Assessing change in Opioid Overdose Knowledge Scale (OOKS), Opioid Overdose Attitudes Scale (OOAS) and Drugs and Drug Problems Perceptions Questionnaire (DDPPQ) scores amongst multidisciplinary healthcare students at two academic institutions

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Objectives
- To assess the change in multidisciplinary healthcare student knowledge, attitude, and perceptions related to the opioid epidemic at two academic institutions via OOKS, OOAS, and DDPPQ.
- To determine if differences in scores exist between campuses and colleges.
- To determine if differences in scores exist when stratifying by student type.

Methods
- Two campus-wide mandatory courses were used to administer the surveys to all first-year students enrolled in the interprofessional One Health courses.
- Response surveys were anonymous, responses were not matched.

Results
- Of an estimated 2,169 students, we received 912 post-administration responses. Glendale response represented 58%, Downers Grove response represented 42%.
- Of the 922 students we received 610 post-administration responses (67% response rate). Glendale’s Group represented 76%.
- Overall, students felt more prepared to handle an overdose situation and became more in favor of “Good Samaritan” naloxone use.

Significant Improvement
- 11 out of 14 questions displayed statistically significant improvement.
- 82% ability to identify symptoms of an overdose.
- 6% ability to decide if someone who has overdosed would benefit from naloxone administration.
- 31% need to call an ambulance.

Table 1. Logistic Regression Analyses of Pharmacy Students on select DDPPQ

<table>
<thead>
<tr>
<th>Question</th>
<th>OR</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feel I can appropriately advise patients about opioids and their effects</td>
<td>2.19</td>
<td>1.71 - 2.80</td>
</tr>
<tr>
<td>Feel I have the right of ask patients about their opioid use when necessary</td>
<td>0.05</td>
<td>0.50 - 0.84</td>
</tr>
</tbody>
</table>

Table 2. Summary of Each Assessment by Overall Sample, Campus, & College

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Sample</th>
<th>Overall Improvement</th>
<th>Improvement among Osteopathic, Pharmacy, and Dental significantly improved</th>
</tr>
</thead>
<tbody>
<tr>
<td>OOKS</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Pre</td>
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<tr>
<td>Post</td>
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<tr>
<td>OR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95% CI</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3. Summary of Each Assessment by Overall Sample, Campus, & College

<table>
<thead>
<tr>
<th>College</th>
<th>Overall Improvement</th>
<th>Improvement among Osteopathic, Pharmacy, and Dental significantly improved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glendale &gt; Downers Grove</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Osteopathic Medicine and Pharmacy significantly improved</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Conclusion
- 73% improvement observed in students’ perception of working with patients with opioid use disorder, specifically a better understanding of their ability to counsel.
- Again, pharmacy students showed the most significant change from baseline.

Figure 1. Participants by Campus

Figure 2. Participants by College

Figure 3. Changes in OOKS for Entire Sample Population (% answered correctly)

Figure 4. Questions with Most Significant Improvement (Change in % Agree)

Figure 5. Changes in % Agree vs. % Disagree for Pharmacy Students Only

Figure 6. DDPPQ Questions with Most Significant Improvement, Pharmacy

Figure 7. Changes in % Agree vs. % Disagree for Pharmacy Students Only

Figure 8. Changes in % Agree vs. % Disagree for Pharmacy Students Only

**Note:** *p < 0.05

References
- Morgan L. Karrels, Amanda L. Colistro, Alyssa M. Peckham. "Assessing change in Opioid Overdose Knowledge Scale (OOKS), Opioid Overdose Attitudes Scale (OOAS) and Drugs and Drug Problems Perceptions Questionnaire (DDPPQ) scores amongst multidisciplinary healthcare students at two academic institutions."
- Midwestern University, Glendale, AZ
- *Amercian Journal of Health Education*

*OR* = Odds Ratio

*95% CI* = 95% Confidence Interval

*P* = Probability

*Pre* = Pre-administration

*Post* = Post-administration