

The effectiveness of pressure injury prevention education for patient care technicians in an adult acute care setting

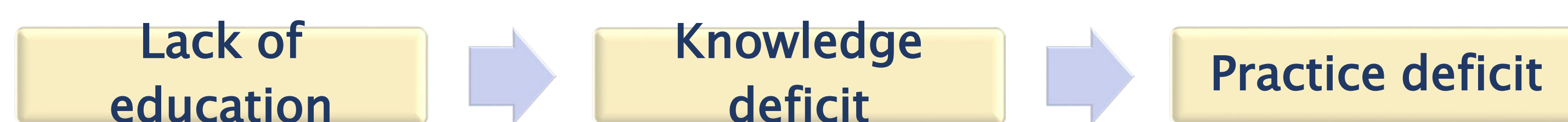
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Background

- More than **2.5 million** people in the U.S. develop preventable hospital-acquired pressure injuries (HAPIs) annually¹
- Risk factors include advanced age, immobility, malnutrition, and sensory loss^{6,7,8}
- 2.8 times** more likely to die during hospitalization and **1.69 times** within 30 days after discharge^{3,4,5}
- Associated with significant physical and psychological suffering, prolonged hospital stays, adverse patient outcomes, and increased health care costs^{1,2,3,4,5}
- Since 2008, no longer reimbursed by U.S. Centers for Medicare and Medicaid Services (CMS)⁹
- Costs up to **\$11.6 billion** per year in the U.S.²
- Evidence-based HAPI prevention strategies effectively reduce HAPI incidences^{1,2}
- Currently **1.5 billion** Patient Care Technicians (PCTs) provide nursing care^{10,13}
- Knowledge and practice deficit in HAPI prevention due to lack of standardized training or education^{11,12}
- Improving PCTs' knowledge and attitude levels help reduce HAPIs^{16,18,19,20,21,22,23,24}



Purpose and Aims

Purpose: To decrease HAPIs by implementing an evidence-based educational tool kit for PCTs

- Aim 1:** Determine the reduction of the project site's 4th quarter 2021 HAPI prevalence data from the 3rd quarter 2021
- Aim 2:** Determine the improvement in the PCTs' knowledge and attitude in HAPI prevention measured by the modified PI Prevention Knowledge (PIPK) and Attitude toward Pressure Ulcer Prevention (APuP) instruments
- Aim 3:** Determine the PCTs' increased utilization of HAPI prevention strategies measured by the modified National Database of Nursing Quality Indicators (NDNQI) audit scores

Methods

Design: pre- and post-test design

Setting: 26-bed inpatient adult acute care unit at an academic medical center in the mid-Atlantic region

Intervention: evidence-based educational tool kit on HAPI prevention strategies

Aim 1

Sample: All patients in the unit
Measure: Unit HAPI prevalence rates
Analysis: Fisher's Exact test

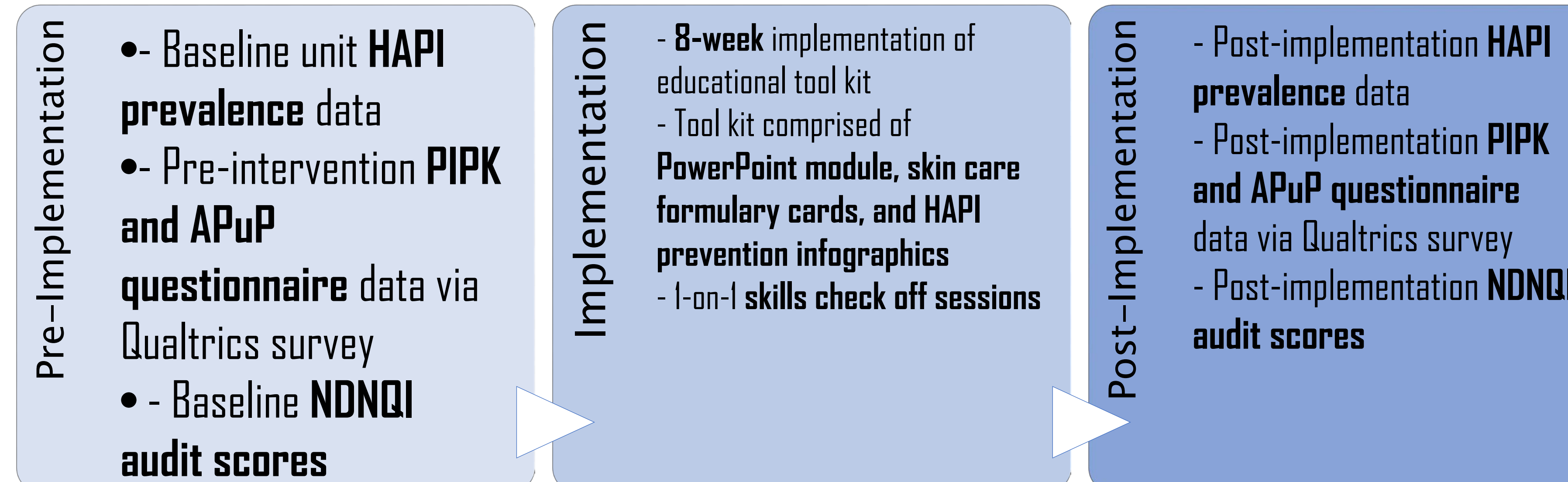
Aim 2

Sample: All 24 full-time and part-time PCTs
Measure: modified PIPK and APuP instruments
Analysis: Descriptive statistics

Aim 3

Sample: All patients with a Braden Scale of <18
Measure: modified NDNQI audit scores
Analysis: Mann-Whitney U test

Intervention



Results: Aim 1 & 2

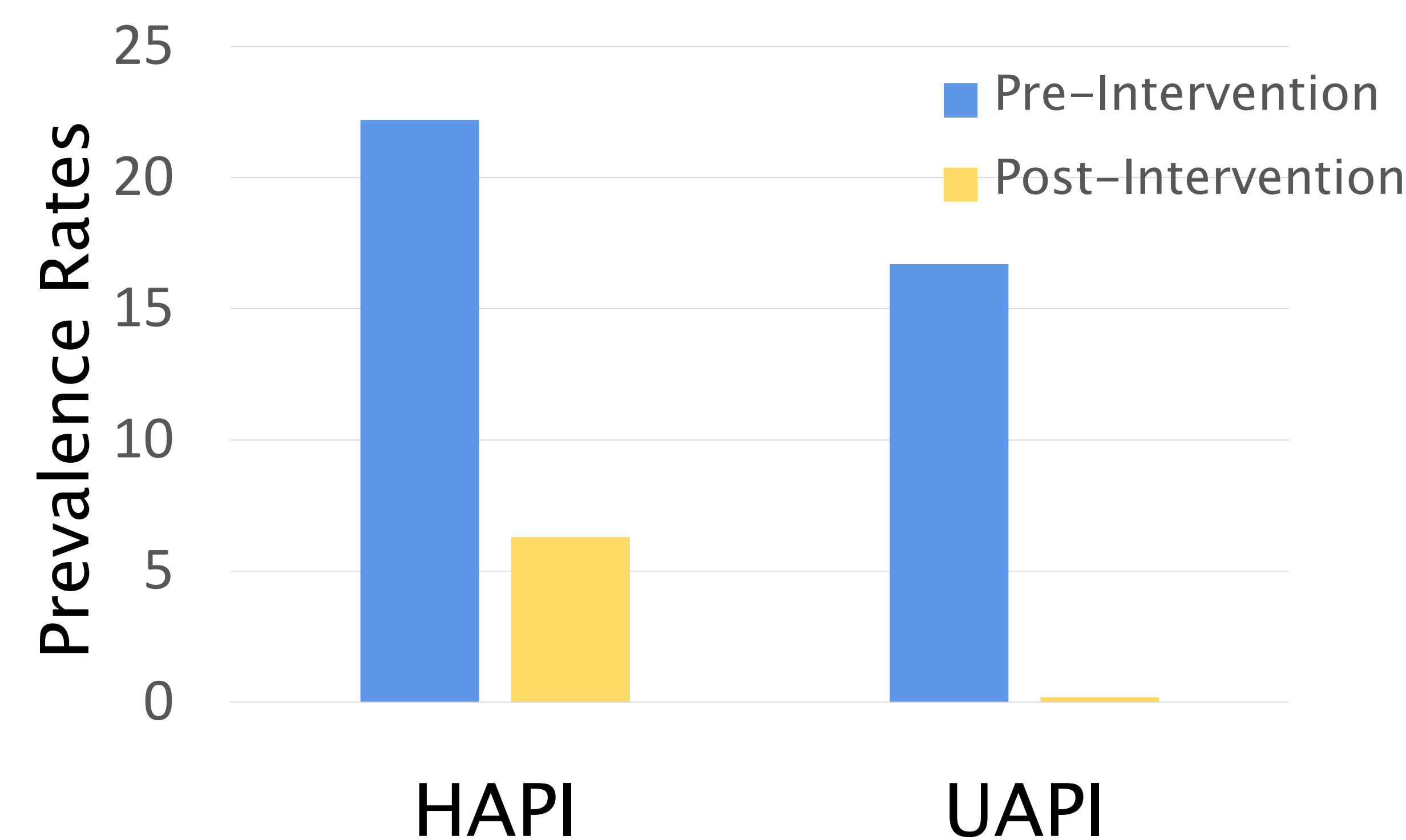
Aim 1:

- HAPI prevalence **decreased** from pre (n=18) to post-intervention (n=16; 22.2% vs. 6.3%; p=0.34)
- Results indicate **improved HAPI prevalence rates**

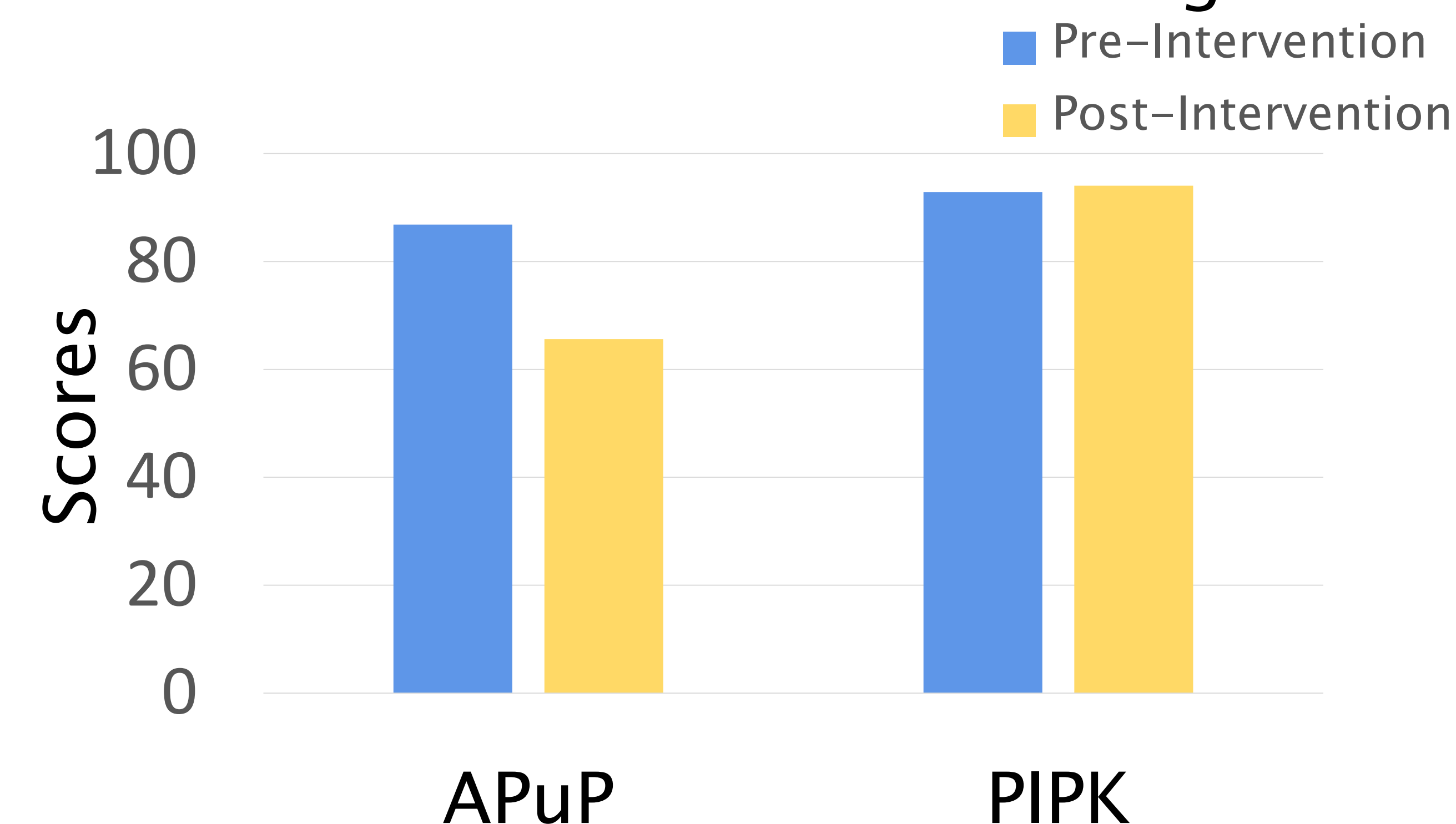
Aim 2:

- Average PIPK scores increased from pre to post-intervention (92.86±9.63 vs. 94.05±12.86), indicating **better knowledge**
- Average APuP scores decreased from pre to post-intervention (86.85±15.25 vs. 65.63±23.46), indicating **worse attitudes**

HAPI and UAPI Prevalence Rates



APuP and PIPK Scoring

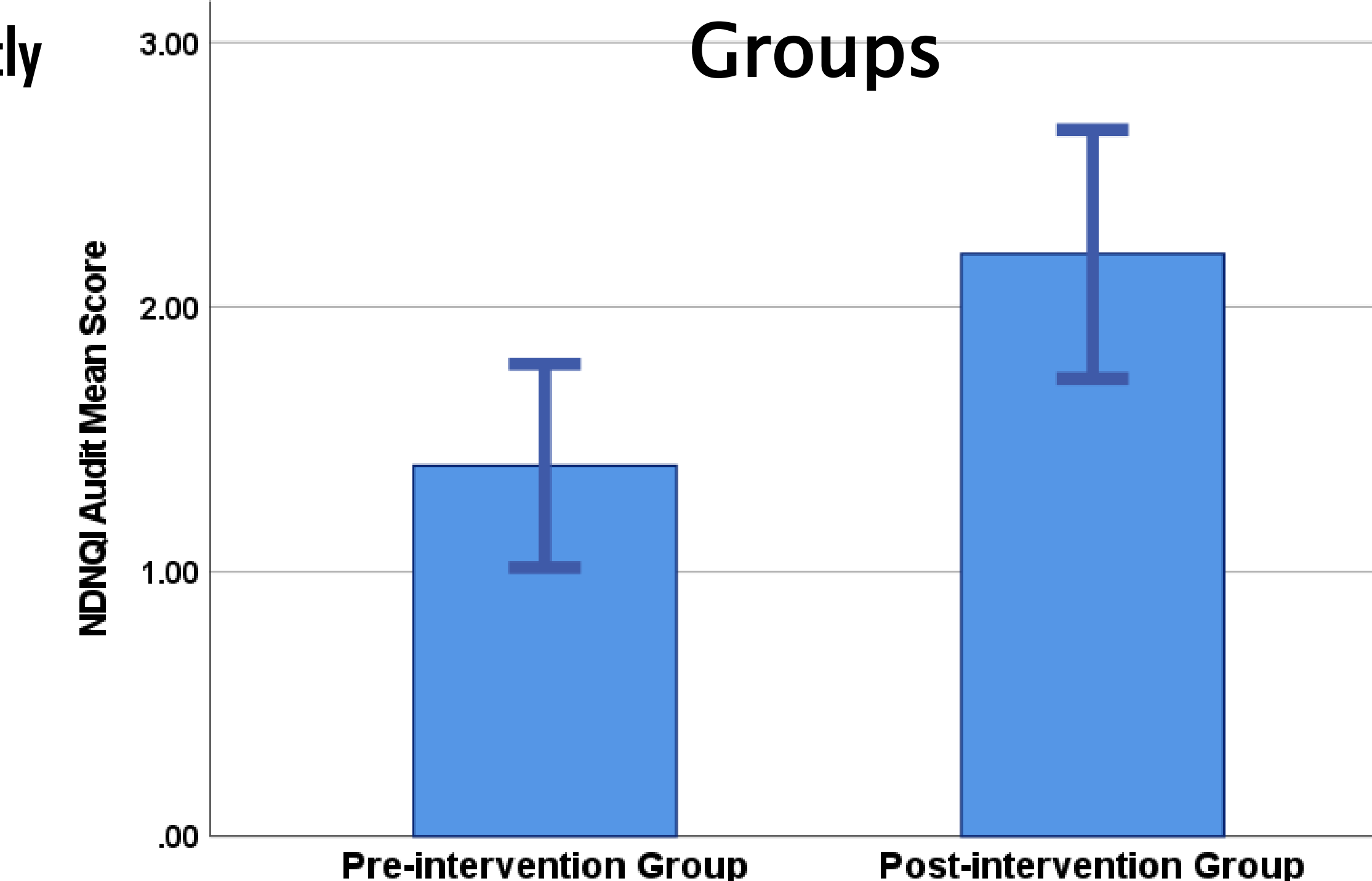


Results: Aim 3

Aim 3:

- NDNQI audit scores **significantly improved** from pre (n=20) to post-intervention (n=23; 1.40±0.82 vs. 2.35±0.99; p=0.014)
- Results indicate **greater compliance with HAPI prevention strategies**

NDNQI Audit Mean Scores for the Pre- and Post-Intervention Groups



Conclusion

- The educational tool kit has shown to **improve the knowledge and implementation** of HAPI prevention strategies and ultimately **decrease the rate of HAPIs** in the unit
- PCTs have an important role in delivering high quality patient care by promoting skin health
- Utilizing an educational curriculum specifically tailored for PCTs may contribute to uptake in implementing HAPI prevention strategies that can help decrease HAPIs
- Next steps:**
 - Conduct **further studies** with larger sample sizes in other inpatient units
 - Submit a **manuscript** to the *Journal of Wound Ostomy and Continence Nursing*
 - Further work on adapting the tool kit into a **hospital-wide learning module** for PCTs
 - Train **PCT skin saver champions**

Acknowledgements and References

- The authors of this project wish to thank the PCU unit manager Christina Kontogeorgos, nurse educator Maria Lao, PCT educator Tamara George, and all the PCT participants who made this project successful
- Please scan the QR code to see the references.



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