



Vaccine Behaviors and Lessons Learned from a Survey of Spanish-Speaking Parents of Kindergartners – Marin County, California, 2016

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Objectives

- Describe vaccination beliefs and behaviors among Spanish-speaking parents of Kindergartners
- Describe one method to effectively reach Spanish-speaking parents of elementary-aged children
- Explain how to conduct a community-wide survey of parent's vaccine behaviors and beliefs

Marin County, California

Population 258,349

Percent Spanish-speaking adults (18+) 15%

Percent with a high school degree or higher 93%

19 school districts in Marin



Marin County, a vaccine hesitant community

- Highest PBE rate of Bay Area counties
- 18th highest PBE rate out of California's 58 counties

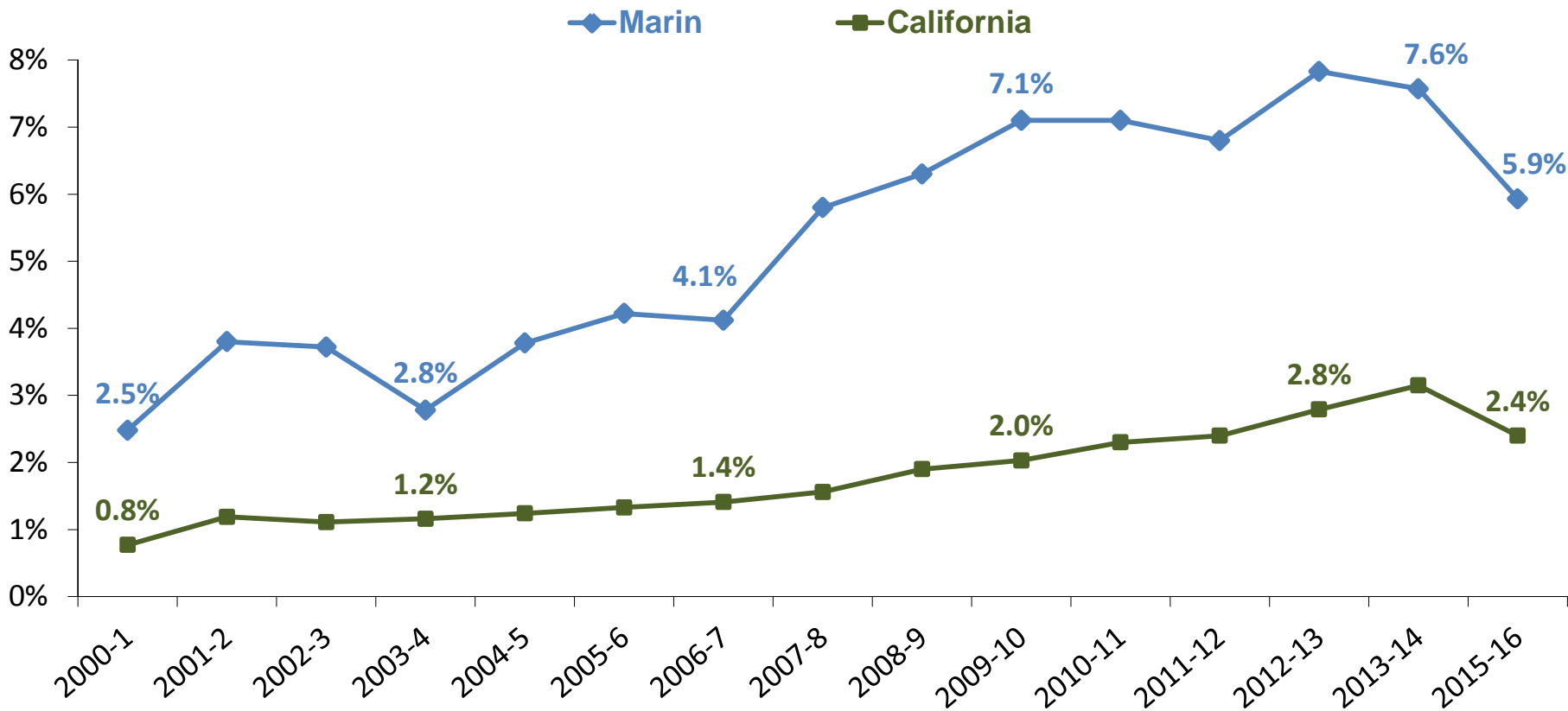


Immunization Status Types

- Up-to-Date
- Personal Belief Exemption
- Medical Exemption
- Conditional Entrant

PBE Rates in Marin County

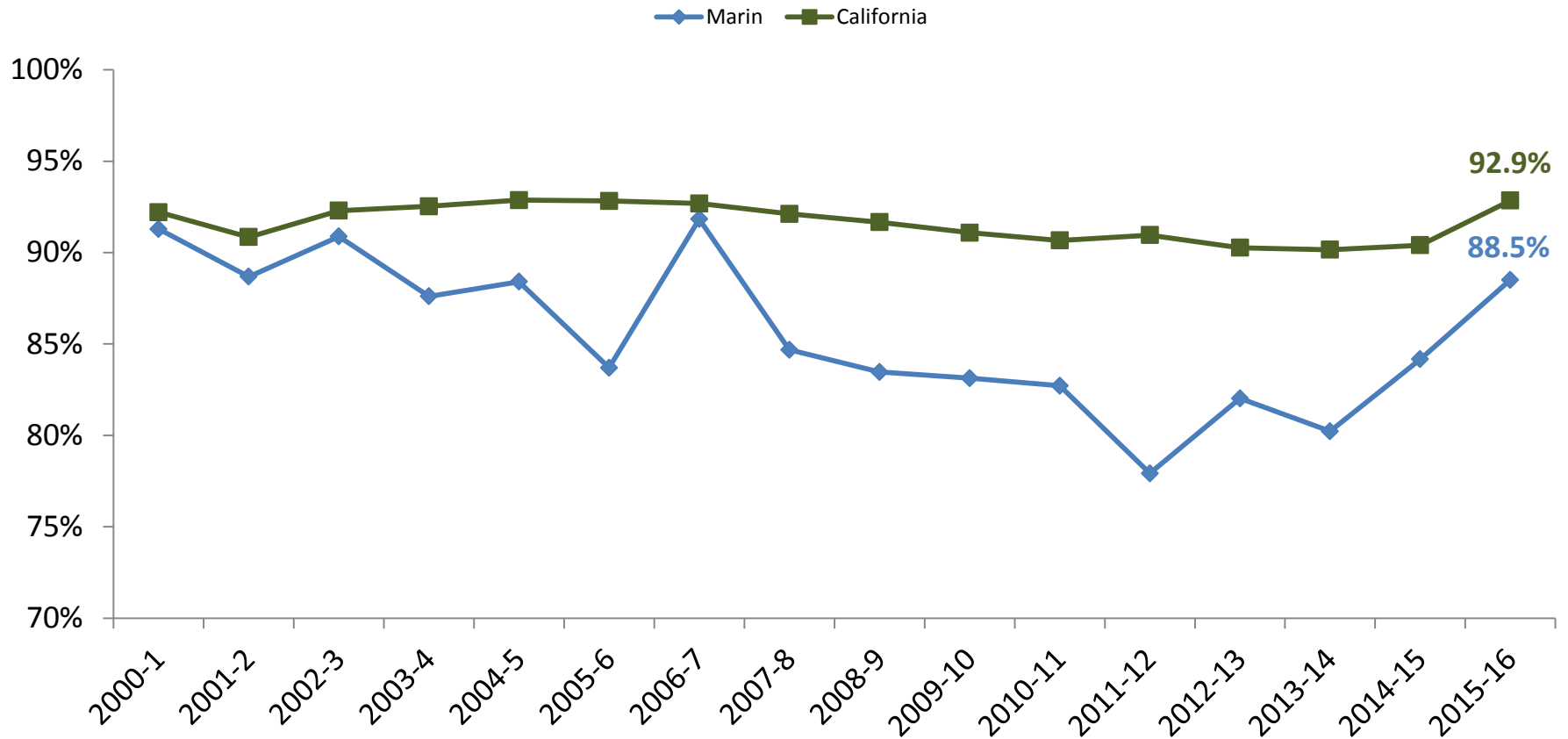
Personal Belief Exemption (PBE) Rates among Kindergarten Students
Marin County v. California, School Years 2000-01 through 2015-16



Source: Kindergarten Summary Reports, Immunization Branch, CDPH

Vaccination Rates in Marin County

Kindergarten Students Up to Date with All Required Immunizations
Marin County vs. California, School Years 2000-01 through 2015-16



Source: Kindergarten Summary Reports, Immunization Branch, CDPH

Survey Background

Fall 2013

First Vaccine Decision Making Survey



Jan 2014

AB 2109 goes into
effect in California

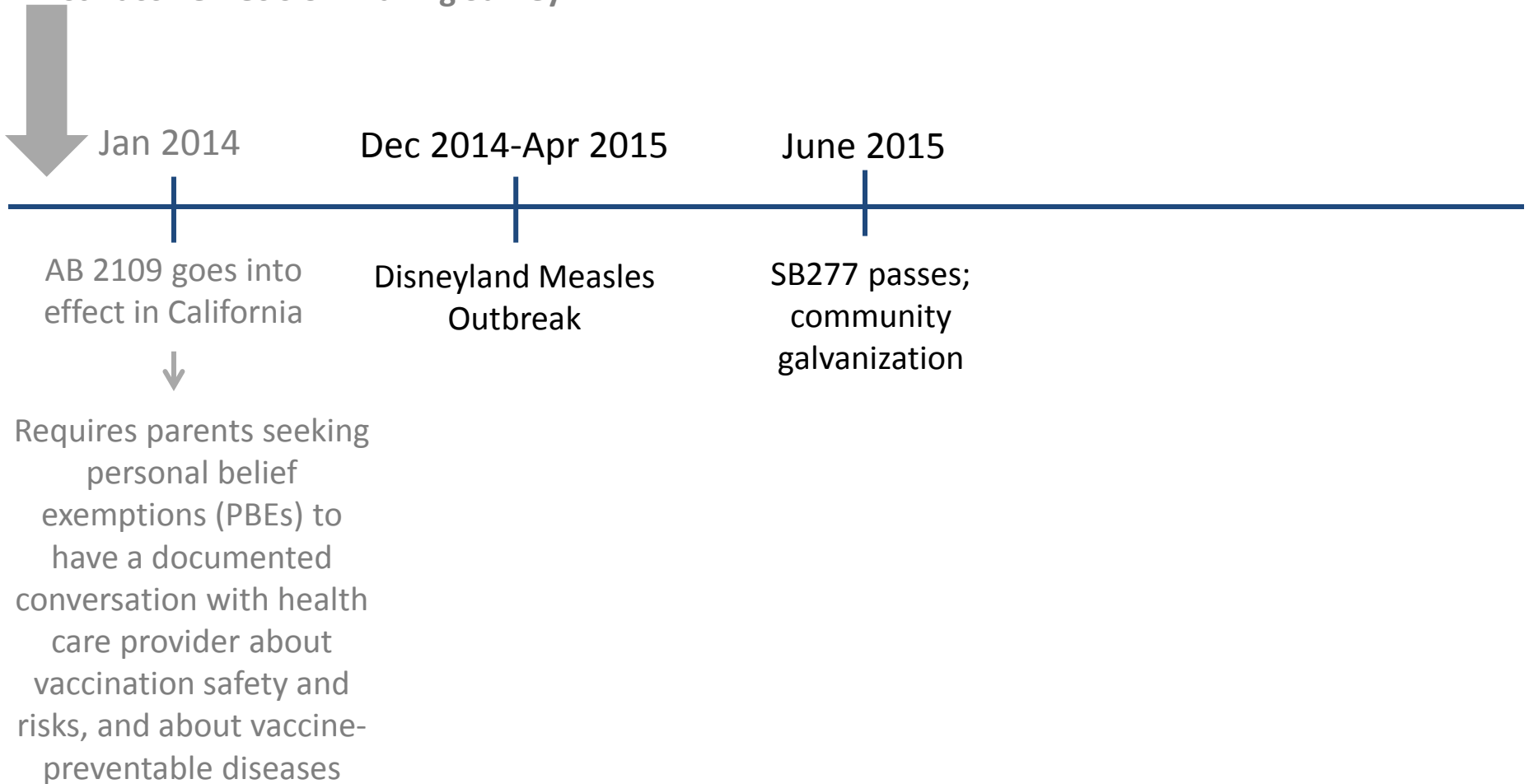


Requires parents seeking
personal belief
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Survey Background

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First Vaccine Decision Making Survey

2016

Follow-up Vaccine Decision Making Survey

Jan 2014

Dec 2014-Apr 2015

June 2015

January 2016

AB 2109 goes into effect in California

Disneyland Measles Outbreak

SB277 passes; community galvanization

SB277 goes into effect in California

Requires parents seeking personal belief exemptions (PBEs) to have a documented conversation with health care provider about vaccination safety and risks, and about vaccine-preventable diseases

New PBEs no longer permitted

Study Purpose

Determine if vaccination beliefs and behaviors differ between Spanish and English-speaking parents of kindergartners

Methods: Survey development and dissemination

- Developed survey with input from local stakeholders
- Disseminated in English and Spanish
- Partnered with school nurses and health liaisons, who:
 - E-mailed a Survey Monkey link and/or
 - Distributed paper copies of the survey
- 1,000 paper surveys distributed

Methods: Survey content

- Demographic information
- Sources of immunization information
- For up-to-date, if delayed in the past and why
- Current year influenza vaccination status
- SB277 attitudes and beliefs

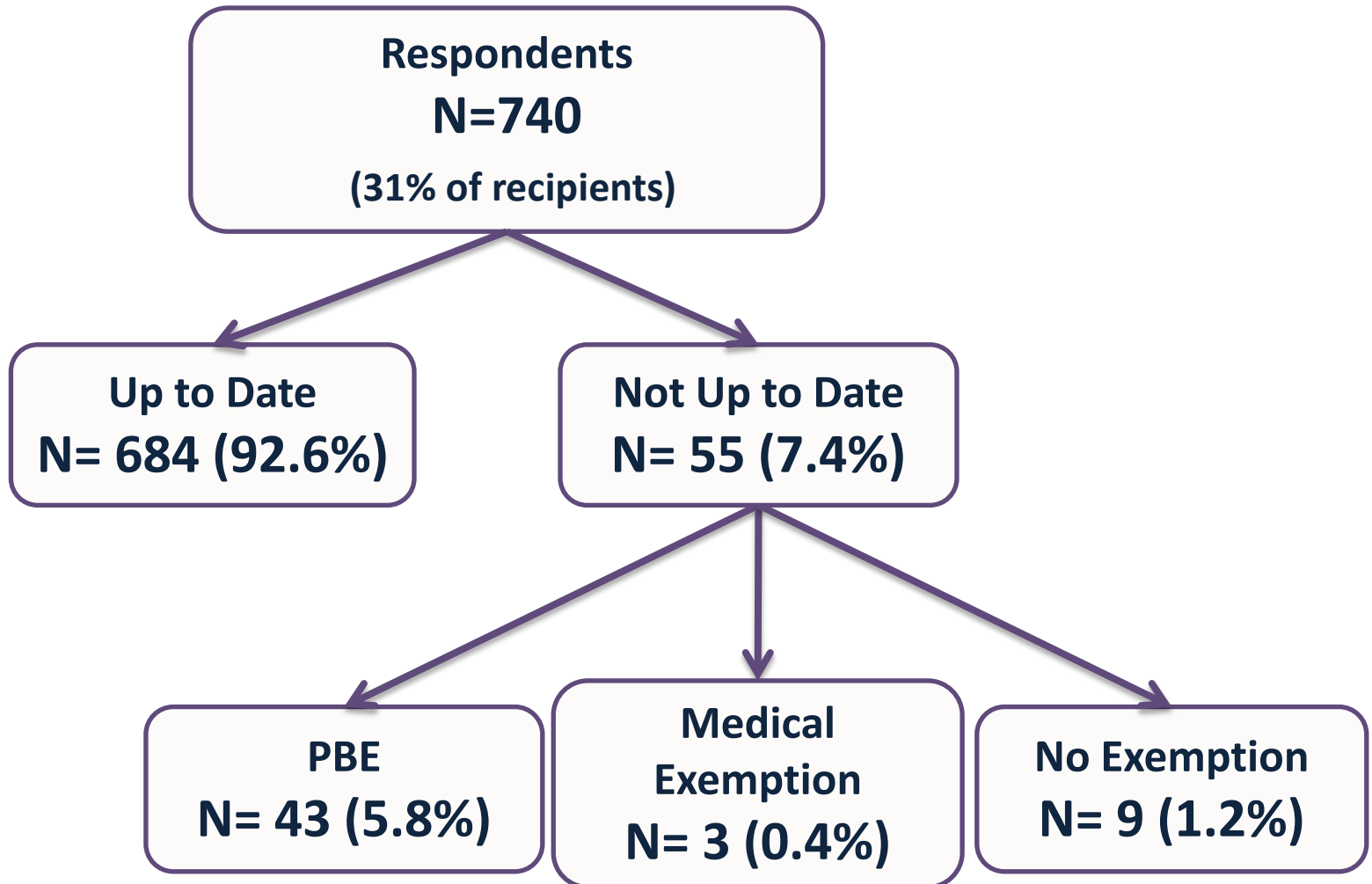
Methods: Data Analysis

- Calculated aggregate proportions for all responses
- Compared demographic information between 2013 and 2016 survey respondents
- Stratified by survey language
- Compared Spanish and English-speaking responses using Pearson's chi-squared tests and Fisher's exact tests:
 - Sources of vaccine information
 - Vaccine behavior
 - SB277 support

Methods: Paper Survey Quality

- Entered all paper surveys into Survey Monkey database
- Followed a set of rules for discordant responses and violated skip patterns
- Two individuals involved in each entry:
 - Primary survey entry
 - Survey entry check

Results: Study Population



Results: Demographic Variations between Vaccine Decision Making Surveys

Demographic Characteristic	2013 Vaccine Decision Making Survey Mean (SD) Proportion	2016 Vaccine Decision Making Survey Mean (SD) Proportion
Parental Age	40.9 (5.1)	39.5 (5.7)
Proportion Female	81%	81%
Bachelor's Degree or Higher	90%	76%
Spanish Language Survey Completed	1%	17%

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Results: Study Population

		Survey Language		
		English	Spanish	Total
Survey Completion Method	Electronic	516	5	521 (70%)
	Paper	96	123	219 (30%)
Total		612 (83%)	128 (17%)	740

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Results: Sources of Vaccination Information

Source	Spanish-Speaking (N=128)	English-Speaking (N=612)	p-value
Physician or other healthcare provider	84%	91%	0.03
Complementary and alternative medical providers	12%	8%	0.16
Family	23%	15%	0.03
Health-related website	0%	32%	<0.001
Social media website	2%	4%	0.41
Friends	6%	11%	0.19
Complementary medicine website	1%	4%	0.07
Books about Vaccinations	7%	10%	0.50
News sources	5%	19%	<0.001

Results: Personal Belief Exemptions by Survey Language

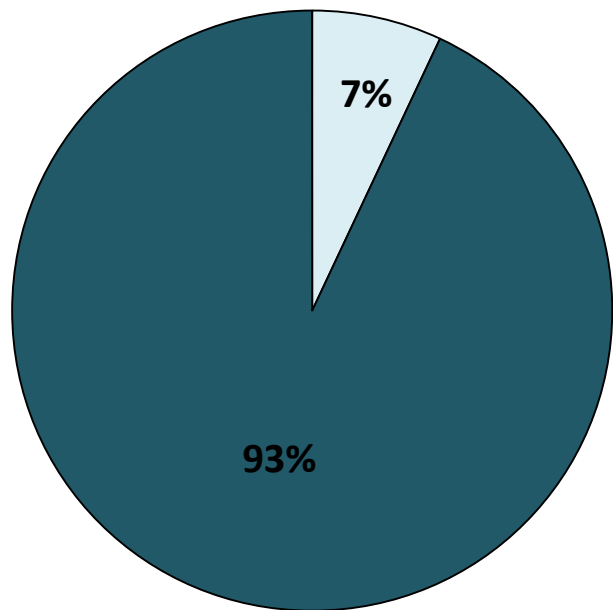
	Spanish-Speaking (N=128)	English-Speaking (N=612)
Proportion with PBEs	0%	7%

Results: Past Vaccine Delay by Survey Language

Proportion Reporting a Past Vaccination Delay by Survey Language
Marin County Vaccine Decision Making Survey, 2016

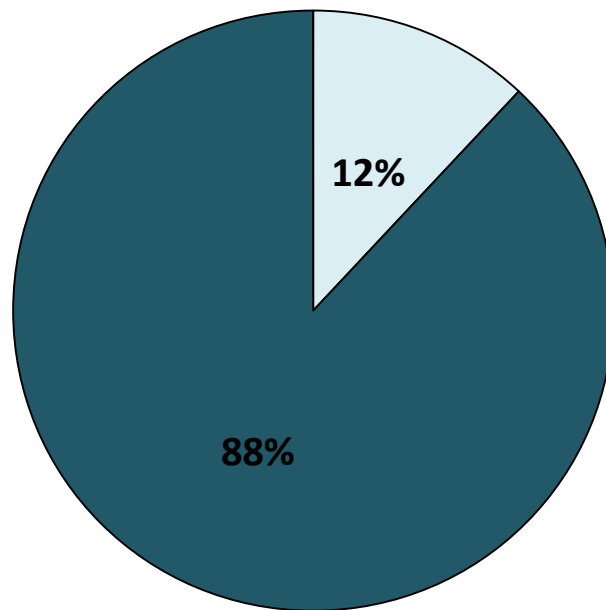
p=0.10

Spanish-Speaking Respondents
N=106 (83%)



Yes
No

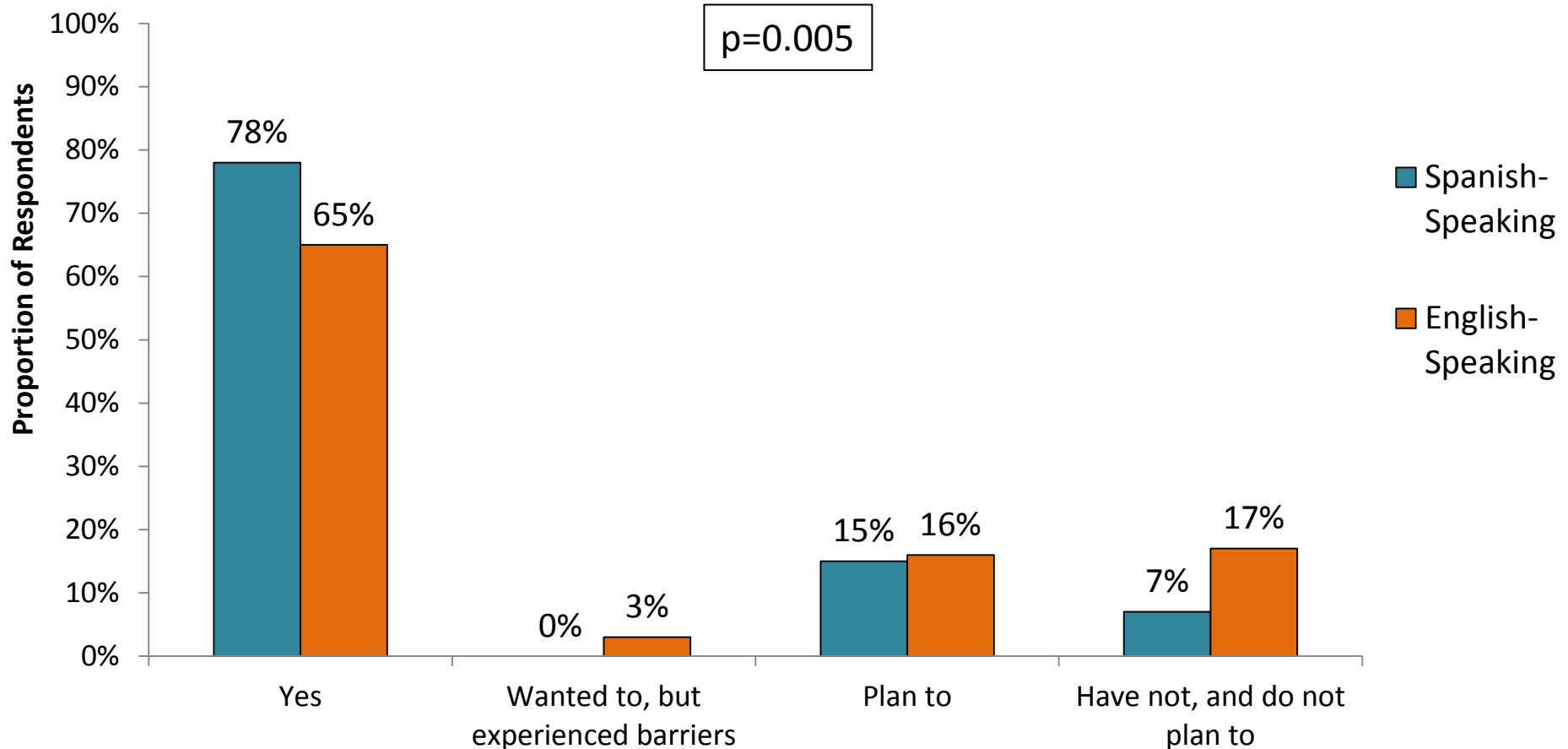
English-Speaking Respondents
N=525 (86%)



Yes
No

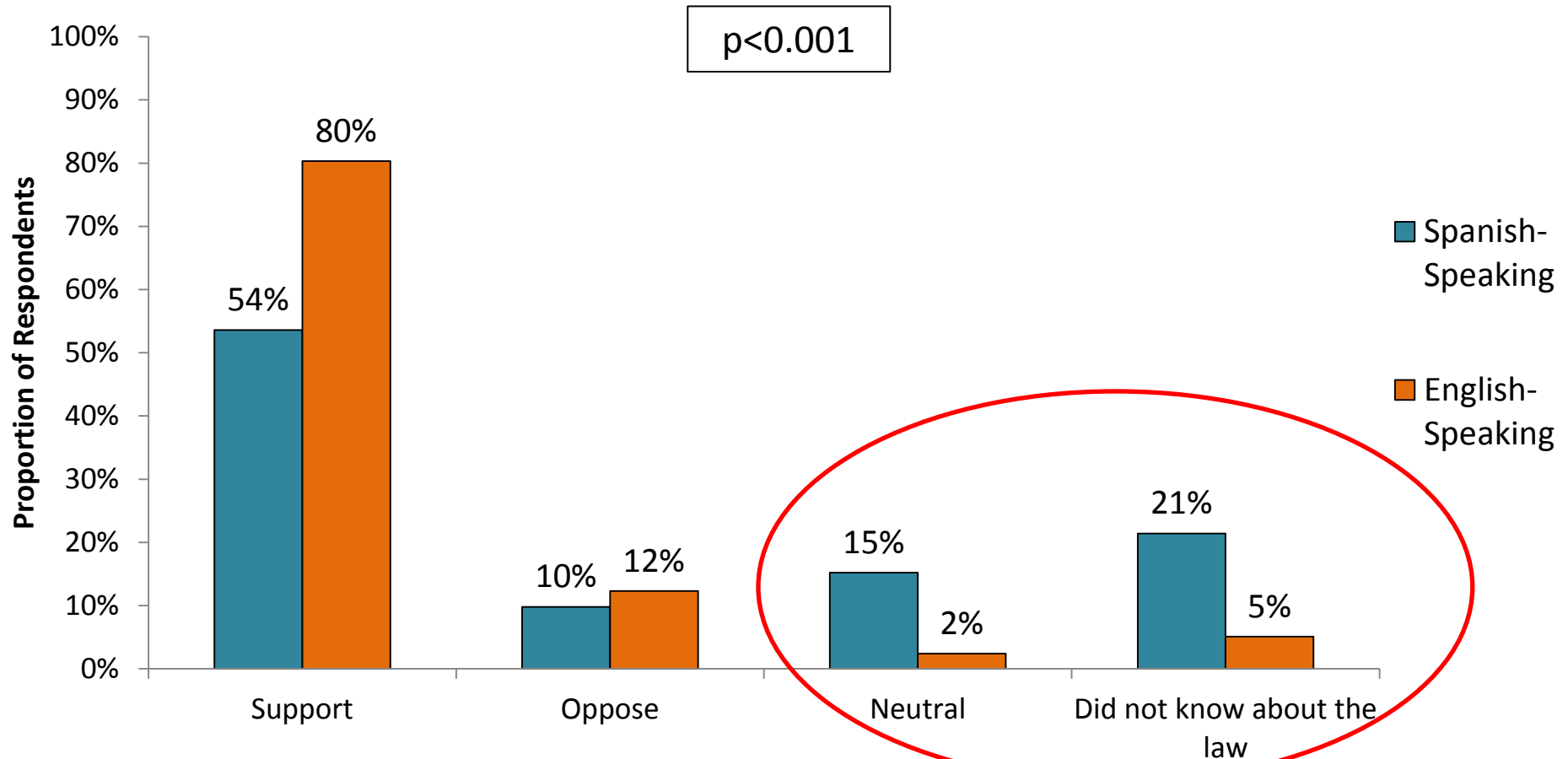
Results: Vaccine Behavior by Survey Language

Influenza Vaccination Status by Survey Language – Marin County Vaccine Decision Making Survey, 2016 n=681 (92%)



Results: SB277 Support by Survey Language

Level of Support for SB277 by Survey Language
Marin County Vaccine Decision Making Survey, 2016
n=659 (89%)



Results: Spanish Paper Survey

- Some issues indicated that some of the survey may have been unclear
 - Presence of violated skip patterns
 - Discordant responses
 - Free text answers to required questions

P2. ¿Ha decidido usted no aplicar o retrasar las vacunas para ingresar a la escuela de su niño de kínder? Éstas son las de varicela, DTaP (difteria, tétanos, tos ferina), MMR (sarampión, paperas, rubéola), poliomielitis y hepatitis B.

Sí, decidí no aplicar y/o retrasar las vacunas para ingresar a la escuela (incluyendo exenciones médicas)

No, mi hijo está al día VAYA A LA P8.

P3. ¿Le han otorgado una excusa para no aplicar las vacunas?

Sí, una excusa por creencias personales

Sí, una excusa médica VAYA A LA P12.

No tengo excusa

P4. ¿Cuáles vacunas o cuál serie de vacunas decidió usted no aplicar o retrasar para su niño de kínder? Por favor marque todas las que apliquen.

	Opté por no aplicar	Opté por retrasar	Está al día
Varicela	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
DTaP (difteria, tétanos, tos ferina)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MMR (sarampión, paperas, rubéola)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Polio	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hepatitis B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Conclusions

- Majority of Spanish-speaking parents completed paper surveys
- Many Spanish-speaking parents seek vaccination information from friends
- High level of reported vaccination among Spanish-speaking parents of kindergartners
- Spanish-speaking respondents were more likely than English-speaking respondents to report:
 - Neutral feelings towards SB277
 - Not knowing about SB277

Lessons Learned

- Paper survey distribution helps reach the Spanish-speaking community
- Barriers to school-based survey release
- Literacy level for Spanish-speaking survey too high
 - Pilot in Spanish-speaking community
 - Develop a team to vet Spanish surveys and communications
 - Conduct focus groups instead of surveys

Applications

- Paper correspondence is used to promote school-based influenza clinics
- Health liaisons are very involved in school-based influenza clinic planning and execution
- School-based health liaisons may be helpful in improving other types of health communication

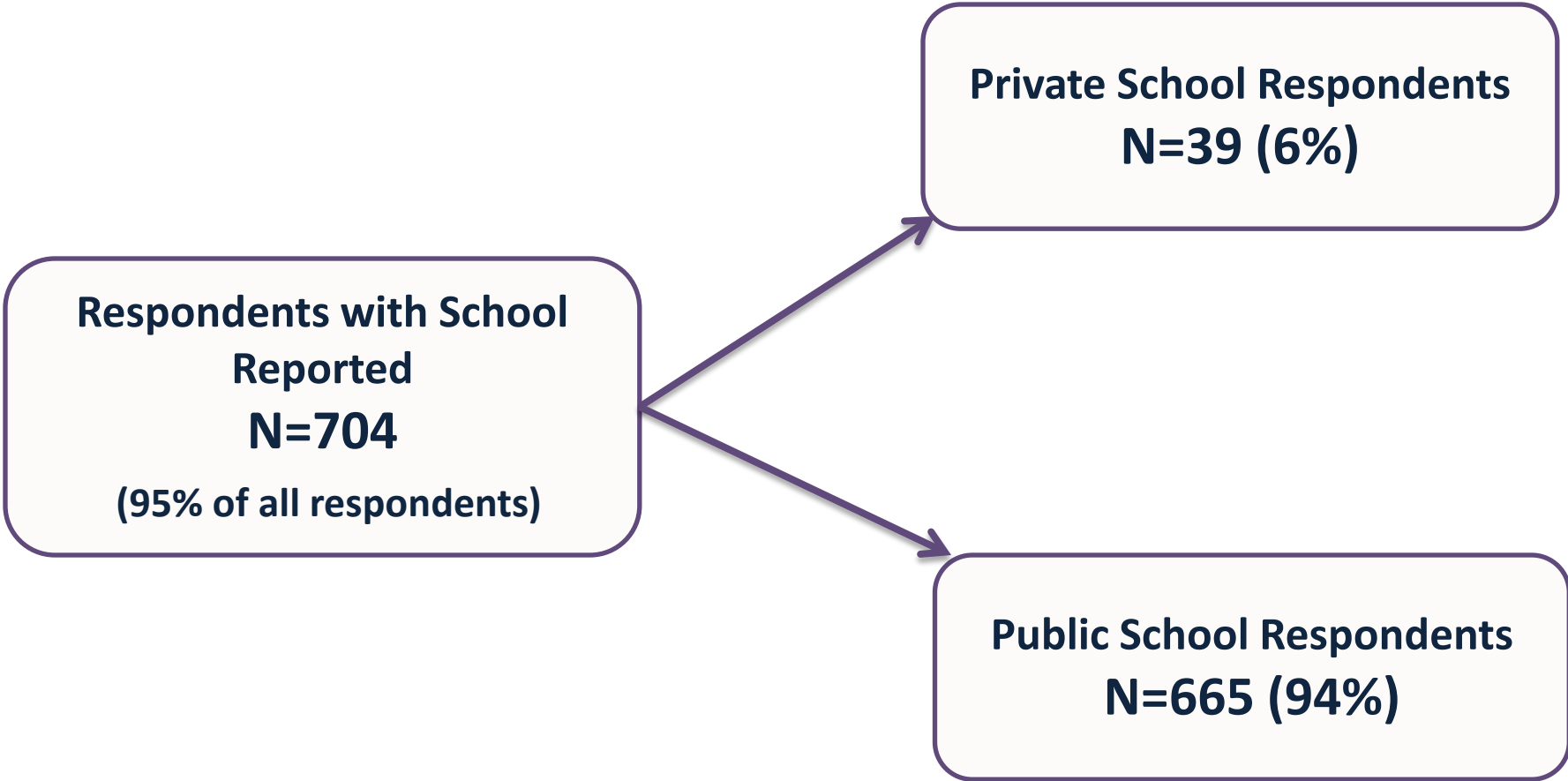
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Thank you!

Supplemental: Respondents by School Type

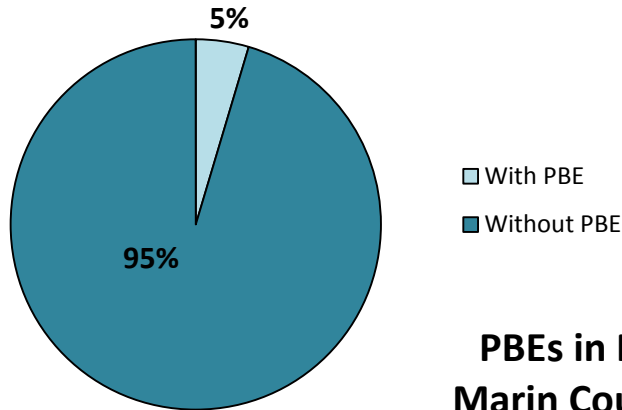


Supplemental: All Survey Content

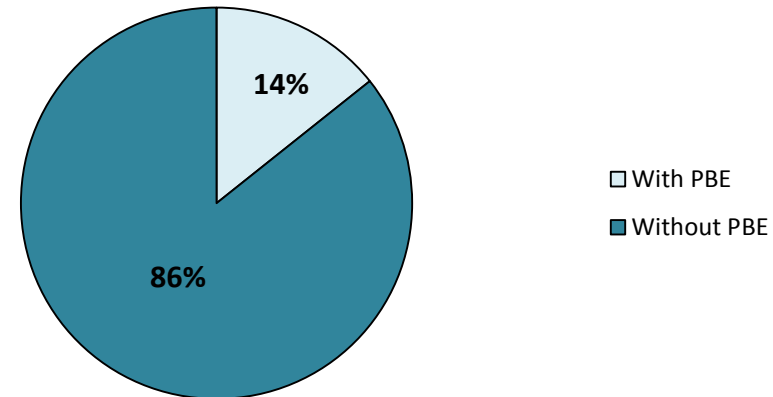
- Demographic information
- Status of meeting mandatory school entry vaccines
- For opt out or delay
 - Reasons for opting out or delaying
 - Reaction if SB277 had gone into effect in the 2015-16 year
- For up-to-date
 - Reasons for vaccination
 - If delayed in the past and why
- Current year influenza vaccination status
- Sources of immunization information
- Influence of Measles outbreak on MMR vaccination
- SB277 attitudes and beliefs

Supplemental: Immunity Varies by Area and School Type

**PBEs in Public Schools
Non-West Marin - 2015-2016
2,607 Students**



**PBEs in Public Schools
West Marin - 2015-2016
154 Students**



**PBEs in Private Schools
Marin County - 2015-2016
507 Students**

