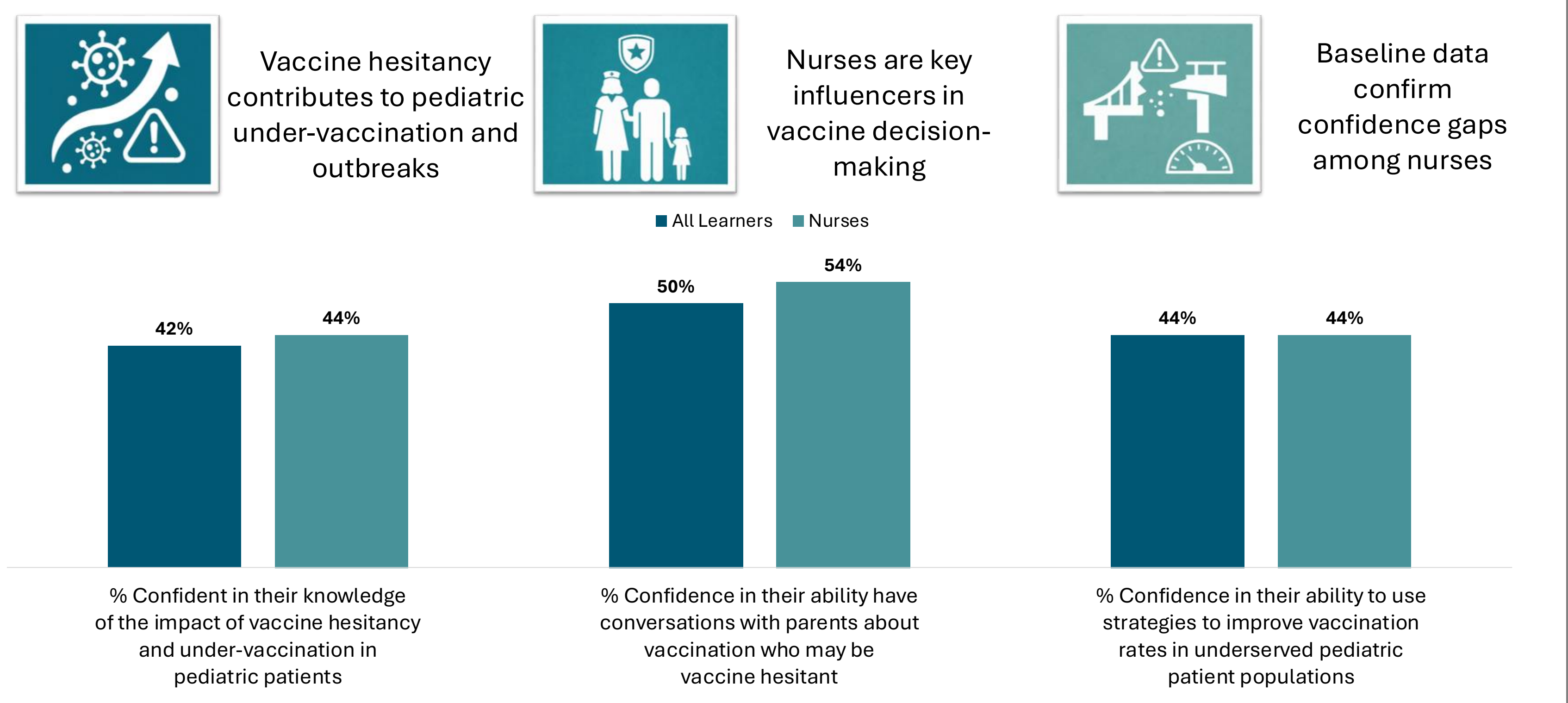


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¹CME Outfitters
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BACKGROUND



Instructional Design

CME SNACKS SERIES

- Multimodal initiative
- Focus on causes of vaccine hesitancy
- Instruction in evidence-based communication models (e.g., 5 C's, CASE model)
- Emphasis on culturally sensitive conversation strategies
- Provision of applicable, practice-ready resources

Equipping the One Holding the Shot: Pediatric Nurses and Vaccine Hesitancy Conversations
 LO: Identify the impact of vaccine hesitancy as part of under-vaccination in the pediatric population

Equipping the One Holding the Shot: Pediatric Nurses and Vaccine Hesitancy Conversations
 LO: Incorporate knowledge of the causes of vaccine hesitancy in clinical conversations with parents who may be vaccine hesitant

Decoding Vaccine Hesitancy: Nuances Among Parents/Caregivers
 LO: Integrate strategies to combat under-vaccination patterns and improve vaccination rates particularly in underserved pediatric patient populations

Resources:

- Downloadable Pocket Guide to ACIP Vaccination Schedules
- FAQ for Nurses – Vaccine Hesitancy (English & Spanish)

Methods

Objective

- To evaluate changes in pediatric and school nurses' knowledge, confidence, and communication behaviors following a multimodal educational initiative addressing vaccine hesitancy.

Design

- Pretest-Posttest
- 90-day follow-up to learners and matched controls

Learners

- Pediatric, family practice, and school nurses

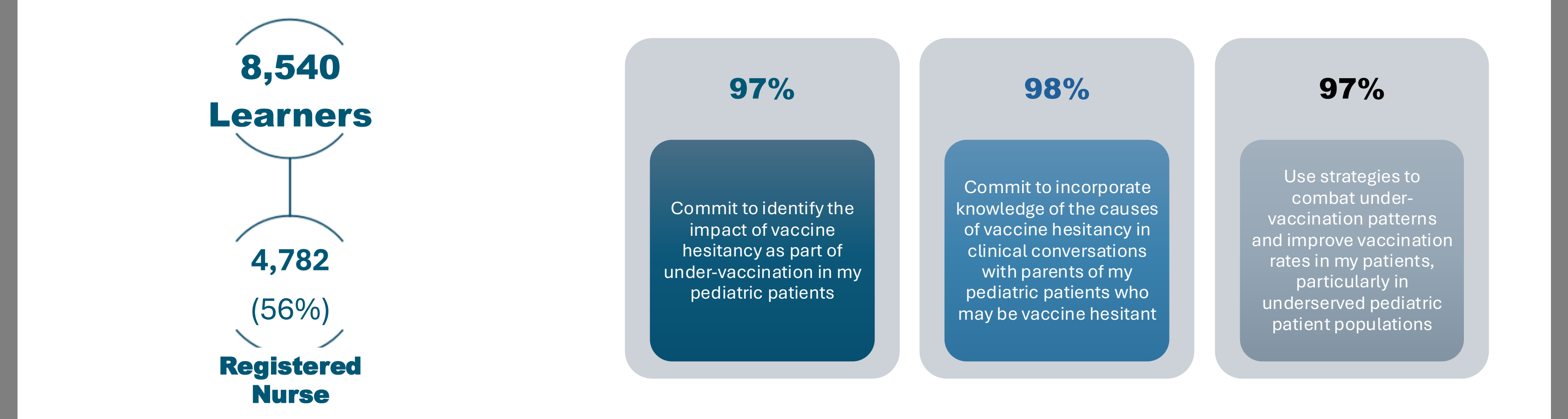
Outcome Data

- Baseline (Pre-test)
- Immediate Impact (Post-test)
- Retention (3-month follow-up of completers with a matched control sample)
- Evaluation (Post-activity)

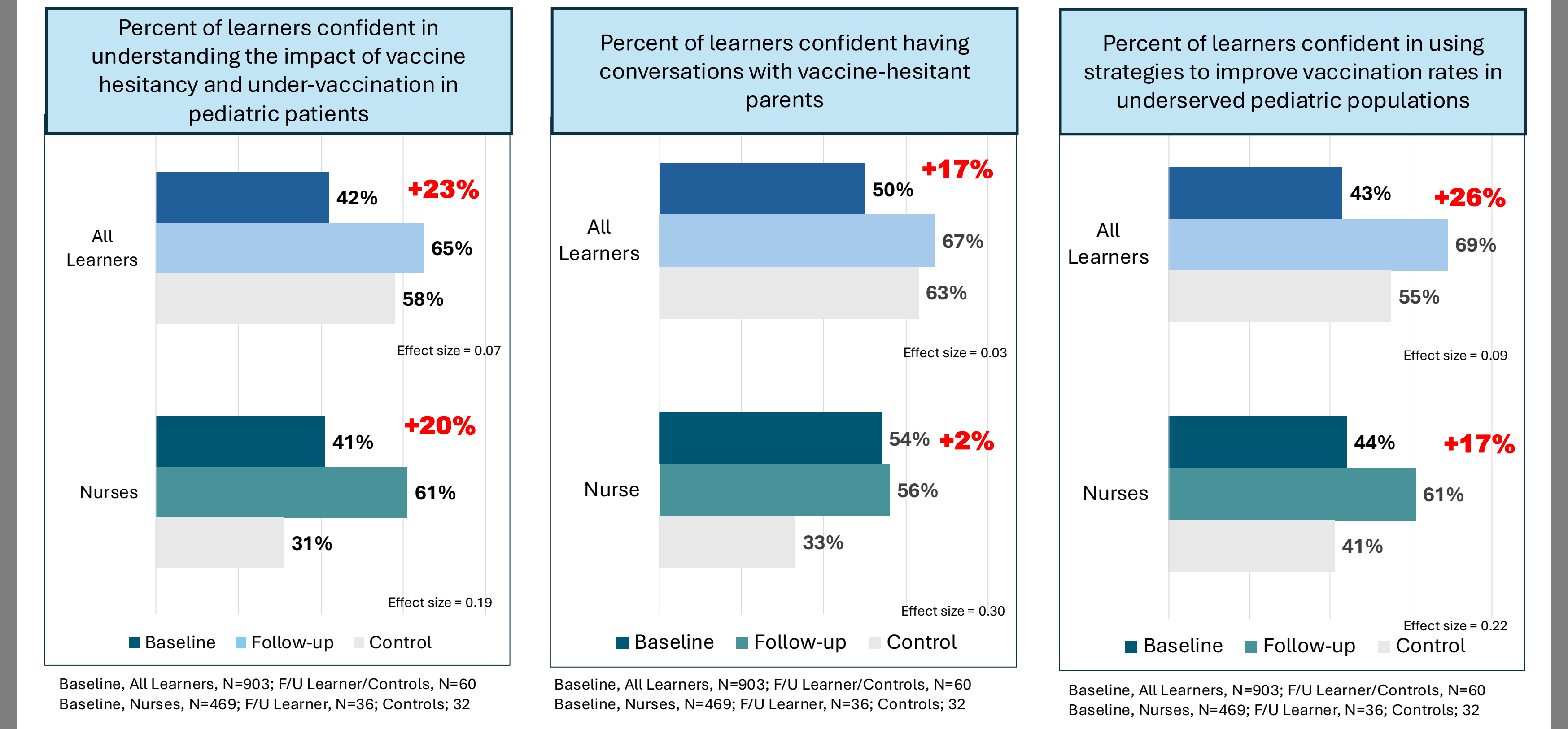
Statistical Analysis

- Educational impact on knowledge, competence, confidence, and communication behaviors was assessed using pre-, post-, and follow-up measures.
- Quantitative outcomes were analyzed in JMP using paired-samples t-tests or Wilcoxon signed-rank tests ($\alpha = 0.05$), with profession-stratified analyses and effect sizes calculated using follow-up intervention vs matched control comparisons.
- Qualitative follow-up responses were analyzed using content analysis with an audit trail; ChatGPT supported theme clustering and quantification.
- Authors retained full responsibility for theme definitions, interpretation, and reporting, supporting credibility and transferability.

RESULTS

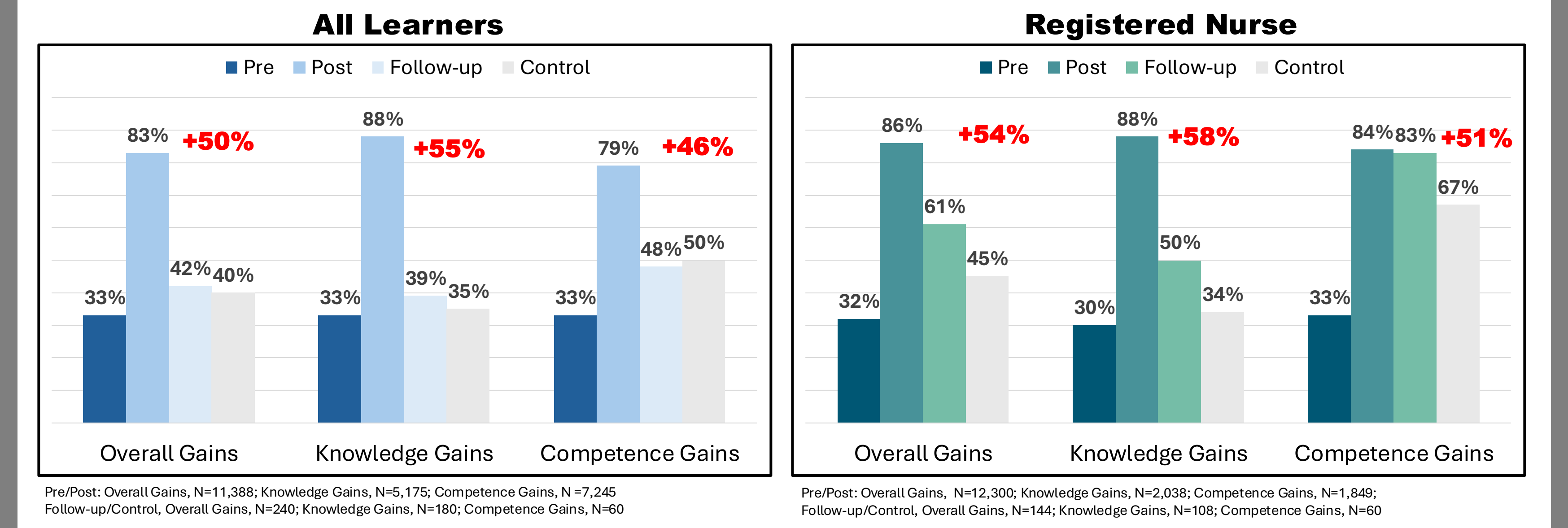


Confidence Gains



- Learner confidence increased in understanding the impact of vaccine hesitancy and under-vaccination in pediatric patients.
- Confidence in vaccine-hesitancy conversations improved, with nurses showing more consistent gains despite higher baseline confidence.
- Nurses reported increased confidence using communication strategies, including approaches to improve vaccination rates in underserved pediatric populations.

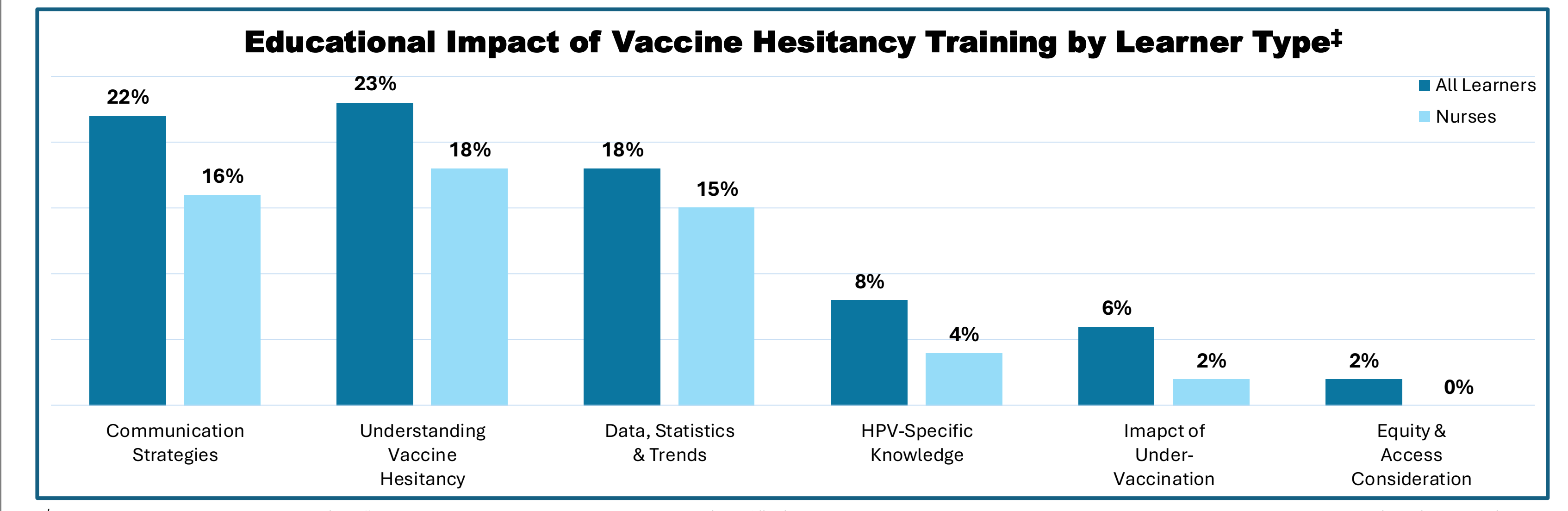
Knowledge & Competence Gains



- The activity produced large immediate gains in knowledge and competence among all learners and nurses.
- Nurses demonstrated equal or greater post-activity gains (knowledge: 30%→88%; competence: 33%→84%), indicating strong alignment with clinical practice needs.
- Knowledge declined at follow-up, particularly among all learners, while nurses retained higher knowledge levels than matched controls, suggesting a more sustained educational effect in this group.
- Competence was more durable than knowledge among nurses, with high follow-up performance (83%) exceeding matched controls, indicating continued skill application.
- Overall, the education had the most enduring impact on nurses, supporting the value of targeted, role-aligned education to drive lasting competence and practice change.

RESULTS

Qualitative Analysis



[†]Learners responded to the question, "What was the most useful knowledge gained?" with percentages calculated for each theme. Responses may be categorized into multiple themes.

Most Useful Learning – All Learner vs. Nurses

Theme	All Learners	Nurses
Communication Strategies	<ul style="list-style-type: none"> How to talk with vaccine-hesitant families Presumptive language, CASE/RULE models, motivational interviewing Word choice, empathy, and trust-building 	<ul style="list-style-type: none"> How to talk with hesitant parents and caregivers Presumptive language, CASE/RULE models Word choice, empathy, and conversation framing
Understanding Vaccine Hesitancy	<ul style="list-style-type: none"> Drivers and barriers (5Cs/4Cs) Role of misinformation and social media Spectrum of hesitancy rather than outright refusal 	<ul style="list-style-type: none"> Identification of key drivers and barriers (5Cs/4Cs) Recognition that hesitancy exists on a spectrum Awareness of misinformation and trust issues influencing parents
Data, Statistics & Trends	<ul style="list-style-type: none"> Vaccination rates, exemption trends, outbreak data Hospitalization and mortality statistics Visual data (graphs/maps) to support patient education 	<ul style="list-style-type: none"> Vaccination and exemption rates Trends in under-vaccination Use of statistics and visuals to support patient education
HPV-Specific Knowledge	<ul style="list-style-type: none"> Importance of HPV vaccination in males Lagging uptake and cancer prevention benefits Population-level impact of improved coverage 	<ul style="list-style-type: none"> Importance of HPV vaccination, especially in males Lagging uptake and cancer prevention implications
Impact of Under-Vaccination	<ul style="list-style-type: none"> Severity of measles and pertussis Infant hospitalization and mortality risk Community and herd immunity effects 	<ul style="list-style-type: none"> Severity of measles and pertussis Hospitalization and mortality risks
Equity & Access Considerations	<ul style="list-style-type: none"> Racial/ethnic disparities School-based and community access strategies 	<ul style="list-style-type: none"> Racial/ethnic disparities Access and underserved populations

Nurse Feedback

"This education armed me with discussion tools to have with parents who have vaccine hesitancy."

"Understanding the reasons behind hesitancy will help me frame my conversations with hesitant parents."

"Educating parents and listening to their concerns is key to getting people vaccinated."

"I now have a greater awareness of how to explain the importance of vaccination to my patients so that they trust my knowledge."

- Communication + hesitancy understanding dominate both groups, accounting for:
 - ~45% of all learners
 - ~34% of nurses
- Nurses emphasize practical application (how to talk, what to say) more than disease severity.
- HPV content resonates more strongly in the broader learner group, suggesting role-based exposure differences.
- Data and statistics remain a high-value tool across both audiences, reinforcing the importance of evidence-based messaging.

Conclusions

- Building Confidence for Vaccine Conversations**
Increased nurse confidence in understanding vaccine hesitancy and applying communication strategies enhances their ability to engage families effectively, particularly in complex or underserved pediatric populations.
- Strengthening Knowledge & Clinical Competence**
Targeted, nurse-focused education resulted in significant knowledge gains and enduring competence, supporting sustained readiness among pediatric nurses to address vaccine hesitancy in practice.
- Enhancing Effective Communication Practice**
Sustained communication competence, supported by qualitative evidence of practical strategy use, indicates improved capacity for effective vaccine-hesitancy counseling among pediatric nurses.
- Targeted Education Driving Practice Change**
Targeted, nurse-focused education produces durable gains in communication competence and confidence, supporting effective, practice-ready engagement in pediatric vaccine-hesitancy conversations.