A photograph of a glass of Guinness beer with a large amount of spilled pills on the surface. The glass is partially filled with white, yellow, and orange pills. The spilled pills are scattered across the white surface in front of the glass. The Guinness logo is visible on the glass.

# **Impact of experiential and didactic education on preparing California pharmacy graduates to combat the opioid crisis**

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# Introduction

- Opioid addiction is an ongoing problem in our nation
  - Deaths quadrupling since 1999
- Must identify prevention and solution strategies
- Pharmacists play an essential role in the opioid epidemic
- Goal: analyze the effectiveness of didactic learning, IPPE\*, and APPE\*\* in preparing individuals to combat the opioid epidemic.

\*IPPE = Introductory Pharmacy Practice Experiences

\*\*APPE = Advanced Pharmacy Practice Experiences

## Objective

To analyze the strengths and weaknesses in didactic teaching and pharmacy practice experience to gauge the readiness of 2020 California pharmacy graduates in combating the opioid crisis

# Outcomes

## Primary Outcome

- Level of preparedness of pharmacy school graduates to combat the opioid crisis

## Secondary Outcomes

- Comparison of
  - Relative preparedness of pharmacy school graduates to combat opioid crisis from 3-year versus 4-year programs
  - Ability to calculate MME, consult patients about opioids and Narcan, identify false prescriptions, navigate CURES
  - Which activities (didactic education, IPPE, APPE, other) graduates felt prepared them the most

# Methodology

- Anonymous web-based survey (Google Forms) delivered via email to assess readiness of new pharmacy graduates from the class of 2020 in combating the opioid crisis
- Open-ended and Likert-scale questions
- Data was collected from June - July 2020 and analyzed with SPSS
- Mann-Whitney U test was used to identify the differences in level of preparedness of pharmacy school programs between 3-year and 4-year programs
- Statistical significance was set to 0.05

# Results

Figure 1. Overall Preparedness in New Graduates

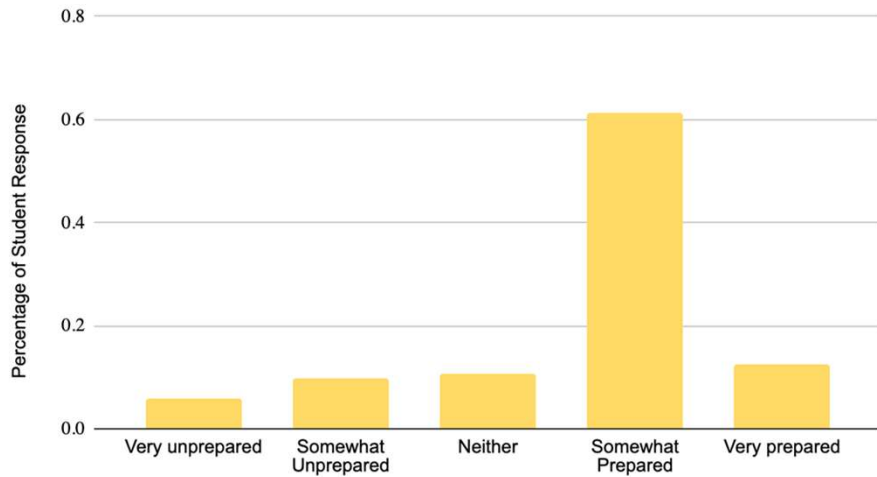
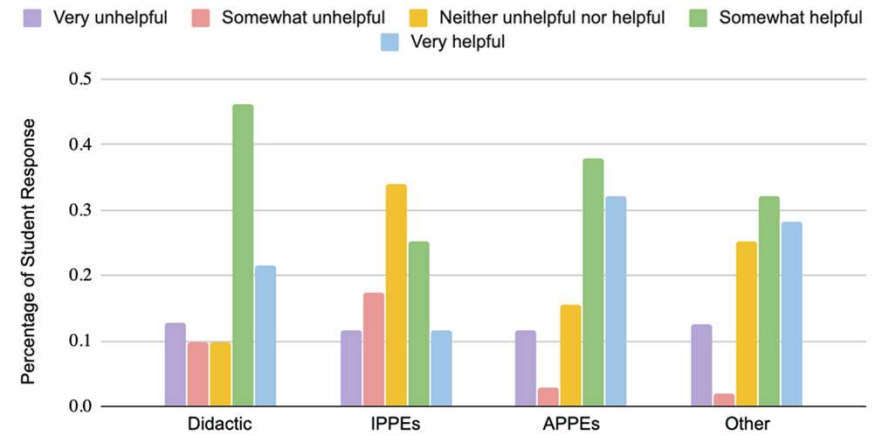


Figure 2. Comparison of Largest Contributors to Opioid Preparedness



# Results (cont.)

Figure 3. Which Activity Do You Believe Prepared You the Most to Combat the Opioid Crisis?

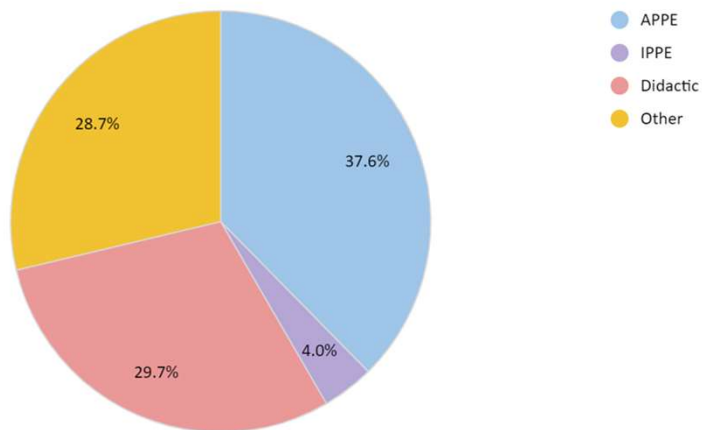


Figure 4. Why Was APPE the Most Impactful Activity in Preparing Students in Combating the Opioid Crisis?

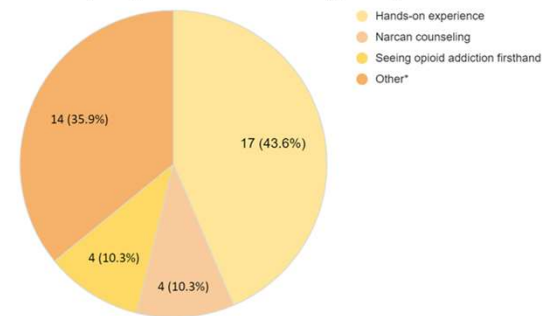
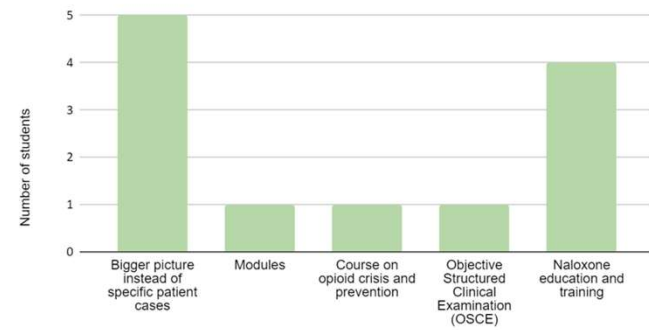
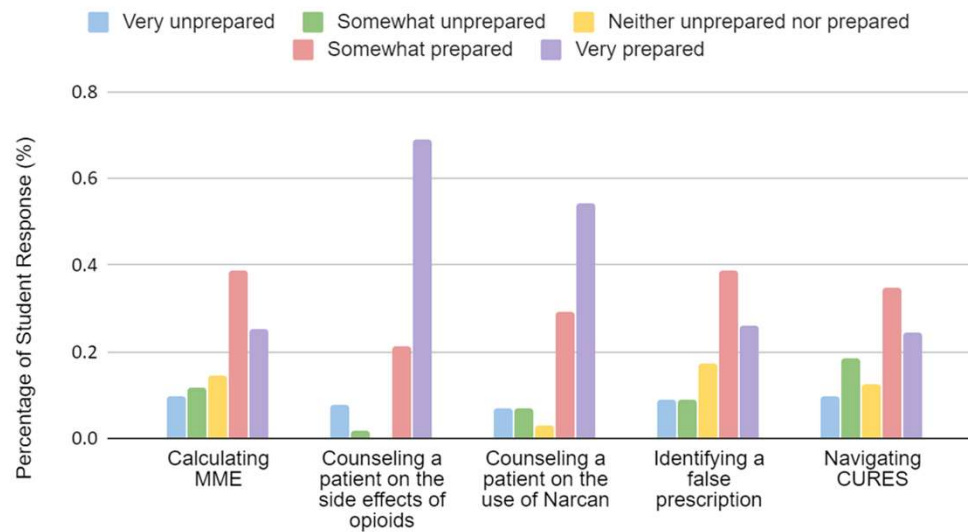


Figure 5. Why Did Didactics Help Prepare Students Better in Combating the Opioid Crisis?



# Results (cont.)

Figure 6. Distribution of Preparedness Across Opioid Safety Measures



# Subgroup Analysis (3rd vs 4th years)

Figure 7. Comparison of Overall Preparedness Between 3 Year and 4 Year Students

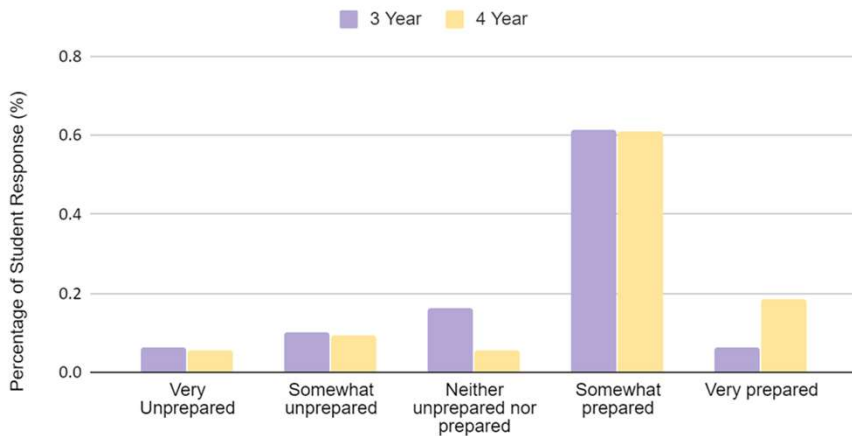
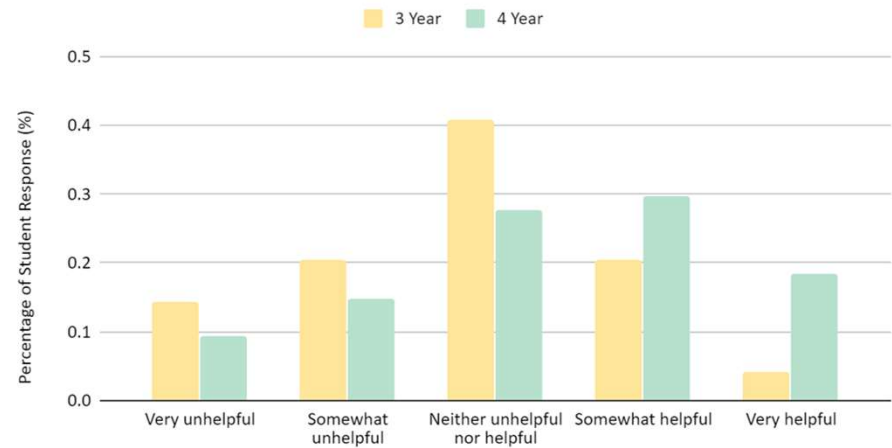


Figure 8. Comparison of IPPE Preparedness on Opioid Safety Between 3 Year and 4 Year Schools



# Conclusion

- To further advance how pharmacists can deal with the opioid crisis by improving education
- Suggestions to improve opioid crisis preparedness:
  - Adding a required pain management clinic or opioid-related rotation to APPE curriculum
  - Implementing more instruction on the use of CURES
    - Lectures, hands-on training, add to the IPPE curriculum
- Generalizability limited by small sample size and recall bias
- Suggestions to improve study:
  - Follow cohort from initiation to completion in a longitudinal study
  - Measure more objective data for preparedness

# Acknowledgements



Veronica Bandy,  
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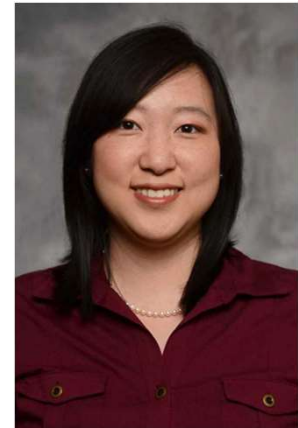
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