis was almost twice as high in states with administrative procedures that made it easy to obtain exemptions as in states that made it difficult.