



Advancing High Performance Health

AMGA Foundation

Adult Immunization (AI)
Best Practices Learning
Collaborative, Group 2:
Case Study

***Austin
Regional Clinic
Austin, TX***



Organizational Profile

Austin Regional Clinic (ARC) was founded in 1980 by family practitioner Norman H. Chenven, M.D., who invited pediatricians Thomas Zavaleta, M.D., and Carol Faget, M.D., to join him in establishing what is now one of the largest multispecialty group practices in the Greater Austin metropolitan area. Their original mission then, as it is today, was to provide access to quality, affordable health care.

ARC cares for 471,000 patients, or almost 25% of the Greater Austin-area residents. Its 24 clinic locations are located throughout Austin and several adjacent cities. It employs approximately 300 providers, with 120 adult primary care physicians, 60 pediatricians, 30 “same day” urgent care physicians, and a team of seven advance practice nurses on the Medicare Wellness team.

ARC’s Population Health and Clinical Quality (PHCQ) department is responsible for improvement initiatives and operationalizing the system-level changes that are needed for success under changing reimbursement models. The department provides a patient-centered model of health care through an organized system of communication and a proactive approach to care. It has designed, piloted, and scaled several approaches to accomplish the goal of improved care coordination, including:

- Hospital transitions service
- Reminder calls about upcoming or needed appointments
- Coordinated care with other health professionals and services
- Team support for chronic conditions, such as asthma, diabetes, or high blood pressure
- Patient outreach

The PHCQ department also directs analytics, measurement, and reporting; it also oversees quality improvement (QI) activities such as AMGA’s Adult Immunization Best Practices Learning Collaborative (AI Collaborative).

Executive Summary

ARC has a data-driven improvement culture in which providers and staff gain performance insights through review of quarterly scorecards and project-specific ad hoc reports. The organization has piloted a financial bonus system that rewards quality care, as determined by performance on clinical quality measures. Therefore, primary interventions for the AI

Acronym Legend

AI Collaborative: AMGA’s Adult Immunization Best Practices Collaborative

APRN: Advanced practice registered nurse

BPA: Best practice alert

CDC: Centers for Disease Control and Prevention

EMR: Electronic medical record

HP2020: Healthy People 2020

PCV: Pneumococcal Conjugate Vaccine

PPSV: Pneumococcal Polysaccharide Vaccine

PHCQ: Population Health and Clinical Quality

QA: Quality assurance

QI: Quality improvement

UI: User interface

Collaborative focused on building department-specific quality measures that addressed immunizations.

The team prioritized two cohorts for the new immunization measures:

- Medicare Wellness advanced practice registered nurses (APRNs), whose patient panels are almost exclusively comprised of individuals over age 65. This team conducts approximately 8,000 Medicare Wellness visits per year
- Allergy/asthma providers, who see patients who are likely to have diagnoses that make them eligible for the “high-risk” and “at-risk” pneumococcal measures. (ARC does not have a pulmonology department)

A second category of interventions involved optimizing electronic medical record (EMR) workflows:

- The EMR team created decision support reminders to prompt physicians and clinical staff when a patient is due for a flu vaccine
- The team also added pneumococcal vaccination reminders to a workflow that had been designed for drop-in flu clinics

ARC saw modest, incremental improvement in the three measures it chose to track. While no single intervention led to significant “jumps” in performance, the organization benefited from consistent internal communication around the AI Collaborative. This approach suggests both an opportunity and a limitation: Because ARC has a centralized QI team that works across 24 clinic locations, small-scale pilots and “tests of change” are usually not feasible. System-level interventions,

such as EMR decision support, achieve scale, but they often lack insights and input from front-line clinicians and staff.

Program Goals and Measures of Success

The AI Collaborative goals were set by AMGA Foundation based on reviewing the Healthy People 2020 goals from the federal office of Disease Prevention and Health Promotion (HP2020)¹, baseline data for each group, and with input from the AI Collaborative advisors; see Appendix.

ARC's goals for participation were improvement on the measures and development of QI infrastructure.

Data Documentation and Standardization

The ARC analytics team used the AI Collaborative measure specifications to develop and test data extraction queries. Immunization data is stored in multiple locations in the EMR and data warehouse (e.g., claims, data from external sources, locally documented immunizations). The quality assurance (QA) process confirmed that the measure calculation included all available data.

Population Identification

Adult immunizations are administered at all 24 clinic locations. ARC's Medicare Wellness team is especially engaged with pneumococcal immunizations due to the patient demographics (the majority are over age 65) and the fact that the typical Medicare Wellness visit focuses on preventive care interventions that are often overlooked during acute visits.

In other primary care encounters, patients are identified for vaccinations through EMR prompts that take into account demographic and clinical variables.

Interventions

At the outset of the AI Collaborative, ARC already had implemented several system-wide strategies to improve immunization rates. These included:

- Best practice alerts (BPAs) for flu and pneumococcal vaccines
- Notification when patients received vaccines at community pharmacies
- Flu clinics

- Patient reminders via patient portal
- "Care gap" calls from a centralized outreach team

Based on previous experiences with improvement initiatives, ARC learned that performance data is a prerequisite to motivate provider engagement. Therefore, despite an engaged project team that explored several ideas for smaller tests of change (e.g., immunization fact sheets on clipboards and screensavers), ARC's primary interventions consisted of introducing pneumococcal immunization rates on the Medicare Wellness (over 65) and allergy/asthma (high-risk) scorecards. While the allergy/asthma initiative was put on hold due to technical resources, the Medicare Wellness measure followed a carefully considered sequence:

1. **Background and buy-in.** PHCQ staff met with Medicare Wellness APRNs to discuss the importance of pneumococcal immunizations for patients over age 65. The Medicare Wellness team was largely aware of the clinical rationale behind the recommendations, so additional information essentially reinforced practice patterns. However, by including the medical assistants in the education and outreach, the Adult Immunization team reinforced the importance of the roles that all clinical staff can play in educating patients about immunizations.
2. **Measure development.** Using the AI Collaborative measure specifications, ARC's analytics team created attribution logic to associate patients with Medicare Wellness APRNs. The Clinical Quality team also created a "one-pager" that explained denominator and numerator variables using non-technical language.
3. **Measure roll-out.** Medicare Wellness providers received their individual scores as well as a "blinded" bar graph showing all department scores. Providers who had questions about their scores were able to review charts in order to confirm numerator and denominator status.
4. **Measure incentives and increased transparency.** After the Medicare Wellness providers had become comfortable with the measure process and the "behind the scenes" calculations, the team added a financial incentive to performance. Also, the analytics team "unblinded" the performance bar graph so that individuals could see others' names. While there are arguments against this level of transparency, the PHCQ team determined that seeing names would increase motivation and also encourage individuals to approach high-performing colleagues for practice tips and strategies.

ARC also implemented an intervention to improve pneumococcal vaccination in its high-risk population. During flu season, ARC holds flu clinics where patients can receive influenza immunizations. These clinics are fast-paced and high-volume, enabled by a streamlined EMR workflow and user interface.

The PHCQ team worked with EMR analysts to add an alert for high-risk patients who were due for a pneumococcal vaccine. Using AI Collaborative measure specifications and user requirements developed by the AI project team, EMR developers built logic that identified high-risk patients based on clinical and demographic factors. The new workflow added a “flag” to a patient record so that nurses could quickly see which patients were candidates for the pneumococcal vaccine.

The AI project team faced several challenges when implementing the “flu-pneumo” process. The flu clinics are fast-paced and high-volume. Therefore, they rely on a routinized workflow, and any new steps or activities can cause confusion or delays. Because these patients were younger than 65, many of them were not aware of indications for pneumococcal vaccination. Therefore, the nurses staffing the flu clinics had to provide education. These conversations were often time consuming. In addition, because the user interface “flag” did not indicate the diagnosis that triggered the flag, patient education often required navigation to additional EMR screens to search for relevant diagnoses.

User acceptance was, predictably, mixed. Some nurses did not mind the additional steps and appreciated the opportunity to provide this additional service to patients. Other users voiced frustration with the workflow and user interface (UI) changes and reported that educating patients was challenging. After considering both perspectives, ARC will continue the “flu-pneumo” clinics in forthcoming flu seasons.

Outcomes and Results

Due to staffing changes in the analytics team, ARC was not able to “drill down” into the results to identify clinics, providers, or sub-populations that showed notable changes. However, all three measures that ARC tracked showed improvement from baseline.

Measure	Baseline Rate	Q5 Rate
Pneumococcal (any) immunization for adults aged ≥65	70.7%	73.0%
Both PPSV and PCV immunization for adults aged ≥65	33.0%	42.9%
Pneumococcal (Any) immunization for adults aged 19-64 with high-risk conditions	26.8%	28.9%
Influenza immunization, age ≥18	27.2%	28.8%

Lessons Learned and Ongoing Activities

ARC is in the midst of a transition with regard to its approach to improving quality, and the experience with the AI Collaborative provides illustrative examples of challenges and suggestions for evolution.

The organization’s data-driven improvement culture has been based on periodic production and distribution of provider scorecards containing a short list of clinical quality measures. This approach has been effective in establishing baseline performance and identifying opportunities for improvement.

However, “moving the needle” through more focused and, in some cases, experimental interventions requires a level of front-line collaboration and co-design that ARC’s infrastructure currently does not support. It also requires a more focused analytics strategy that progresses from static, quarterly reports, to dynamic, as-needed queries that can drill down to patient sub-populations and also identify performance changes at the clinic or provider level.

References

1. Office of Disease Prevention and Health Promotion (ODPHP). Healthy People 2020. healthypeople.gov

Collaborative Goals

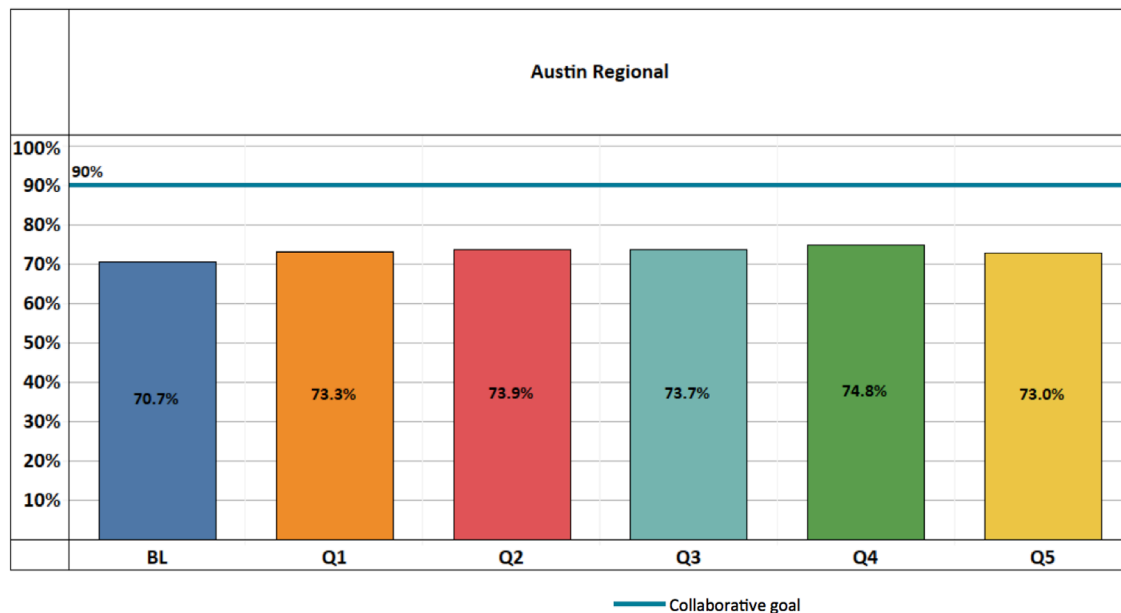
Measure	Healthy People 2020	Collaborative Goal
Measure 1 (65+) Any	90%	90%
Measure 1 (65+) Both PPSV and PCV*	90%	60%
Measure 2 (High-Risk)	60%	45%
Optional Measure 2a (At-Risk)**		
Measure 3 (Flu)	70%/90%***	45%

* Increasing “Both” is a good goal for Groups which are already doing well on “Any”

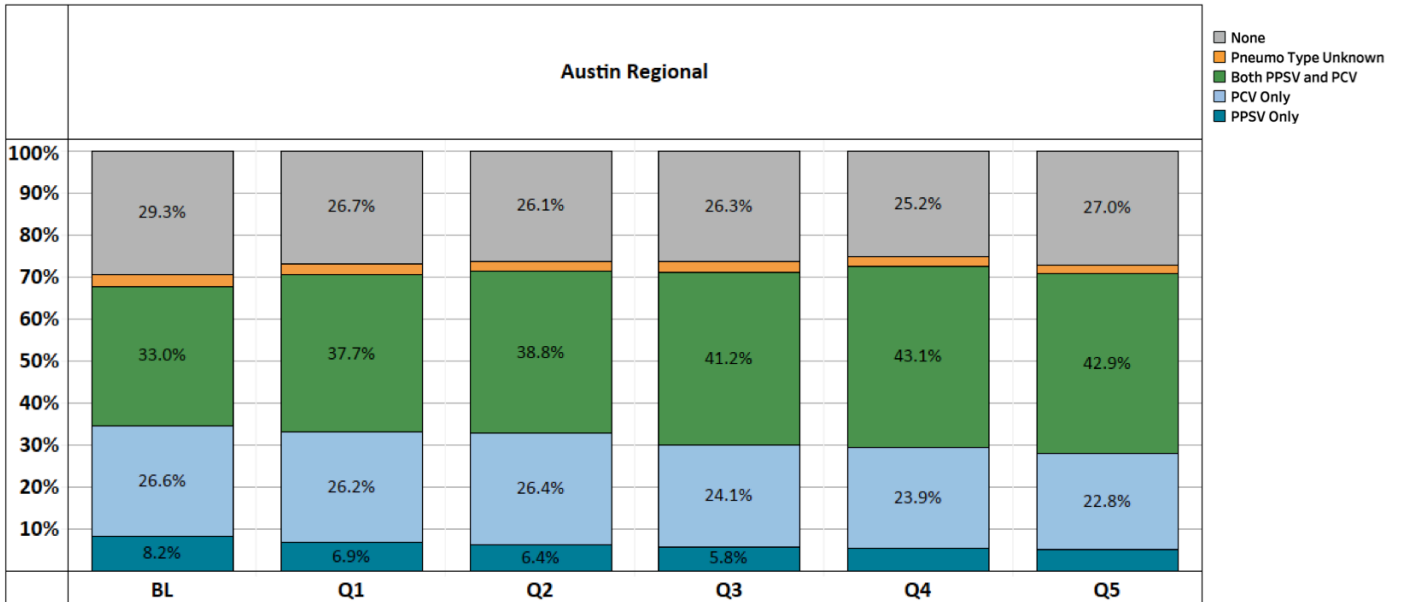
** According to CDC guidelines, it is not currently recommended that the at-risk population receive PCV. Therefore, “PPSV” or “Unknown pneumococcal vaccination” are numerator options for Measure 2a.

*** 70% for all patients, 90% for Medicare patients

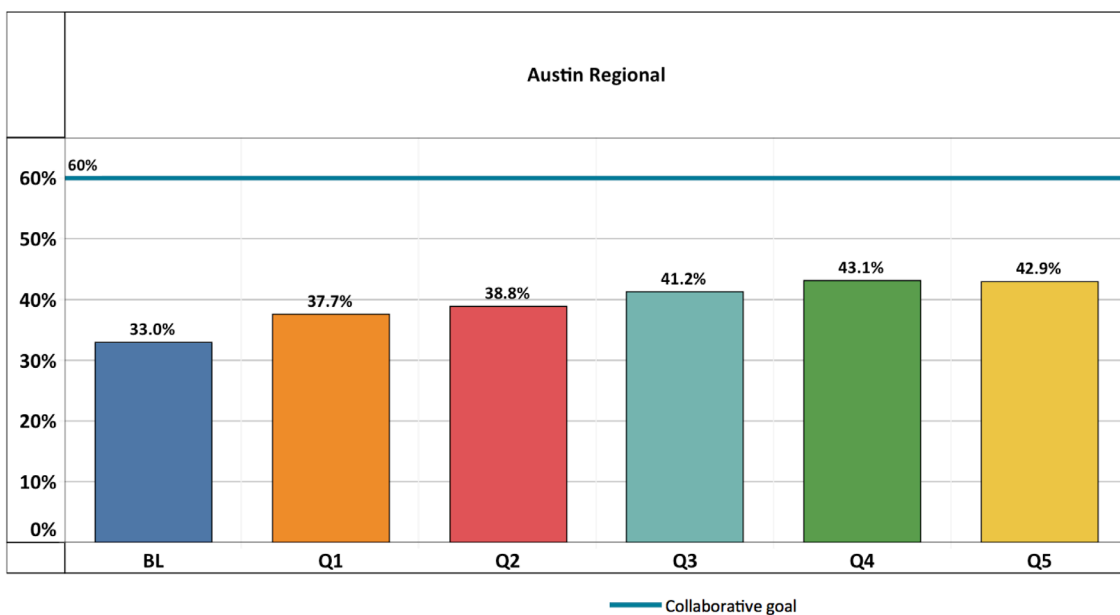
Measure 1 – Pneumococcal (Any) Immunization for Adults Ages ≥ 65



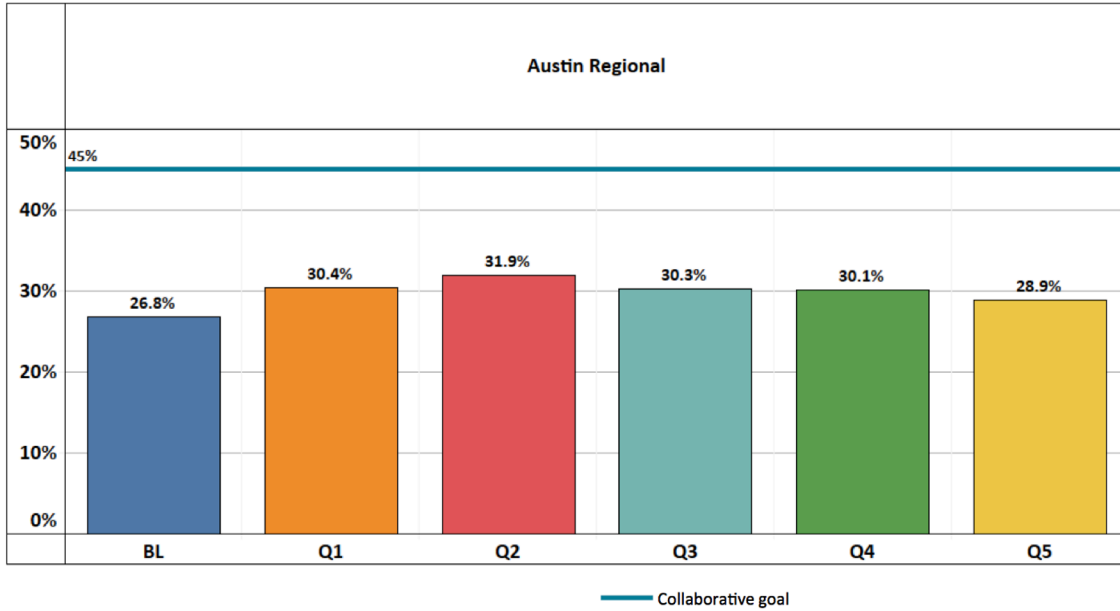
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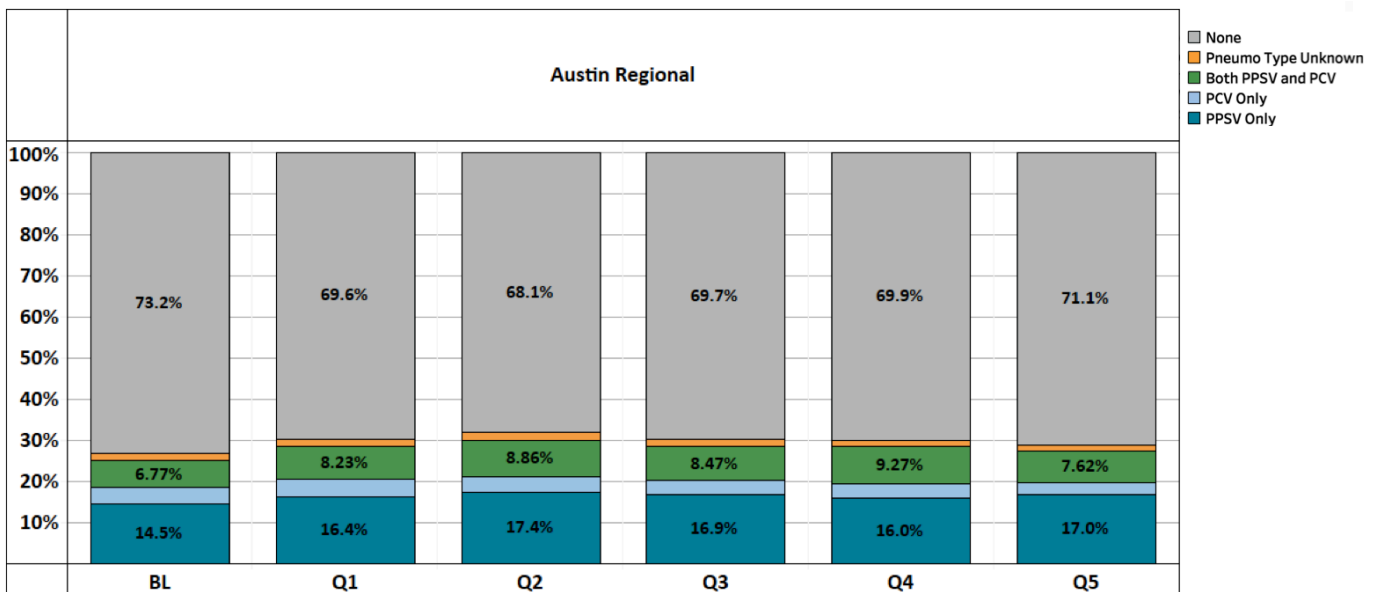
Measure 1 – Both PPSV and PCV Immunization for Adults Ages ≥ 65



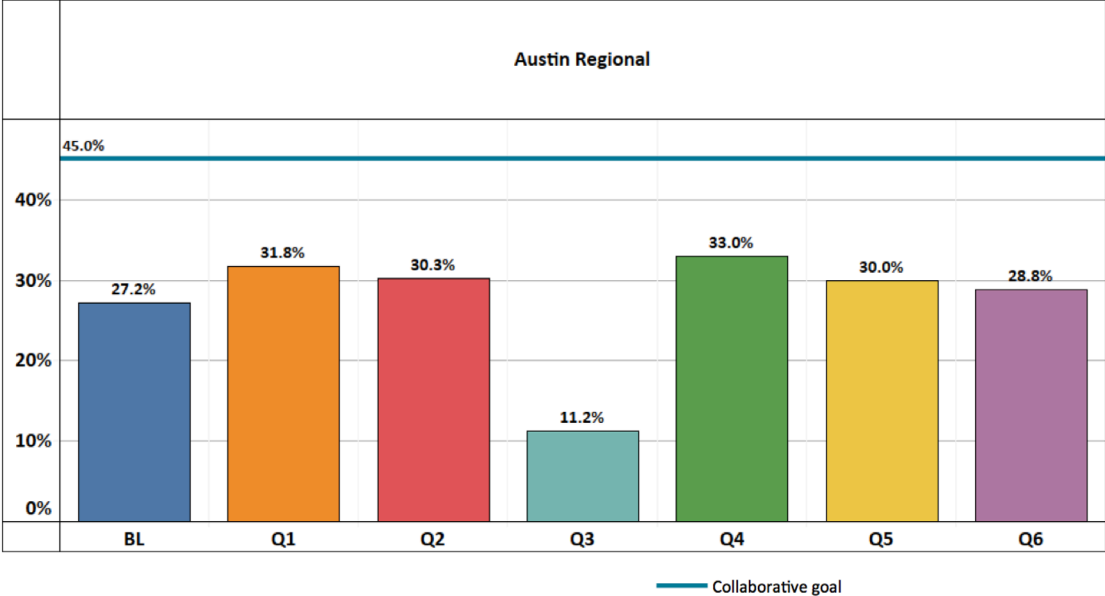
Measure 2 – Pneumococcal (Any) Immunization for Adults Ages 19–64 with High-Risk Conditions



Measure 2 – Pneumococcal (Any) Immunization for Adults Ages 19–64 with High-Risk Conditions



Measure 3 – Influenza Immunization, Age ≥ 18



Project Team

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