AMGA

Advancing High Performance Health

AMGA Foundation

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

Sanford Health

Sioux Falls, SD

Organizational Profile

Sanford Health, one of the largest health systems in the United States, is dedicated to the integrated delivery of health care, genomic medicine, senior care and services, global clinics, research and affordable insurance. Headquartered in Sioux Falls, South Dakota, the organization includes 44 hospitals, 1,400 physicians and more than 200 Good Samaritan Society senior care locations in 26 states and nine countries. Nearly $1 billion in gifts from philanthropist Denny Sanford have transformed how Sanford Health improves the human condition.

Executive Summary

Every year, many people are affected by influenza and pneumococcal disease. Although vaccines are available to prevent these diseases, many individuals have not been vaccinated and are left unprotected. Sanford Health has been working hard to make improvements in vaccination rates for all patients. AMGA's Adult Immunization Best Practices Learning Collaborative (AI Collaborative) provided an opportunity to focus on better protecting adult patients. Seven of Sanford Health's clinics were selected to participate in the AI Collaborative.

Key interventions for Sanford included:

- Staff education
- Reminder letters
- Incentive program

Sanford Health has over 100 primary care sites. Due to competing projects, Sanford Health elected to enroll seven of its internal medicine clinics in the AI Collaborative. Internal medicine is a specialty that focuses on routine and preventive care for adult patients. Previously, Sanford Health's internal medicine clinics had not participated in immunization-related projects. Data indicated that there was a need to do a better job of protecting patients from vaccine preventable diseases. Education was provided to remind staff about vaccine preventable diseases, the different vaccines available, Centers for Disease Control and Prevention's (CDC) routine immunization schedule, electronic medical record (EMR) enhancements to help identify patients overdue for vaccination, and transition to a "no missed opportunities" culture.

The project kicked off with education to both clinicians and nursing staff. Participants were educated on disease state, the two types of pneumococcal vaccines, and the adult vaccination schedule. Staff were also educated on the transition to a "no missed opportunities" culture. A "no missed opportunities" culture means that vaccines are administered at all visit types—not just complete physical exams. The second intervention utilized was distribution of reminder letters to patients overdue for pneumococcal vaccination. Lastly, an incentive program was instituted to provide compensation to the clinic that saw the greatest increase in pneumococcal conjugate (PCV13) vaccination rates, for patients aged 19 to 64 years with high-risk conditions.

Sanford Health aligned with the recommendation to focus on adult vaccines, but with a particular emphasis on improving influenza and pneumococcal vaccination rates. Sanford Health had a total of 38 providers and 24 residents included in the AI Collaborative. Baseline data revealed that the seven internal medicine locations included a total of 11,386 patients overdue for influenza vaccination and over 7,500 patients overdue for pneumococcal vaccination.

Acronym Legend

AI Collaborative: AMGA's Adult Immunization Best Practices Collaborative

CDC: Centers for Disease Control and Prevention

EMR: Electronic medical record

HM: Health Maintenance

PCV13: Pneumococcal Conjugate Vaccine

PPSV23: Pneumococcal Polysaccharide Vaccine

QA: Quality assurance

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).

Sanford Health's overarching goals were:

- To help staff recognize the importance of adult vaccines
- To increase influenza and pneumococcal vaccination rates for participating clinics
- To meet or exceed the AI Collaborative goals

Data Documentation and Standardization

The Sanford Health 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

Out of Sanford Health's 291 clinics, seven internal medicine clinics were selected to participate in AMGA's AI Collaborative. Of these seven clinics, two were in Minnesota, four were from North Dakota, and the women's internal medicine clinic is in South Dakota.

Sanford Health's electronic health record, Epic, provides vaccine reminders for patients of all ages. These reminders assist patients, nurses and providers with knowing when a patient is due or overdue for a vaccine. Additionally, this prompt, termed "health maintenance," was utilized to assist in targeting reminders for patients who were overdue for influenza and/or pneumococcal vaccine.

Intervention

Sanford Health's first intervention involved education of clinical staff. Educational topics included disease state, vaccines available, CDC's adult vaccination schedule, EMR tools, and a "no missed opportunities" culture. As mentioned previously, interventions utilized in this project included the dissemination of reminder letters to patients overdue for pneumococcal vaccination. Historically, reminder letters resulted in clinics seeing an increase in patients presenting to the clinic for vaccination. Contrary to previous experience, the seven internal medicine clinics did not see an influx of patients presenting for pneumococcal vaccination after reminder letters were distributed. Potential reasons for this difference could be age and/or patients choosing to receive this vaccine at the local pharmacy rather than the clinic.

Sanford Health has both an age- and condition-driven EMR notification for pneumococcal vaccination. This reminder notification lives in the "health maintenance" section of Sanford Health's EMR. Due to the complexity of the pneumococcal vaccination schedule, EMR notification of patients overdue for the vaccination is an undeniable value. When the pneumococcal Health Maintenance (HM) topic was turned on, initial cleanup of the high-risk conditions was needed. At first, the pneumococcal group included conditions that were not indicated as a high-risk diagnosis. After working to discard conditions that should not have been included, the health maintenance section of the EMR was more accurate and staff grew to rely on the reminder notifications.

An incentive program was utilized to obtain buy-in from clinic staff. The clinic that had the greatest percentage increase for PCV13 for 19 to 64-year-old patients with high-risk conditions would be named the winner. Gains in this target group appear to be difficult with Sanford Health's winning clinic seeing only a 10% increase. Potential implications for the difficulty of raising this rate include routine visits at specialty clinics, thus preventing the patients from following up with their primary care provider. Sanford Health has the opportunity to ensure specialists caring for these at-risk and high-risk populations are stocking and encouraging vaccination. Additionally, there is a potential need to educate specialty clinical staff on medical conditions that constitute the need for pneumococcal vaccination prior to the age of 65. It was identified that some clinicians had disbelief in the need to vaccinate some of the younger, at-risk patients (i.e., a 20-year-old diabetic patient). Additional education and training was necessary for providers with this thought pattern.

Baseline data demonstrated that Sanford Health was meeting the AI Collaborative's goal of 90% pneumococcal vaccination rate for patients aged 65 and older. There was a slight drop in pneumococcal coverage for 65+ year-old patients during the AI Collaborative. However, the seven participating clinics saw an increase of 11.3% for the number of 65+ year-old patients who had received both pneumococcal polysaccharide vaccine (PPSV23) and PCV13.

Outcomes and Results

The AI Collaborative's pneumococcal vaccination goal for 19 to 64-year-old patients with high-risk conditions was 45%. This measure was based on the referenced patient population having proof of either PPSV23 or PCV13. Sanford Health saw a 18.2% decrease in pneumococcal naïve high-risk patients. Sanford Health opted to participate in Measure 2a, which tracked receipt of PPSV23 for 19 to 64-year-old patients with at-risk conditions. Sanford Health's internal medicine clinic saw an 18.1% increase in vaccination rate for these at-risk

patients. The overall pneumococcal vaccination rate for 19 to 64-year-old at-risk patients was 54.3%. The AI Collaborative's vaccination goal for Influenza was 45%. Sanford Health consistently surpassed the set goal of 45% for 18+ year-old patients who had received an influenza vaccine during the influenza season with the highest rate of 70.4% during the first quarter.

Lessons Learned and Ongoing Activities

One of the participating clinics struggled with staffing turnover during the project period. Transition of clinicians and nursing staff can be a large barrier to the success of a program like the AI Collaborative. Success of projects with education, training, and interventions is dependent upon consistent clinical staff. Staffing turnover of these roles results in delayed education and training, as well as the implementation of interventions.

Collaboration with specialty groups who see patients with high-risk conditions for pneumococcal disease is essential. Probability exists that patients who see a specialist on a routine basis may not present for regular follow-up with their primary care provider (i.e., a diabetic patient who sees their endocrinologist every 3-6 months). Lastly, due to the complexity of the pneumococcal vaccination schedule, having an EMR reminder for at-risk and high-risk pneumococcal is imperative to the success of increasing pneumococcal vaccination rates.

References

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

Collaborative Goals

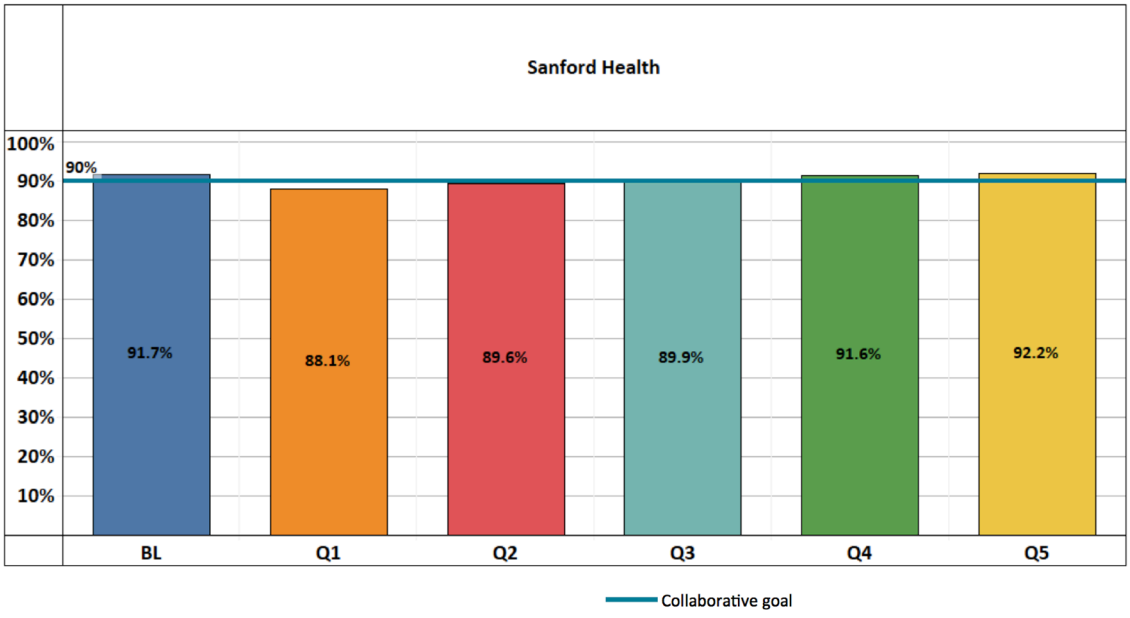
Measure	Healthy People 2020	Collaborative Goal
Measure 1 (65+) Any	90%	90%
Measure 1 (65+) Both PPSV and PCV*	90%	60%
Measure 2 (High-Risk)	60%	45%
Optional Measure 2a (At-Risk)**		
Measure 3 (Flu)	70%/90%***	45%

* 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.

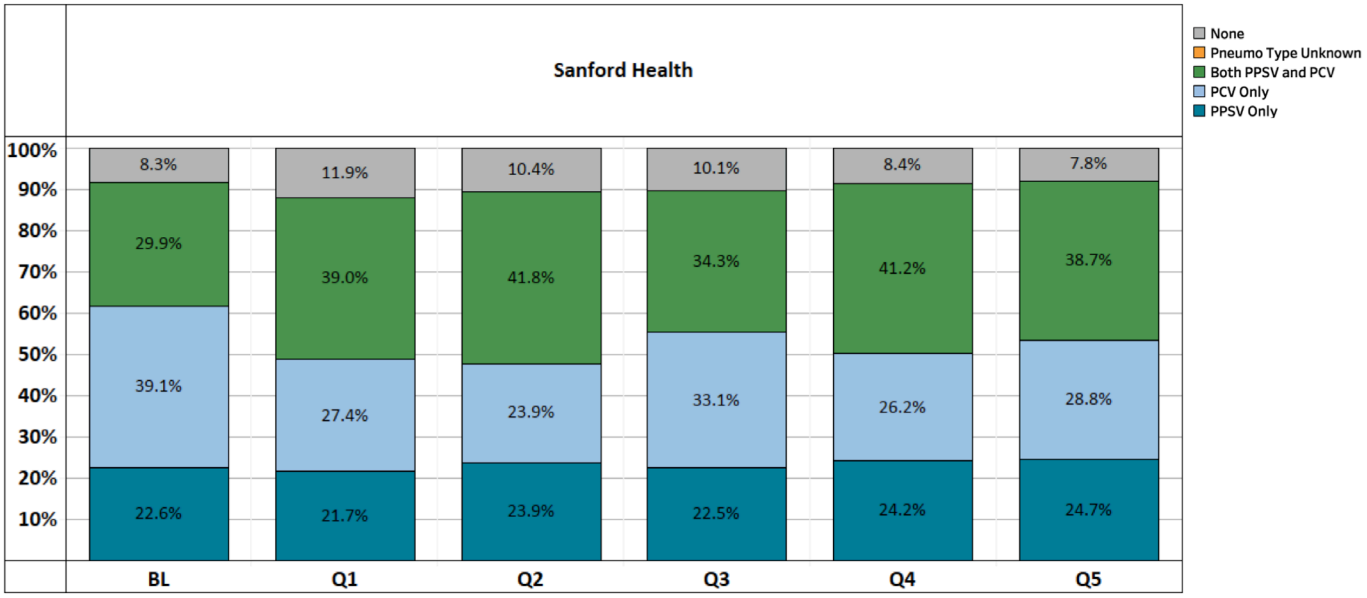
*** 70% for all patients, 90% for Medicare patients

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

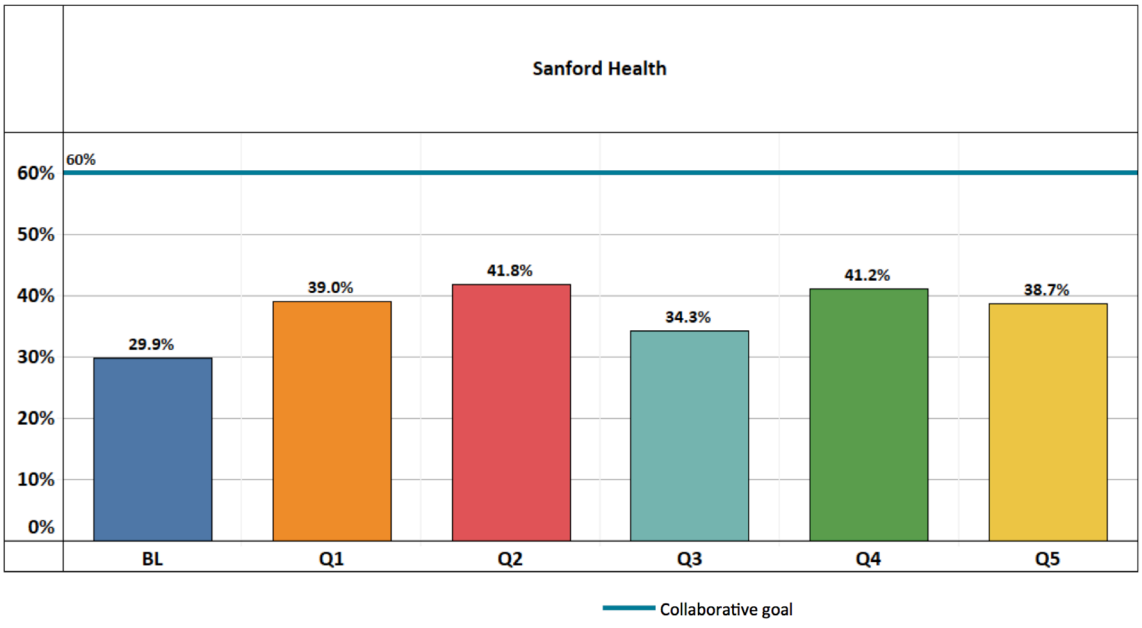


Appendix

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

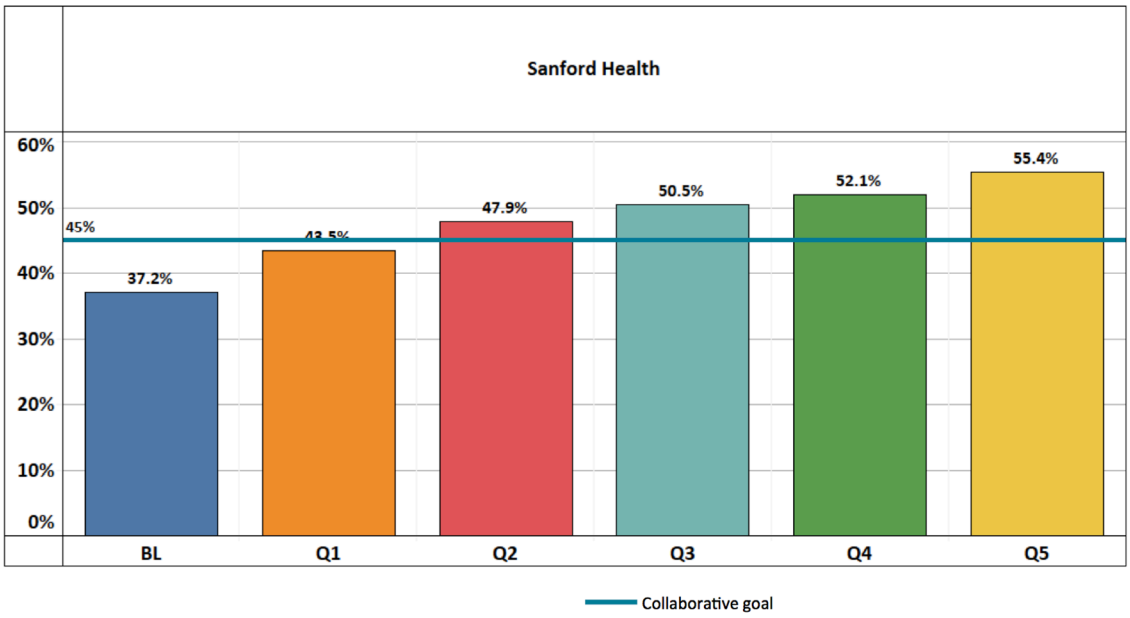


Measure 1 – Both PPSV and PCV Immunization for Adults Ages ≥ 65

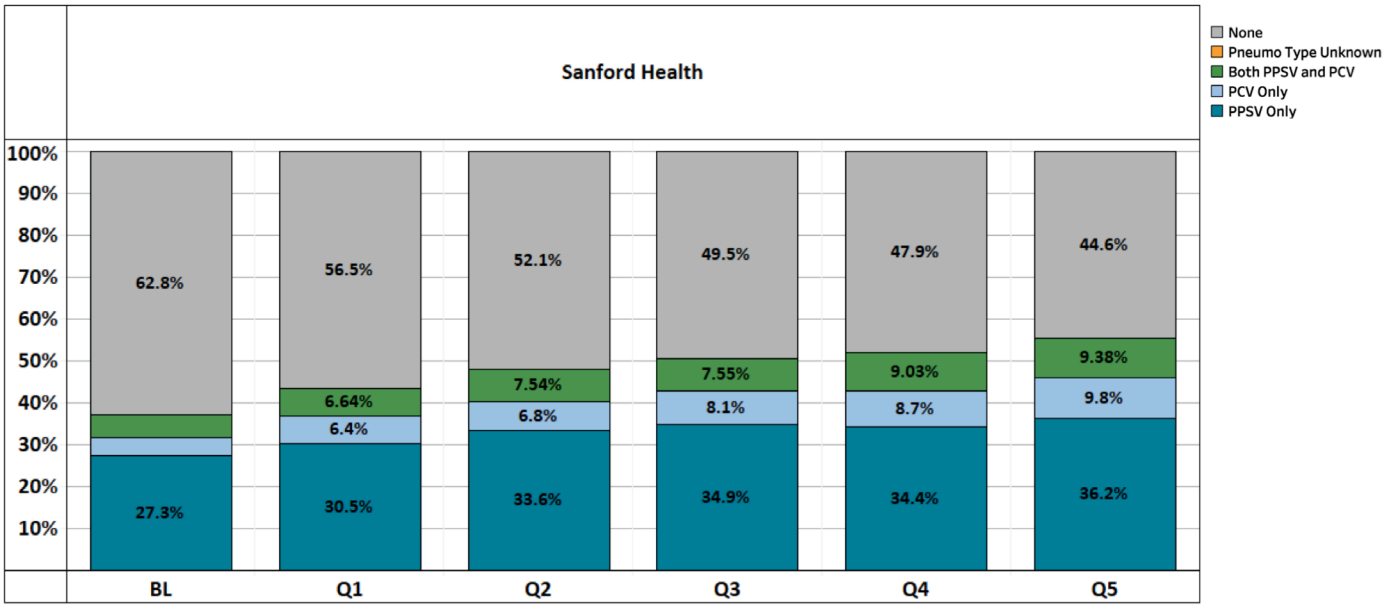


Appendix

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

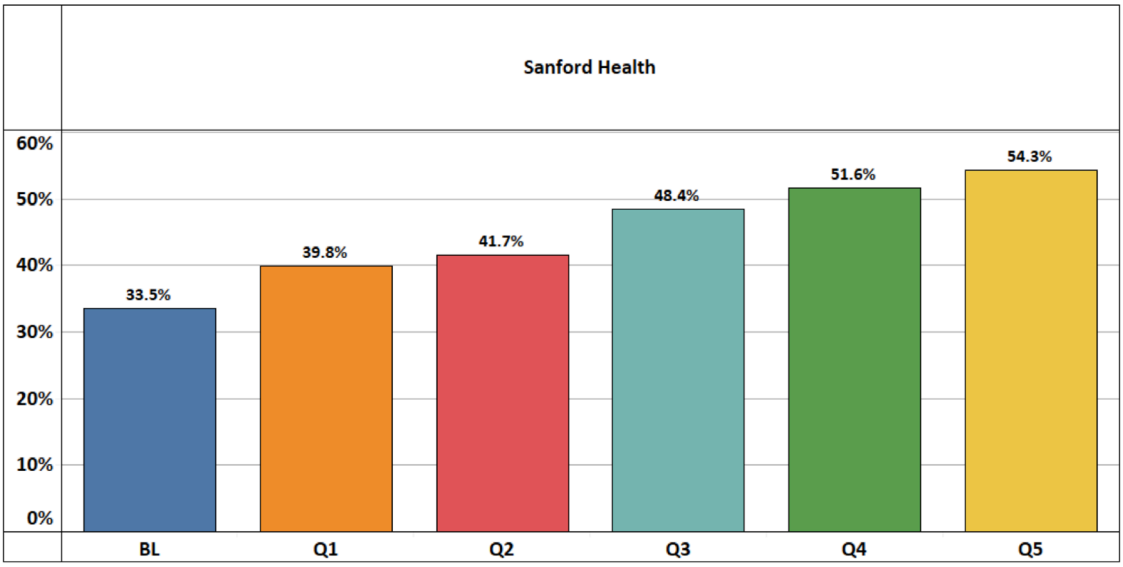


Measure 2 – Pneumococcal (Any) Immunization for Adults Ages 19–64 with High-Risk Conditions

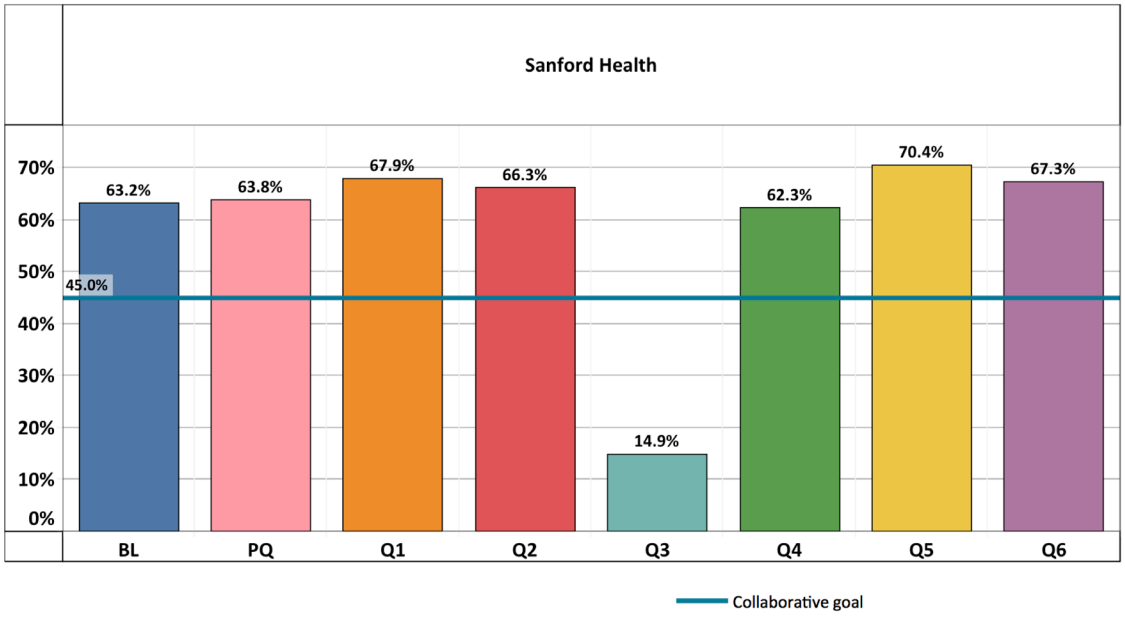


Appendix

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



Measure 3 – Influenza Immunization, Age ≥ 18



Project Team

Andrea Polkinghorn, B.S.N., R.N.
Tracy Bieber, B.S.N., R.N.
Claire Frenzel, B.S.N., RN-BC
Melodi Krank, B.S.N., RN-BC
Brittany Sjolie, B.S.N., R.N.

Tania Brost, B.S.N., R.N.
Jodi Gallagher, B.S.N., R.N.
Jane Hjelden, B.S.N., R.N.-BC
Kathleen Koppinger, Senior Director
Amy Magnuson, B.S.N., R.N.-BC, PHN
Sara Miller, B.S.N., R.N.

Kimberly Nicholls, M.S.N., R.N.
Denise Nilsen, M.S.N., R.N.
Karoliina Slack, Director
Jessica Stenen, BAN, R.N.
Holly Sturtz, ADN, R.N.

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AMGA Foundation

One Prince Street
Alexandria, VA 22314-3318

amga.org/foundation

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