Goal:

To improve **Combo 10** vaccine rates for Tennessee children at **2 years of age** through the development of an educational and quality improvement program (IVY) for pediatric office practices.
IVY Educational Components

Develop interactive web-based modules:

• Adapted from CoVER modules
• Individualized for two groups (pediatric providers and pediatric clinical staff)
• Educate on key vaccine topics:
  – diseases, contraindications, common misconceptions, vaccine safety, communication techniques, vaccine schedules, catch up rules, exemptions, school requirements
• Each group will receive 2 modules, one primary module, and one “booster” module
  – Booster module will focus more on communication techniques and flu
IVY Quality Improvement Components

Develop in-person QI coaching session:

• Will incorporate introduction to key drivers for improved vaccination rates.
• Will structure using the 4Pillars™ Practice Transformation Program
• Will be implemented over lunch session
• Recruited practices will then select at least one improvement measure to implement.

Incentives:

• For medical office staff who complete modules will receive $10 Amazon cards/module.
• Providers who implement at least one QI measure and complete both modules will be eligible for 25 MOC4 points.
IVY Study Design

- Combo 10 vaccine rates for children turning 2 years of age in the preceding month will be collected monthly from the EHR.
- Rates be compared between practices monthly within a Stepped-Wedge Cluster Randomized Trial design (SW-CRT).
- Analysis will include full Combo 10 vaccine rates AND Combo 10 vaccine rates less influenza.

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<th>Figure 3. Stepped Wedge Cluster Randomized Trial Implementation Plan Over 13 Month Study Period</th>
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<td>Baseline Data</td>
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M1: Module 1, QI: In-person QI Coaching Session, B: Booster Module
IVY Results

- Patient population = 4041 (1788 control and 2253 intervention) / 14-month study period
  - Inclusion criteria: seen in one of the eight participating clinics at least once prior to 90 days of life and were between 24 and 25 months of age for analysis month
  - A chi-square test of the overall observed Combo 10 vaccination rates (not adjusting for trends over time or repeated measurement within clinics) indicated that they were not significantly different in the periods before and after rollout of the intervention (58.3% versus 57.0%, respectively; p=0.4).
- The prespecified primary analysis (a multilevel mixed-effects logistic regression model, adjusting for trends over time and allowing a random effect for clinic) was unable to detect a statistically significant intervention effect on vaccination rate (OR=1.01; 95% CI [0.76, 1.34]; p>0.9).
- Secondary outcome analysis of Combo 10 vaccination rates without influenza using a chi-square test indicated a significant difference in the rates before and after rollout (70.4% versus 74.4%, respectively; p=0.004).