

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

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Introduction

- Opioid addiction and abuse is an ongoing in our nation with deaths quadrupling since 1999.
- With opioid death rate

Objectives

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. This information will be used to measure the effectiveness of California pharmacy school opioid curriculum and the need for any adjustments.

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

In this cross-sectional study, an anonymous web-based survey (Google Forms) assessed the readiness of new pharmacy graduates in combating the opioid crisis. The survey consisted of seven questions, three open ended and four Likert scale. The survey was distributed via email to 2020 California pharmacy school graduates, CPhA and CSHP. A total of 103 participants responded to the survey. Inclusion criteria included class of 2020 graduates from California pharmacy schools. There was no exclusion criteria. Data was collected from June to July 2020 and analyzed using SPSS. Graphs were created with Microsoft Excel. The Likert scale is as follows and was quantified as such: very unprepared (1), somewhat unprepared (2), neither unprepared nor prepared (3), somewhat prepared (4), very prepared (5). This scale was also applied to helpfulness, scaling from very unhelpful to very helpful. The descriptive statistics (mean, mode, skew) were used to identify differences in the level of preparedness of graduates to combat the opioid crisis based on knowledge gained from didactic learning, IPPE, APPE, and other external experiences. Preparedness in performing related tasks were also analyzed with descriptive statistics. For open-ended questions, results were compiled based on frequency and trends. The 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 (α) was set to 0.05.

Results

Results

Table 1. Statistics of Helpfulness of Each Activity

	Didactic	IPPE	APPE	Other
N	102	103	103	103
Mean	3.5392	3.0777	3.7573	3.6117
Mode	4	3	4	4
Skewness	-0.841	-0.154	-1.044	-0.812
Kurtosis	-0.413	-0.693	0.195	-0.169

Results (cont.)

Figure 1. Overall Preparedness in New Graduates

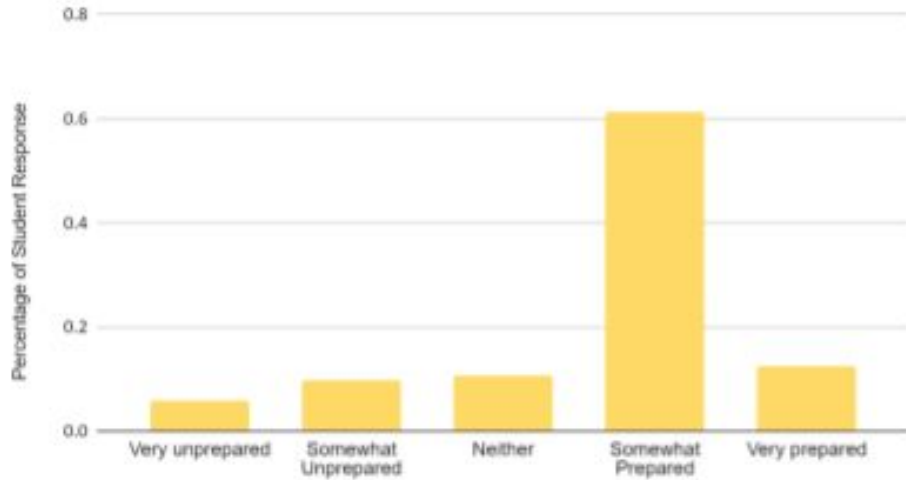
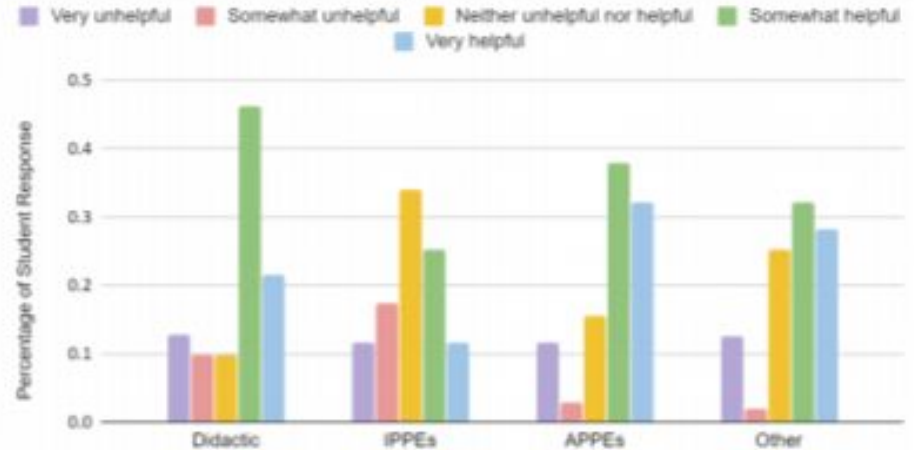


Figure 2. Comparison of Largest Contributors to Opioid Preparedness



Results (cont.)

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

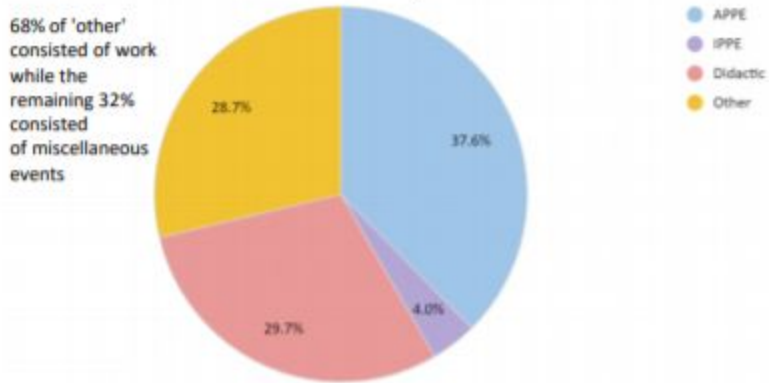
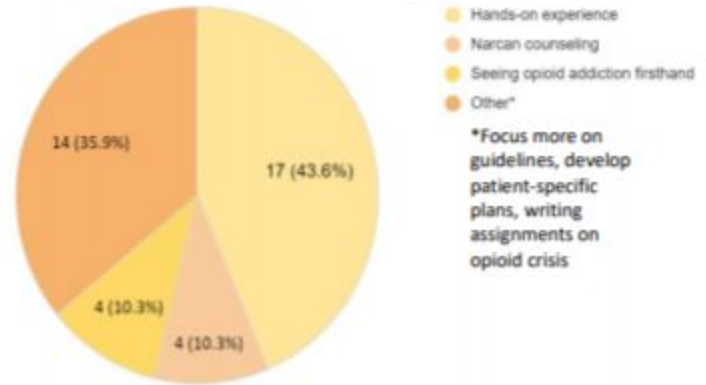


Figure 4. Why Was APPE the Most Impactful Activity in Preparing Students in Combating the Opioid Crisis?



Results (cont.)

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

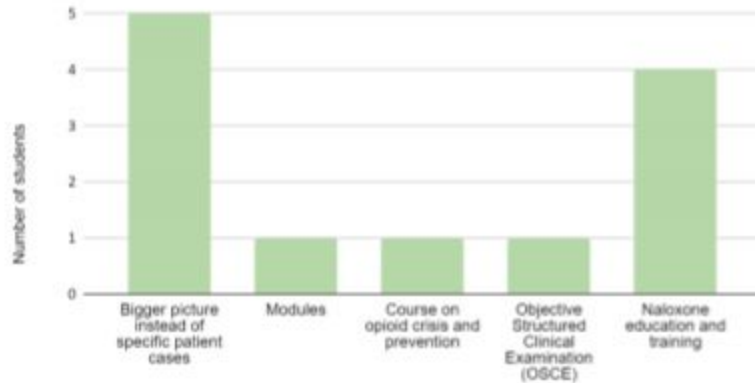
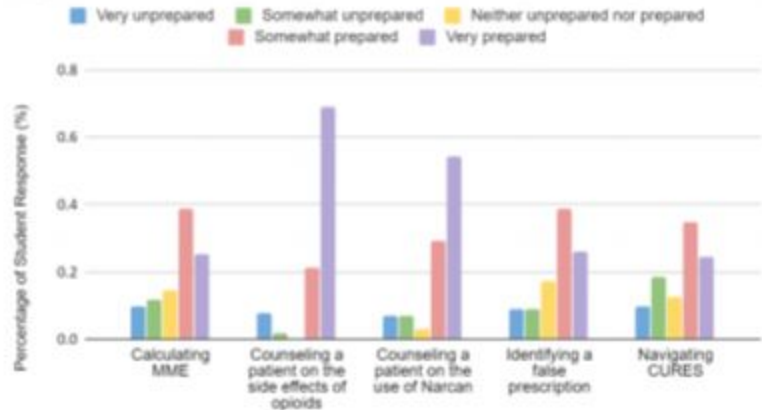


Figure 6. Distribution of Preparedness Across Opioid Safety Measures



Results (cont.)

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

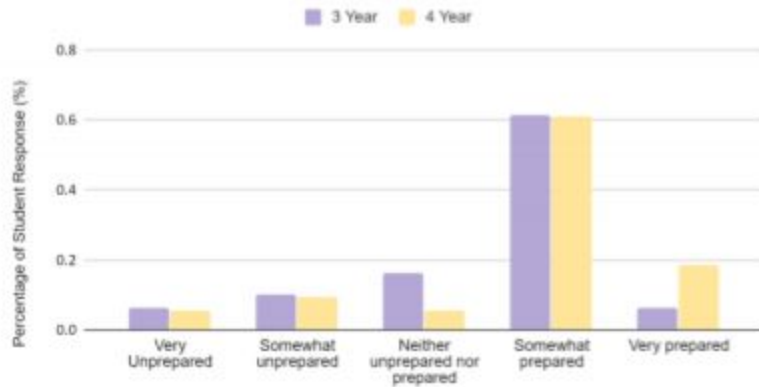
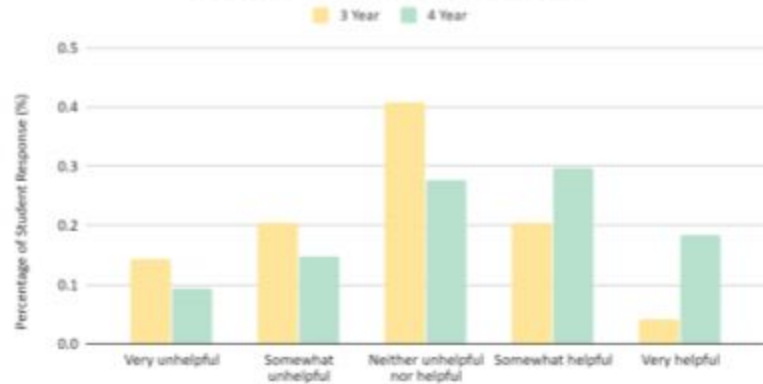


Figure 8. Comparison of IPPE Preparedness on Opioid Safety Between 3 Year and 4 Year Schools



Results (cont.)

Results

Table 2. Statistics of Preparedness Across Opioid Safety Measures

	CURES	FalseRx	MME	Side Effects	Narcan
Mean	3.4563	3.6505	3.5825	4.4175	4.1748
Mode	4	4	4	5	5
Skewness	-0.497	-0.817	-0.735	-2.249	-1.56
Kurtosis	-0.953	-0.162	-0.471	4.05	1.421



Conclusion

Due to the variability of responses regarding APPE, adding a required pain management clinic or opioid-related rotation to the APPE curriculum may increase consistency in the preparedness of graduates. It would also be beneficial for pharmacy programs to implement more instruction on the use of CURES. This can be done in the form of a lecture, required hands on training or most notably, be added to the IPPE curriculum to improve its impact on students.

The generalizability of this study should be taken into consideration due to limited sample size and recall bias. Efforts to improve this study could consist of following a cohort from initiation to completion in a longitudinal study or measuring more objective data for preparedness. Ultimately, we hope that this study will further advance how pharmacists, as a profession, can deal with the opioid crisis starting with how education can be improved.

- Adding a required pain management clinic or opioid-related rotation to APPE curriculum
- Implementing

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