



Analysis of Pain Education Deficiencies Among Student and Recent Graduate US Pharmacists



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INTRODUCTION

Ubiquity of Pain

- Approximately 100 million Americans live with chronic pain¹
- An additional 50 million Americans undergo surgical procedures where perioperative pain is expected²
- Opioid prescribing and opioid-related deaths have quadrupled since 1999³

Pharmacist Role in Pain Management

- There are approximately 295,000 employed pharmacists in the United States as of May 2015⁴
- Pharmacists are the most accessible healthcare provider and are uniquely positioned to play a vital role in pain management and opioid risk mitigation strategies

Education is Key

- It is imperative that new pharmacy graduates are equipped with the proper clinical skills and knowledge in pain management to provide safe and effective direct patient care from both a treatment and a risk mitigation standpoint
- Specialty post-graduate training is limited as there are currently only 13 pharmacy residencies in pain and palliative care
- Comprehensive pain management education in PharmD curricula is vital given the rampant use, abuse, and misuse of pain medications in the United States

OBJECTIVE

Survey student and new pharmacist practitioners to gather perceptions regarding their pain management education in pharmacy school including:

- Quality and quantity of pain education
- Hours of instruction spent on pain education
- Basic knowledge and levels of comfort with basic pain management principles
- Opioid risk mitigation education

METHODS

Survey Creation

- Electronic survey created using Google Forms on March 13, 2016
- Survey included:
 - Hours in curriculum spent on pain risk stratification, urine drug screen interpretation, post-surgical pain management and treatment of cancer and non-cancer pain
 - Comfort level and level of understanding of topics listed above
 - Preferred method of opioid conversion

Distribution

- Link to the survey provided via social media platforms (ie: Facebook, Twitter) and via e-mail lists and message boards
- Participation required completion of didactic pharmacy training
- Target audience was PharmD graduate classes of 2014-2016

Responses

- Survey closed on April 20, 2016
- **137** responses collected

SURVEY EXAMPLES

PCAs*

What is your understanding of patient-controlled analgesia (PCA) infusions?

- No understanding
- Limited understanding
- Extensive understanding

Urine Drug Screens*

In your pain elective course, how much time was spent learning how to interpret urine drug tests for illicit drug use and/or to confirm compliance with opioid therapy?

- 0 hours total
- 1-2 hours total
- 3-4 hours total
- >4 hours total

RESULTS

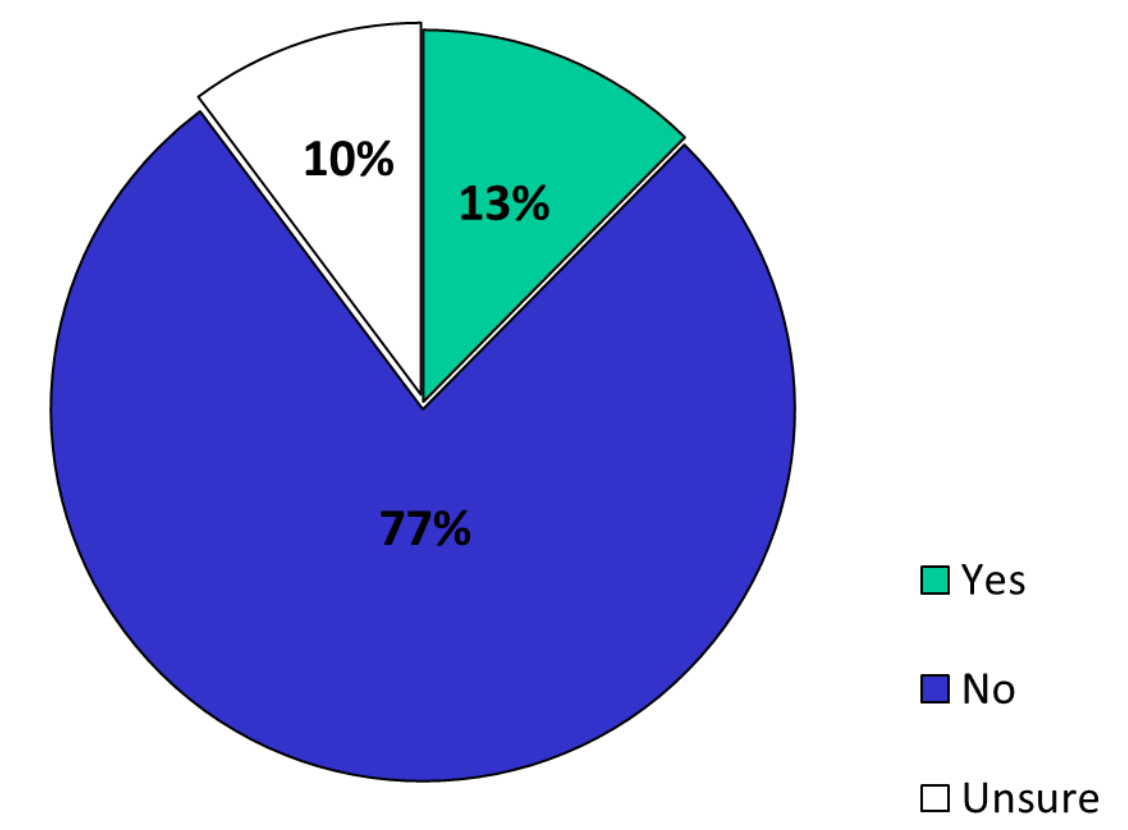
Graduation year:

24 (17.5%) graduated in 2014,
 51 (37.2%) graduated in 2015
 62 (45.3%) will graduate in 2016

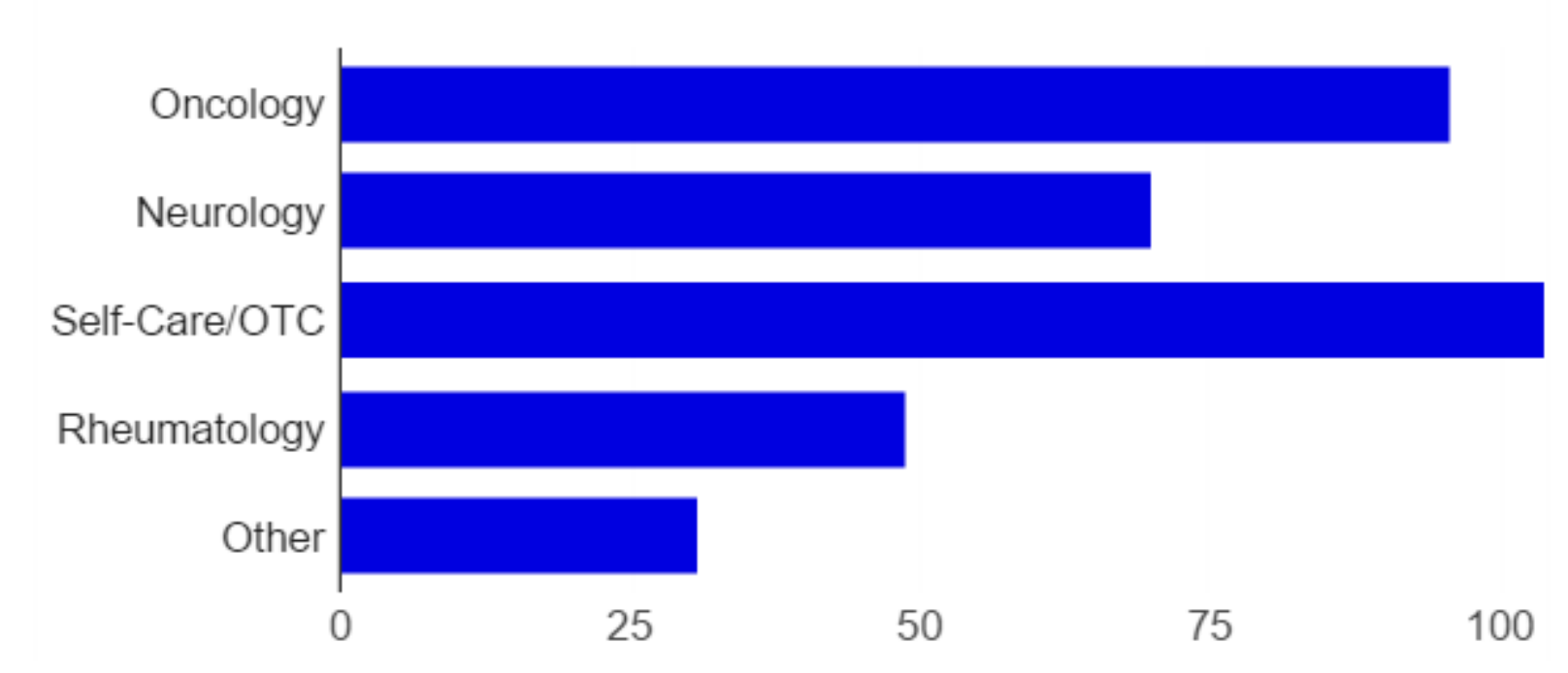
School location (by time zone):

106 (77.4%) EST 21 (15.3%) CST
 2 (1.5%) MST 7 (5.1%) PST
 1 (0.7%) Other

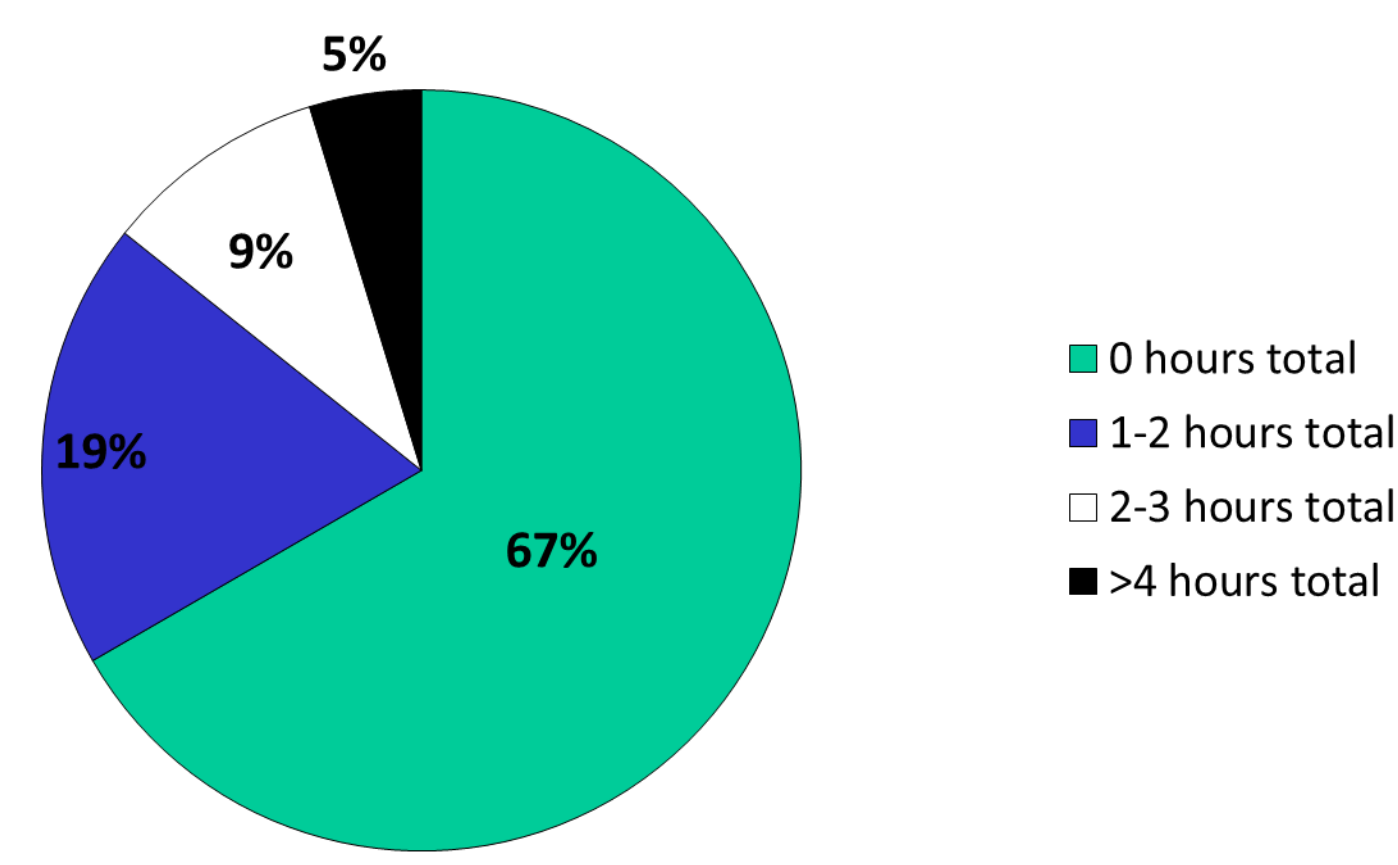
Pain Elective Offered At School?



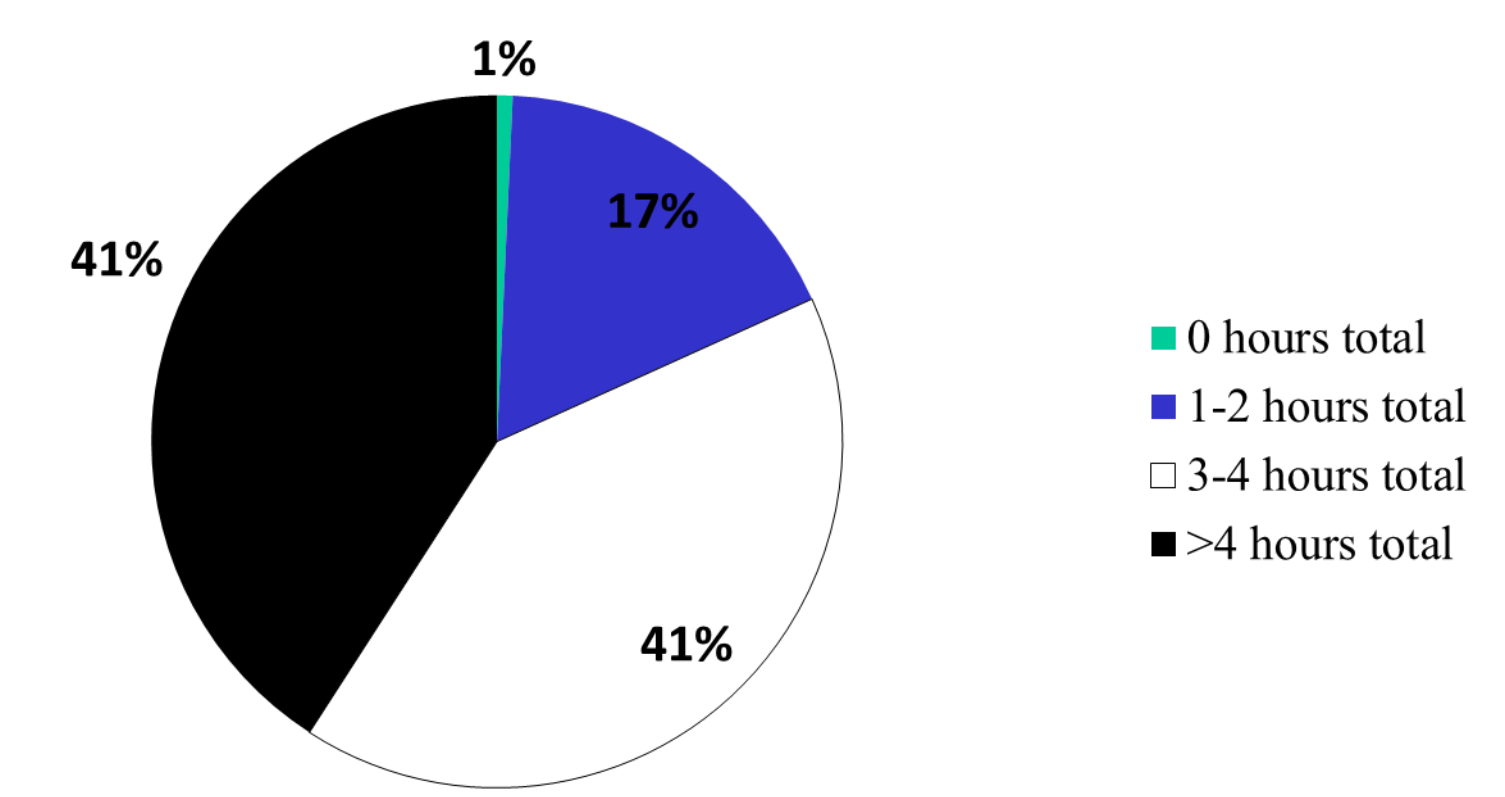
Courses/modules where pain management was taught (select all that apply)



Time Spent on Risk Stratification



Number of Didactic Hours Estimating Pain Education



Pain Elective Responses

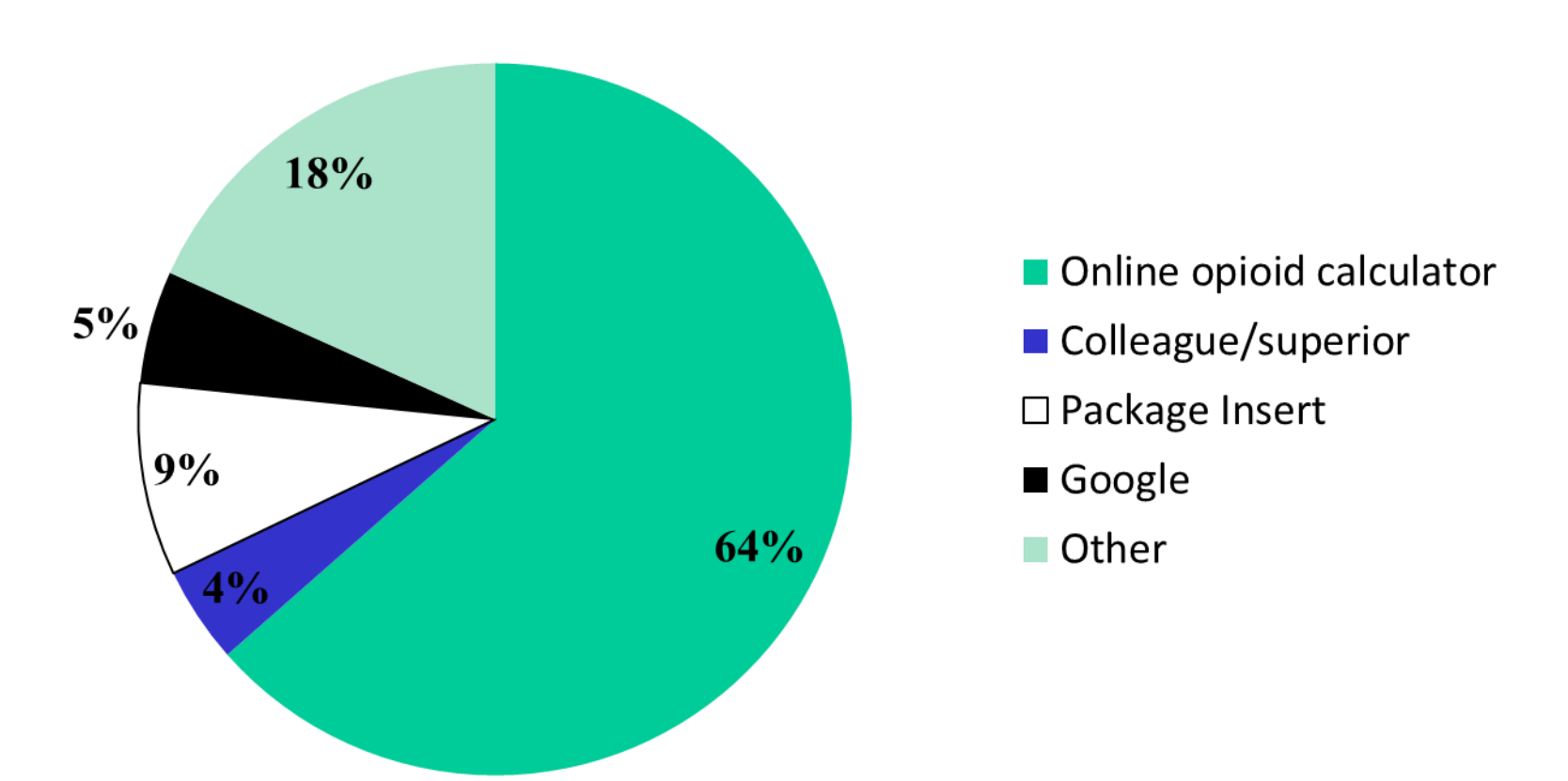
8 (5.8%) Yes
 113 (82.5%) No
 16 (11.7%) Not Sure

Are pharmacists receiving adequate pain management training relative to other subjects:

8 (5.8%) Yes
 113 (82.5%) No
 16 (11.7%) Not Sure

RESULTS

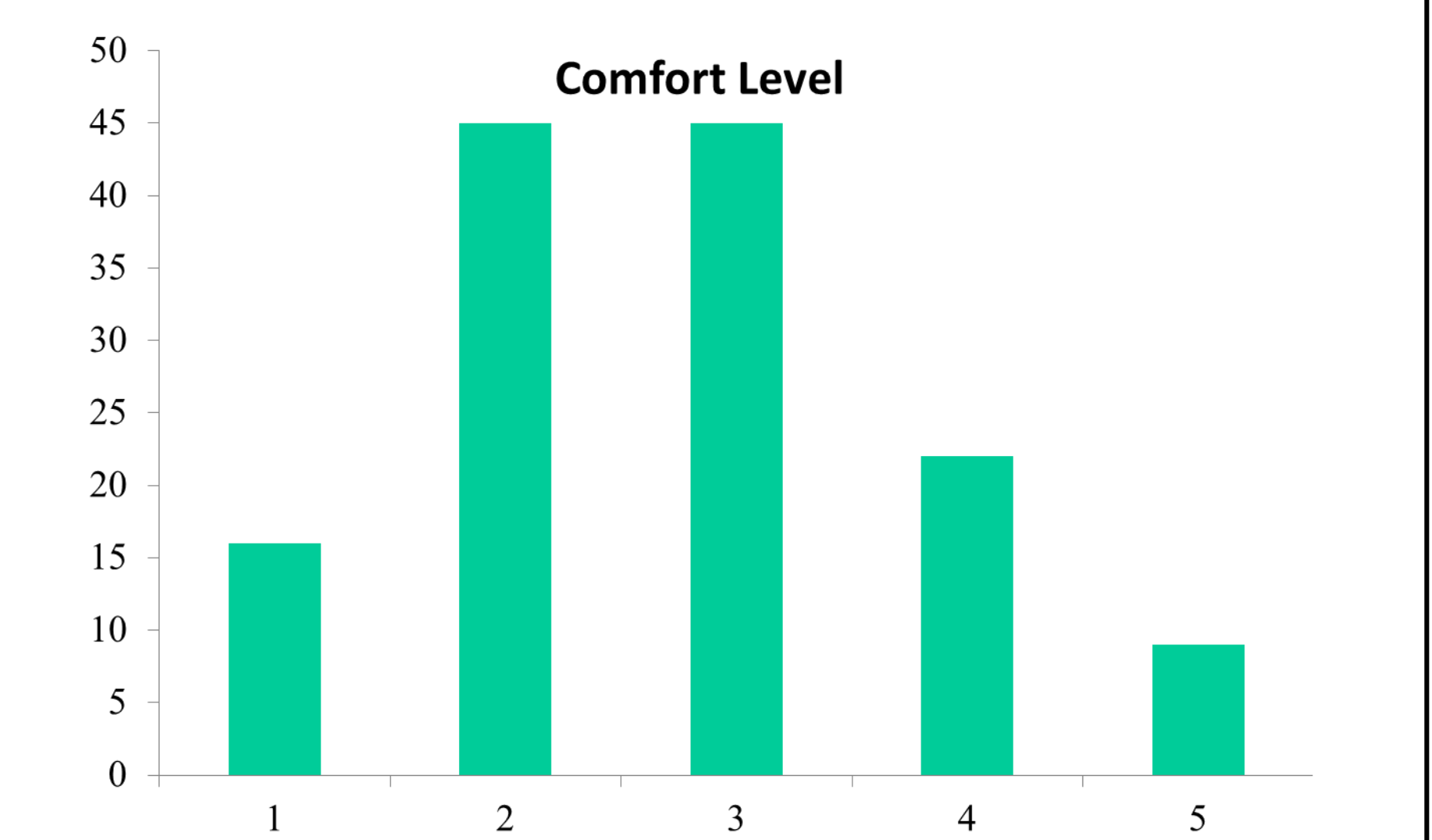
Preferred Method of Opioid Conversion



Q: If asked to convert a patient from one opioid to another, which of the following resources would you most likely consult?

Note: disparity for online calculators has been shown to be from -54% to +254%⁵

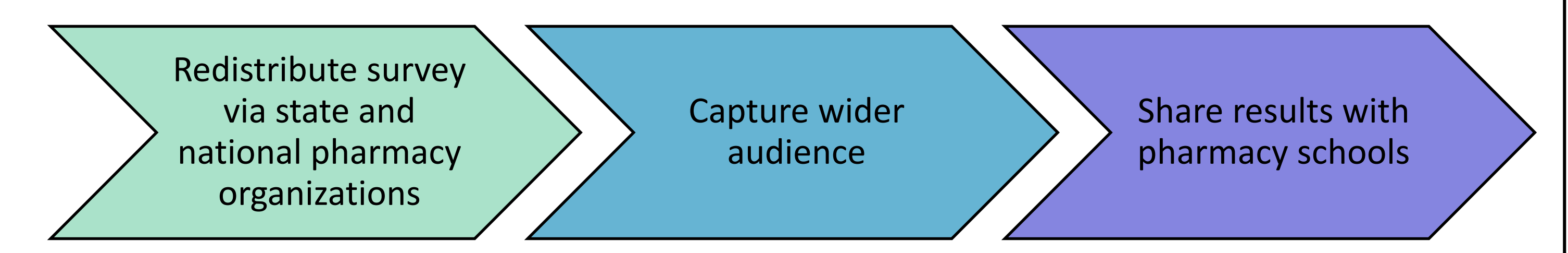
Q: On a scale from 1 to 5, with 5 being comfortable and 1 being least comfortable, how would rate your level of preparedness in regard to treating patients in chronic, non-cancer pain?



CONCLUSIONS

Preliminary survey results show that new pharmacist practitioners and current student pharmacists feel that they received inadequate comprehensive pain management education in pharmacy school

FUTURE DIRECTIONS



REFERENCES

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3. Centers for Disease Control and Prevention. Injury Prevention & Control: Opioid Overdose. Understanding the Epidemic. June 21, 2016. Available at: <https://www.cdc.gov/drugoverdose/epidemic/>. Accessed June 5, 2016.
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5. Shaw K, Fudin J. Evaluation and Comparison of Online Equianalgesic Opioid Dose Conversion Calculators. *Practical Pain Management*. 2013 August; 13(7):61-66.

DISCLOSURES

Jacqueline Cleary, PharmD nothing to disclose.
 Joni Carroll, PharmD nothing to disclose.
 Jeffrey Fudin, BS, PharmD, DAIPM, FCCP, FASHP disclosures: Astra Zeneca (Speakers Bureau, Advisory Board), Clarity (Consultant), DepoMed (Advisory Board, Speakers Bureau), Endo (Consultant, Speakers Bureau), Kaleo (Speakers Bureau, Advisory Board), Kashiv Pharma (Advisory Board), KempPharm (Consultant), Millennium Health, LLC (Speakers Bureau, Advisory, Permex Therapeutics (Speaker), Remitigate, LLC (Owner), Scilex Pharmaceuticals (Consultant)
 Scott Strassels PharmD, PhD nothing to disclose.