

# A Survey of California Registered Nurses' Vaccine Attitudes and Practices

## BETTY IRENE MOORE SCHOOL OF NURSING

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Academic Symposium

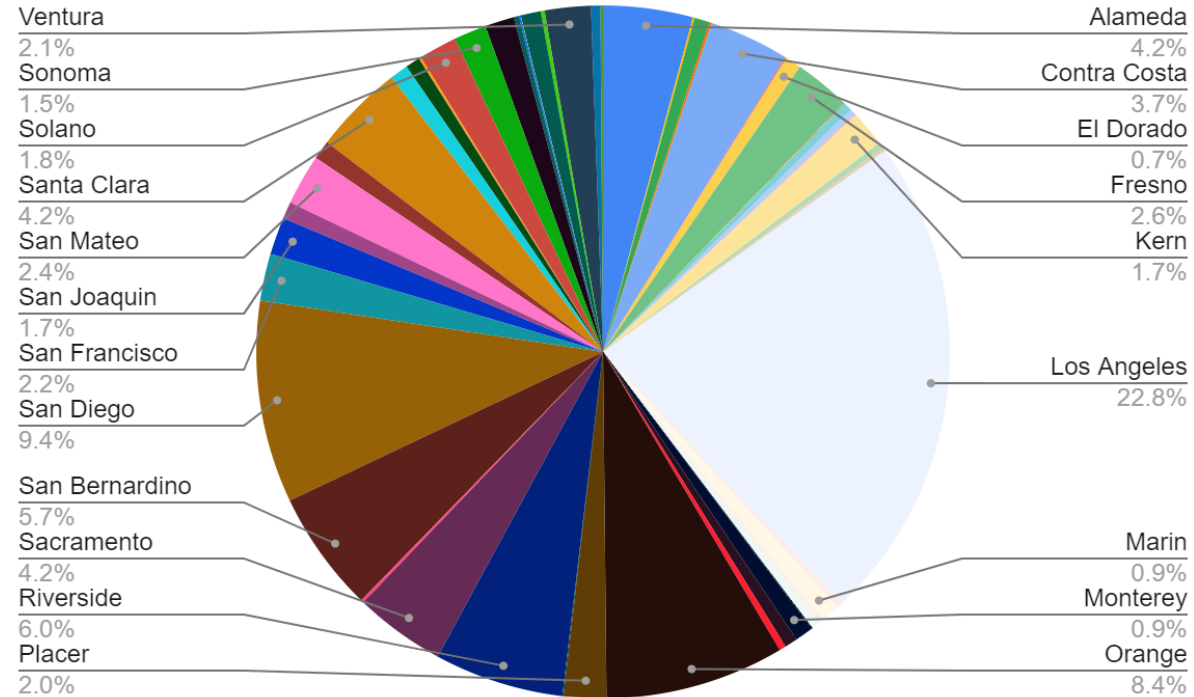


# Background

- Vaccine hesitancy among healthcare workers and nurses was a public health issue prior to the COVID-19 pandemic.
  - Only 80.6% of healthcare workers vaccinated against seasonal influenza for 2019-2020 season
  - All 4 nurses at a Kansas county health department refused to administer the COVID-19 vaccines
- Thesis project aims:
  - Assess general vaccine hesitancy in California (CA) registered nurses (RNs).
  - Assess COVID-19 vaccine intent in California RNs.

# Survey Sample

- CA RNs
  - Not recently surveyed
  - Racially/ethnically diverse
  - Unique COVID-19 experience
  
- Current permanent CA RN license with CA address
  - N = 373,474 as of 2/14/20
  - Stratified by county
  - Randomly selected



# Methods


- VAX scale
  - 12 items
  - Measures general vaccine hesitancy on scale of 1-6
  - Validated in West Coast adults
  - Confirmed in UK adults
- Additional Questions
  - Demographics
  - Commonly held vaccine hesitancy beliefs
  - Flu vaccination for HCWs
  - Past and intended vaccine practice
    - For self and child(ren) in household
    - Hypotheticals for ebola and COVID-19 vaccination
  - COVID-19 experiences and attitudes

# Survey Implementation

- Available online and in printed form
- 5 points of mail contact
- 3 survey waves initiated in August and September 2020
- Total 603 RNs mailed

**CALIFORNIA REGISTERED NURSES'  
VACCINATION OPINIONS AND PRACTICES**

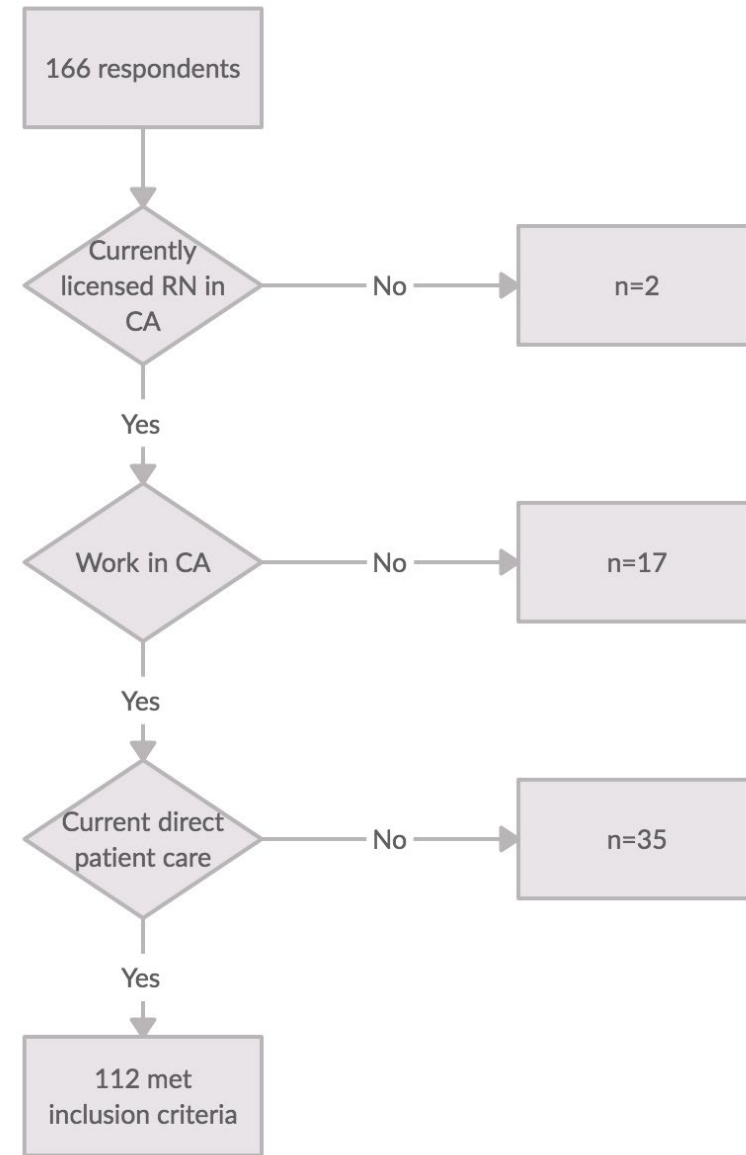
A statewide survey of registered nurses' knowledge, attitudes, beliefs, and practices on vaccination and how their COVID-19 experiences may have affected these views



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# Survey Responses

- 166 respondents (27.5%)
  - Comparable to other studies that also used the CA Board of Registered Nursing database
- 112 respondents met 3 inclusion criteria
- Final count for analysis = 111 RNs
  - 1 respondent excluded for not completing significant portions of the survey



# Results

- Mean VAX score = 3.01 (n = 109; SD = 1.11;  $\alpha = .91$ )
  - Previous findings from West Coast adults = mean VAX scores of 2.77 and 3.20
- 29.7% of respondents reported unlikely COVID-19 vaccine intent
- RNs unlikely to receive COVID-19 vaccine have higher mean VAX score (4.02) than those likely to receive COVID-19 vaccine (2.78)

## Results cont.

- General vaccine hesitancy was significantly associated with lower COVID-19 vaccine intent after controlling for gender, presence of a chronic condition, RN years worked, workplace, child or elderly household member ( $R = -0.64$ ;  $P < .0001$ )
- Strong associations between COVID-19 vaccine intent and survey items involving trust in authorities and vaccine safety and preference for "natural" exposure to infectious disease
  - 54.1% of respondents agreed "natural" immunity is longer lasting than immunity from vaccination
  - 38.7% disagreed that authorities could be trusted to ensure new vaccine safety



# Limitations

- General survey issues
  - Direct patient care requirement excluded 21% of respondents
  - Response bias
    - Expectations of healthcare workers/RNs
    - Vaccine hesitant people have been shown to have an outsized presence online and be more likely to engage on the topic of vaccines
- COVID-19 pandemic
  - Competing priorities for RNs
    - Low response rate among RNs with <18-year-olds in household
- USPS disruptions
  - Budget cuts
  - Historic wildfires
  - Increased vote-by-mail traffic

# Conclusion

- CA RNs are just as vaccine hesitant as other U.S. West Coast adults.
- General vaccine hesitancy was significantly associated with COVID-19 vaccine intent.
- Public health officials need to:
  - Disseminate data on durability of COVID-19 vaccine immunity and whether booster shots will be required
  - Directly address how COVID-19 vaccine development was uniquely expedited without taking safety shortcuts