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Implementing and Evaluating a Standardized Opioid Curriculum

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Introduction/Problem

- As the opioid epidemic in America gains increased visibility, attention has turned toward physicians' prescribing practices.
- Opioids are a first-line analgesic postoperatively
- More than a third (36.5%) of all prescriptions written by surgeons in the U.S. are for opioid containing pain medications¹
- A critical strategy for combatting this public health crisis is ensuring medical school and residency curricula include prescription education to improve appropriate prescribing by physicians
- Despite the widely recognized importance of integrated pain management courses, only 4% of U.S. medical schools report having such courses²

Aim/Goal

We initiated the present study to introduce and evaluate an opioid educational curriculum for pre-interns, residents PGY 1-5, Nurse Practitioners (NP), and Physician Assistants (PA) across four academic medical centers in Boston (BIDMC, BMC, BWH, and MGH).

The Team

- Kortney Robinson MD- Research Fellow
- Michaela Carroll BA- Research Coordinator
- Stephanie Ward BA- Research Assistant II
- Alind Amedi BA- Research Assistant
- Musa Aner MD- Anesthesia/ Co-Investigator
- Tara Kent MD- Residency Director
- Gabriel Brat MD MPH- Principle Investigator

The Interventions

- A 75 minute opioid education session, designed to increase knowledge in 3 areas:
 - Patient characteristics and pre-operative risk
 - Patient monitoring and plan of care
 - General opioid dosing, knowledge, and understanding
- Pre and post-education knowledge assessment previously validated by Pennsylvania State Safety Authority

Results/Progress to Date

- 197 Prescribers Participated
- 167 completed both pre and post assessments (84.8%)
 - 58 pre-interns, 89 PGY 1-5, and 17 NP/PA participated
- All groups had significant knowledge gaps across the three areas of knowledge studied (Figure 1)
- Average scores prior to education were 59.5% which increased to 68.2% post education, an increase of 14.6% (P<0.001) (Figures 2 & 3)
- Comfort prescribing increased from an average of 3.96 to 5.44 on a scale of 1-10 (P<0.001) (Figure 4)
- "Students" felt it was overall beneficial with 96% reporting it would change their practice

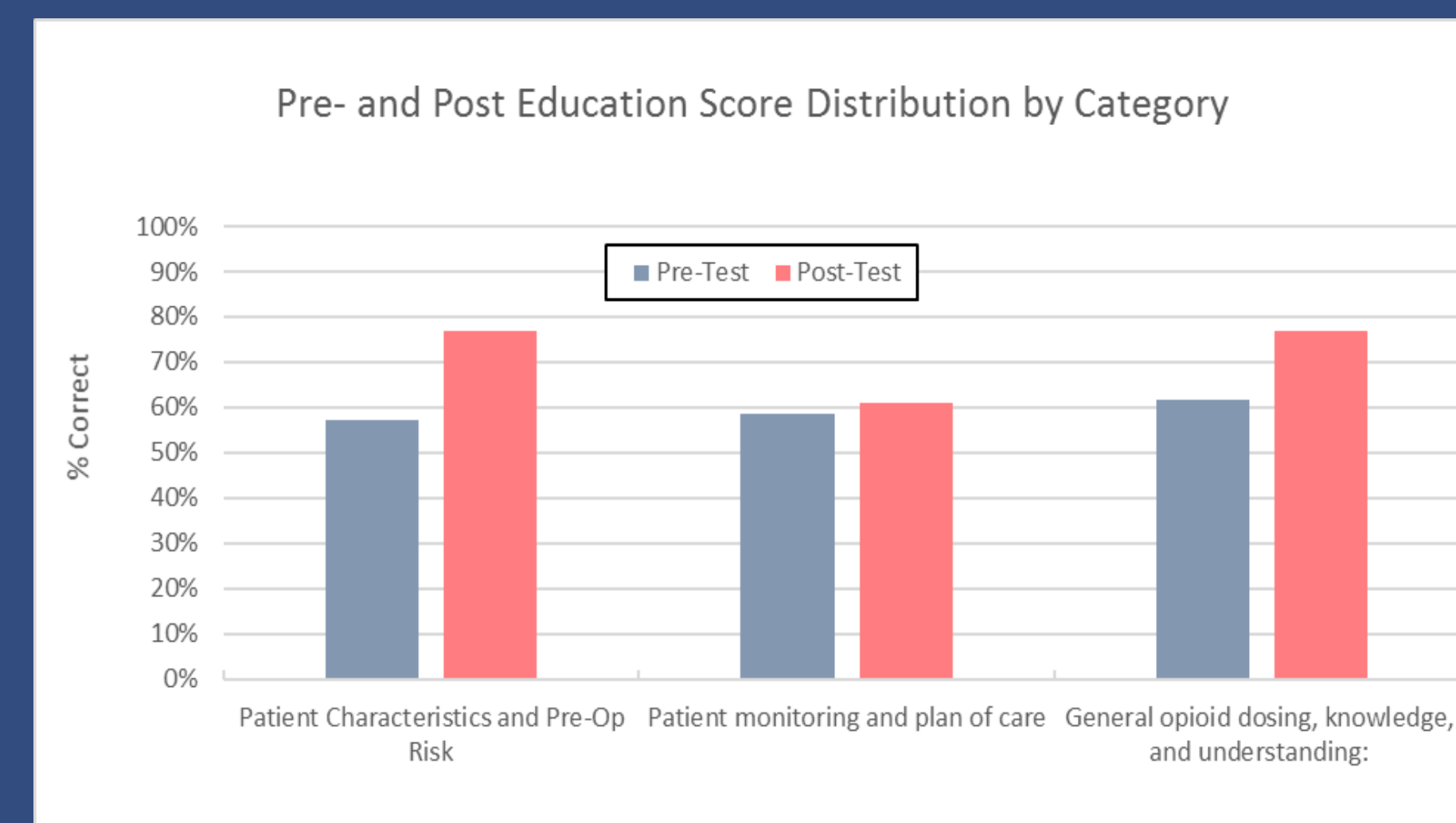


Figure 1 (at left): Pre and post educational scores as distributed by category of question. Questions relating to patient characteristics, risks and opioid dosing resulted in a larger increase in scores when compared to questions relating to patient monitoring and plans of care.

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More Results/Progress to Date



Figure 2: Box Plots of overall scores before and after education

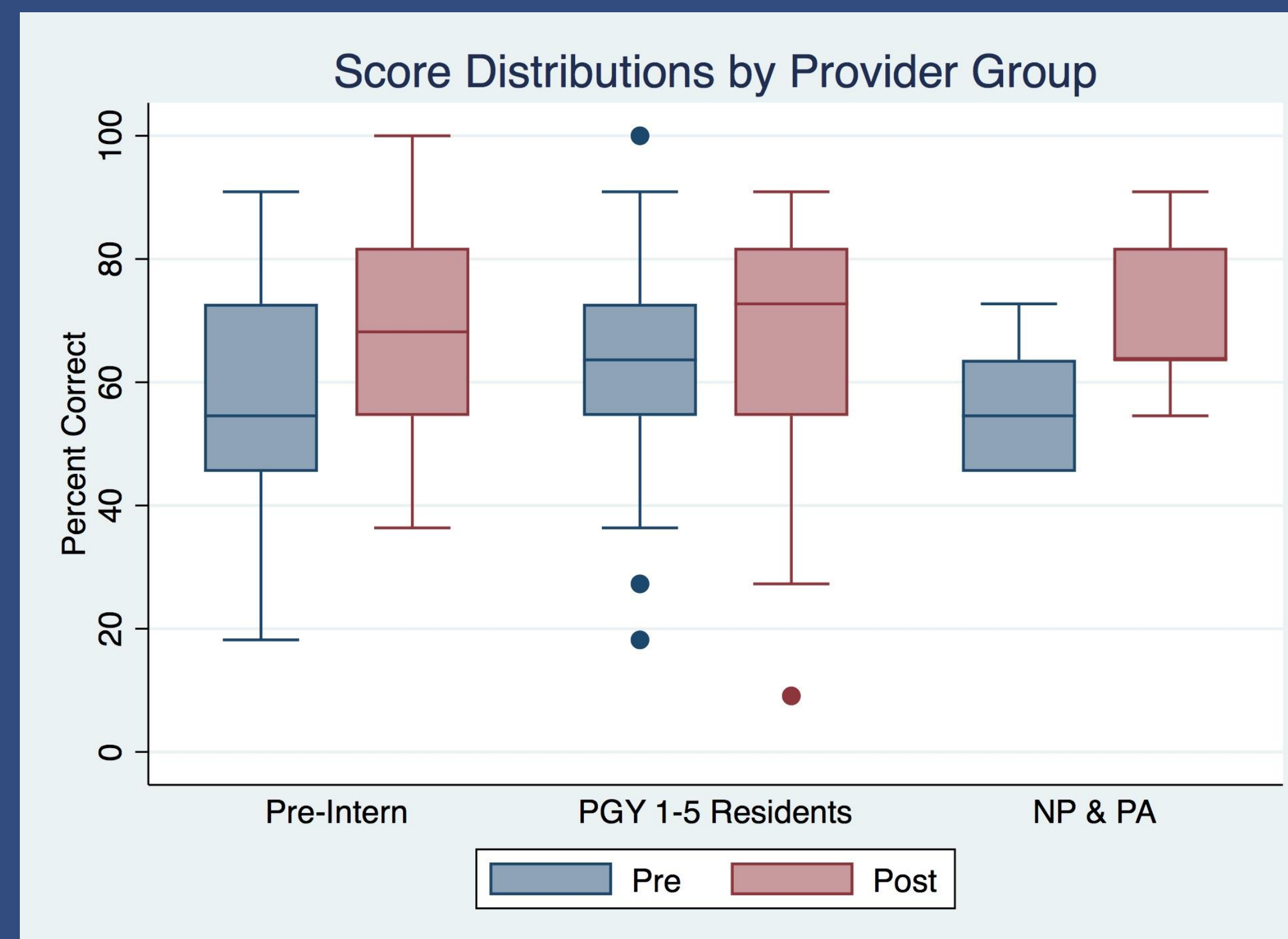


Figure 3: Box Plots of scores across provider groups before and after education

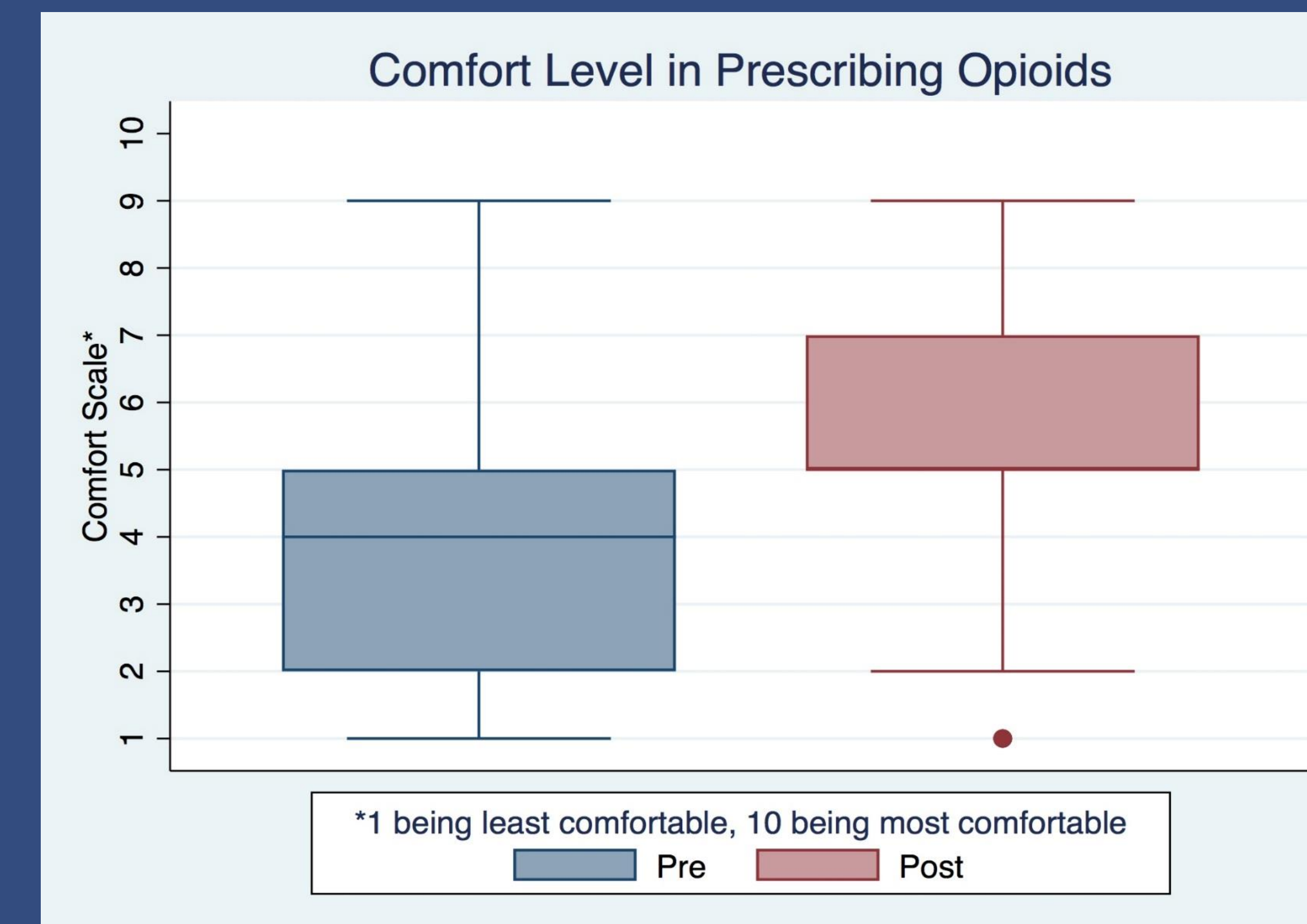


Figure 4: Box Plots demonstrating comfort level in prescribing before and after education

Next Steps

- Update the curriculum to increase resident engagement and level of investment – V2.0 is being rolled out in a case-based format
- Reevaluate knowledge after 1 year to see how much information has been retained
- Design shorter, web-based training for broad-based dissemination among clinical care providers

Lessons Learned

- A short educational session is a simple, cost-effective way to improve knowledge of safe opioid prescribing and pain management.

Works Cited

1. Levy, B., Paulozzi, L., Mack, K. A., & Jones, C. M. (2015). Trends in Opioid Analgesic-Prescribing Rates by Specialty, U.S., 2007-2012. *American journal of preventive medicine*, 49(3), 409-413. doi:10.1016/j.amepre.2015.02.020
2. Mezei, L., & Murinson, B. (2011). Pain Education in North American Medical Schools. *Journal of Pain*, 12(12), 1199-1208. doi:10.1016/j.jpain.2011.06.006.

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