**BACKGROUND**

- Marin County is an affluent county in the San Francisco Bay Area with a population of approximately 356,000 people.
- The rate of kindergarten students seeking Personal Belief Exemptions (PBEs) varies from one or more required school immunizations, in Marin County is nearly four times the California average.
- Marin County PBEs increased from 2.7% in 2002 to 7.8% in 2012.
- In 2014, California implemented legislation requiring parental conversations with medical professionals before receiving PBEs.
- Marin-specific reasons that parents request PBEs were not well known.

**PURPOSE**

- Better understand vaccine decision-making in Marin to equip providers for conversations required under the new law.

**Specific Aims**

- Identify differences between parents of kindergartners with and without PBEs.
- Increase knowledge about local PBE decision-making: - Vaccination decisions - Leading reasons for PBEs
- Share results with providers, schools and public health professionals.

**METHODS**

Survey Development and Data Collection

- Developed Marin Kindergarten Vaccination Survey content using existing questionnaires and expert knowledge.
- Pilot tested with 10 staff members for clarity and length.
- Translated finalized survey into Spanish.
- Topics for all survey respondents included:
  - Child’s exemption status
  - Demographic information
  - Sources of vaccine information
- Topics for parents with PBEs:
  - Vaccine-specific coverage of their kindergartners
  - Reasons for requesting a PBE

In Fall 2013, Immunization Coordinators of 39 public and private schools in Marin County emailed the Survey Monkey link to 2,271 kindergarten parents.

Data Analysis

- Stratified study population by school entry immunization status.
- Compared characteristics among parents of kindergartners with and without PBEs using Pearson’s chi-squared tests, Fisher’s exact tests, and Student’s t test.
- Demographic information Sources of vaccine information
- Amongs parents of kindergartners with PBEs:
  - Calculated proportions to describe child’s vaccination coverage
  - Determined means for common reasons for requesting PBEs

All data were analyzed with Stata version 12.

**REFERENCES**

1. 2012-2013 Kindergarten Immunization Assessment Results, California Department of Public Health, Immunization Branch

**CONCLUSIONS**

- Most parents who request PBEs choose some, but not all, required vaccines for their children.
- No significant differences were found in parent age, education or vaccination history between those with and without PBEs.
- Parents requesting PBEs are: less likely to receive vaccine information from complementary and alternative providers and health-related websites, less likely to receive vaccine information from physicians and other healthcare providers and family members.
- Various reasons parents request PBEs include: - Safety concerns - Lack of perceived risk - Lack of trust.

**LIMITATIONS**

- Due to the response rate, findings may not be representative of all kindergarten parents in Marin.
- Reasons that kindergartners who were not up to date did not have exemptions were not explored in the survey, and therefore unexplained.

**IMPLICATIONS**

- It should be recognized that only a minority of parents with PBEs seem categorically opposed to vaccines.
- Providers can use findings in vaccine-related conversations required under the new law.
- Anticipate themes of parents’ concerns.
- Recognize the diversity of vaccine decision-making.

**ACKNOWLEDGMENTS**

We would like to thank Marin School Immunization Coordinators and the Communicable Disease Control and Prevention Team of Marin County Department of Health and Human Services for their collaboration and contributions.

This study was supported in part by an appointment to the Applied Biostatistics Fellowship Program administered by the Council of State and Territorial Epidemiologists (CSTE) and funded by the Centers for Disease Control and Prevention (CDC) Cooperative Agreement Number 5U58MM02414-5.

For more information: carver@marincounty.org (415) 473-2574