



Advancing High Performance Health

AMGA Foundation

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

---

***Kelsey-Seybold  
Clinic***  
*Houston, TX*



## Organizational Profile

Kelsey-Seybold Clinic (KSC) was established in 1949 by founder Mavis P. Kelsey, MD. Modeling the Mayo Clinic, the organization was the first of its kind in the Houston area to bring together specialists, general practitioners, nurses, and other health providers as a team to provide multispecialty treatment within the Houston Medical Center.

Six decades since its inception, the organization has witnessed tremendous growth and now spans the Greater Houston and surrounding areas to include 19 clinics, two Ambulatory Surgery Centers (ASCs), and one of the first freestanding cancer centers within its region. KSC employs more than 360 full-time equivalent physicians encompassing more than 55 specialties with more than one million visits annually. Approximately 50% of KSC's business is primary care.

## Executive Summary

AMGA's Adult Immunization Best Practices Learning Collaborative (AI Collaborative) was started as a way to help organizations improve their immunization compliance. There are three measures that were analyzed:

- Pneumococcal coverage for patients > 65
- Pneumococcal coverage for patients aged 19-64
- Influenza coverage for patients > 18

Collaboration with the other participating groups allowed KSC to optimize lessons learned based on the successes and failures of many instead of just one. Pilot Collaborative (Group 1) brought together seven AMGA Analytics member organizations from February 2015 to April 2016. These organizations collaborated to improve adult immunization rates for pneumococcal and influenza, thereby reducing the clinical and economic burden of these vaccine-preventable diseases. AMGA Foundation expanded on the successful pilot collaborative into two new groups of participating organizations, Groups 2 and 3. KSC was a part of Group 2. This group of participating organizations began their work in April 2017.

Throughout the course of the AI Collaborative, KSC put several initiatives into place to improve the vaccine compliance rates:

- Staff education
  - Mandatory annual immunization modules, influenza campaigns, and flu quizzes to help increase staff knowledge

## Acronym Legend

**AI Collaborative:** AMGA's Adult Immunization Best Practices Collaborative  
**ASC:** Ambulatory Surgical Center  
**BPA:** Best Practice Alert  
**CDC:** Centers for Disease Control and Prevention  
**EMR:** Electronic Medical Record  
**HP2020:** Healthy People 2020  
**IMS:** Internal Medicine Subspecialties  
**KSC:** Kelsey-Seybold Clinic  
**MKO:** MyKelseyOnline  
**PCV13:** Pneumococcal Conjugate Vaccine  
**PPSV23:** Pneumococcal Polysaccharide Vaccine  
**QI:** Quality Improvement

- Talking points
  - Developing talking points for staff to help them strike up conversations with patients on the importance of immunizations
- Best Practice Alerts (BPAs) extension
  - Extending BPAs for vaccines to include internal medicine subspecialties (IMS) like:
    - Cardiology
    - Pulmonary
    - Endocrinology, etc.
- Patient Outreach
  - Flu and pneumonia outreach to general population via the MyKelseyOnline (MKO) patient portal
  - Flu and pneumonia outreach specifically targeting the Hispanic and African-American populations
  - MKO flu outreach
  - Mail-out for those patients who did not use MKO

Outcomes:

- Pneumococcal coverage (≥65 years of age)
  - KSC baseline (calendar year 2016) was 89% in comparison with the AI Collaborative goals of 90%. For the first quarter of 2018, KSC was at 88%. The highest rate reached during the AI Collaborative was 89%.

- Pneumococcal coverage for high-risk patients (aged 19 to 64)
  - KSC baseline (calendar year 2016) was 45% in comparison to the AI Collaborative goal of 45%. For the first quarter of 2018, KSC was at 47%. The highest rate reached during the AI Collaborative was 48%.
- Influenza coverage (≥18 years of age)
  - KSC baseline (July 1, 2015-June 30, 2016) was 47% in comparison to the AI Collaborative goal of 45%. For the second quarter of 2018, KSC was at 53%. The highest rate reached during the AI Collaborative was 57%.

## Program Goals and Measures of Success

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

Going into this collaborative, KSC had several goals and objectives. When asked for their feedback on how to improve immunization compliance, one of the big things that was heard from staff regarded some of their fears and anxiety associated with giving vaccinations. Some staff felt uncomfortable with the idea of “pressing” patients on immunizations and frankly were not too sure on how to get the conversation started. Based on this, KSC knew they had to develop a script or key talking points. This would enable staff to engage the patient/caregiver in a conversation that would help them to make an informed decision about immunizing while also helping the staff feel more confident approaching the patient/caregiver.

Along the same lines, the organization wanted to improve the knowledge of their staff by refreshing their understanding on the importance of being immunized. Through initial conversations, it was discovered that there were still misconceptions around immunizations, such as believing a person can get the flu from the influenza vaccine. For this reason, KSC wanted to come up with ways to help dispel these myths.

KSC also wanted to establish an annual automated outreach program for pneumococcal and influenza immunizations that utilized both a focused and broad-spectrum approach. From this, the organization had a way of following up with patients

who were non-compliant with their immunizations. Finally, KSC wanted to expand current BPAs for pneumococcal vaccination to include IMS.

For some time, KSC has seen disparities in health outcomes between races/ethnicities. KSC saw the AI Collaborative as a wonderful chance to begin fighting toward decreasing those disparities, so the organization wanted to do an outreach to hit particular patient populations.

## Data Documentation and Standardization

Data collected by KSC was gathered through two means: utilizing immunization data from the patients’ chart as well as pulling claims data. Both are captured in tables within their data warehouse. They were then able to abstract patient data using Microsoft SQL Server database management system. KSC’s Quality Improvement (QI) team has two analysts that are highly skilled with SQL report writing and were the individuals who gathered and analyzed the data for the purpose of this collaborative based on the specifications laid out by AMGA.

## Population Identification

Quarterly reports were generated utilizing both clinical and claims data from KSC’s Epic EMR (electronic medical record) system, capturing data from all 19 clinic locations for the following measures:

Pneumococcal Compliance (Measure 1):

- Numerator: All denominator patients who received pneumococcal polysaccharide vaccine (PPSV23), pneumococcal conjugate vaccine (PCV13), or both pneumococcal vaccines
- Denominator: All patients ≥65 who had a face-to-face visit during the reporting period

Pneumococcal Compliance (Measure 2):

- Numerator: All denominator patients who received PPSV23, PCV13, or both pneumococcal vaccines
- Denominator: All patients aged 19-64 who had a face-to-face visit during the reporting period and had at least one high-risk diagnosis on an outpatient visit or problem list prior to or during the reporting period

### Influenza Compliance (Measure 3):

- Numerator: All denominator patients who had evidence of an influenza immunization anytime on or between the first and last date of the influenza season during which the reporting period falls
- Denominator: All patients  $\geq 18$  who had a face-to-face visit during the reporting period

## Intervention

Once the AI Collaborative began, KSC started working toward its established goals. To empower clinical staff to strike up conversations with patients about getting their immunizations, key talking points were created through a collaboration between the clinical education department and the Immunizations Committee. The talking points were then distributed to the nursing staff, who were encouraged to practice speaking to one another. The talking points and practice caused some of the staff to feel less anxious about starting a conversation with patients.

KSC then launched a company-wide flu campaign (“Fight the Flu, It Starts With You!”) and rolled out the “Influenza True or False Quiz” that focused on flu myths and general information about the vaccine. Starting the first week of September, weekly online newsletters that highlighted questions and answers regarding the flu were sent out to staff. These weekly newsletters culminated in a quiz that took place in the last week of October. Gift cards of \$25 were awarded to five staff members who received a cumulative score of 100% on their quizzes (see Appendix). In addition to this, KSC implemented mandatory immunizations educational modules through the Kelsey University Portal that instilled staff with more in-depth knowledge of the influenza and pneumococcal vaccine (see Appendix).

Because of the importance of the influenza vaccine, KSC decided its immunization policy (Immunization for Vaccine of Preventable Diseases) should be updated, requiring employee vaccinations as a condition of hire and mandatory for all staff who have direct contact with patients unless they have a valid exemption.

To reach more patients at face-to-face encounters, KSC decided to expand BPAs reminding clinical staff to immunize eligible patients to all internal medicine subspecialties. KSC’s QI department collaborated with IT to expand current BPAs as well as update the logic (criteria that would trigger an

alert) to current Centers for Disease Control and Prevention (CDC) guidelines for high-risk and at-risk patients. They also made it so that clinical staff were not allowed to delete BPAs; the BPA would not stop firing until the clinical staff fulfilled the requirement of that particular BPA. The QI department also worked with IT to send outreach letters to non-compliant patients via the MKO patient portal for influenza noncompliance and mail for pneumococcal noncompliance. KSC first initiated pneumococcal outreach that focused on high-risk patients aged 19–64 who were not compliant with their pneumococcal vaccine.

For several years, KSC has wanted to do an intervention that focused on health disparities, specifically within race/ethnicity. It is known that health outcomes are widely different between races, such as between White, Non-Hispanics and African-Americans. For the baseline data for Measure 3, 55% of White, Non-Hispanics were compliant for their flu vaccination, compared to 41% and 45% for African-Americans and Hispanics, respectively. For this reason, KSC decided to initiate an influenza outreach that focused on health disparities found within their African-American and Hispanic populations.

## Outcomes and Results

For Measure 1, the AI Collaborative goal set by AMGA was 90%. KSC’s baseline for calendar year 2016 was 89%. For the first quarter of 2018, KSC was at 88%, with the highest rate reached during the course of the AI Collaborative being 89%. For Measure 2, the AI Collaborative goal was 45%. KSC’s baseline for calendar year 2016 was 45%. For the first quarter of 2018, KSC was at 47%. The highest rate reached during the course of the AI Collaborative was 48%. For Measure 3, the AI Collaborative goal was 45%. KSC’s baseline for influenza season 2015–2016 was 47%. For the second quarter of 2018, KSC was at 53%, with the highest rate reached during the course of the AI Collaborative being 57%.

KSC found great success with the target outreach to decrease health disparities within its African American and Hispanic patient populations. For influenza season 2015–2016, as was previously stated, 55% of White, Non-Hispanics were compliant for their flu vaccination, compared to 41% and 45% for African-Americans and Hispanics, respectively. For the most recent influenza season (July 1, 2017–June 30, 2018), KSC saw an increase to 46% and 51% for their African-American and Hispanic populations, respectively.

## Lessons Learned and Ongoing Activities

### Hurdles Crossed

- Persistence with BPAs improves compliance. When staff are allowed to delete BPAs from a patient's chart, they are often not reminded about immunizations that are due again until the next year. With the change in policy, staff are reminded each time they have an encounter with a patient and the BPA fires, indicating that patient needs to get their vaccination
- Ongoing education is necessary to ensure success with immunization rates. It is imperative that both patients and staff are educated on the importance of vaccines. Staff need to be instilled with the knowledge to talk openly about vaccinations; when your staff is not properly educated, how can they be expected to talk about that with their patients? Providing immunization talking points to staff helps them to start a conversation with the patient that in turn can increase vaccination compliance
- KSC emphasizes the necessity of having an immunization champion to stand as the leader pushing for better compliance. Because of the size of KSC's clinical system, it can be difficult to reach all employees and make sure

the company philosophy resonates across all clinics. Having that champion going to all the clinics to remind and educate staff (especially physicians) on immunizations helps to entuse staff to increase those numbers. KSC also believes that having providers as the champion is best, particularly when talking with other physicians. They are more receptive to hearing and enacting change when it is coming from a peer

Going forward, KSC plans to continue to utilize outreach letters, which will be sent out to follow up with those patients who still have not received their flu/pneumonia vaccines. These letters were found to be highly effective, especially in conjunction with the outreach efforts to decrease health disparities. KSC will continually monitor these patients to assess the effectiveness of the outreach. In addition, KSC will continue to enforce the importance of influenza and pneumococcal vaccines to members of its staff to better educate patients.

---

### References

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

## Collaborative Goals

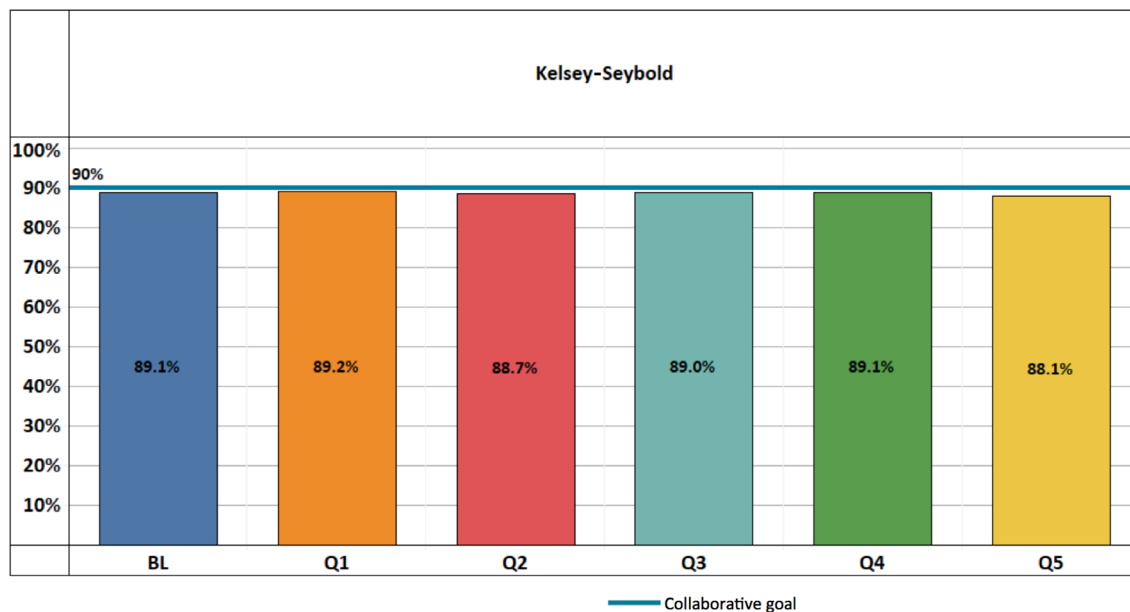
Measure	Healthy People 2020	Collaborative Goal
Measure 1 (65+) Any	90%	90%
Measure 1 (65+) Both PPSV and PCV*	90%	60%
Measure 2 (High-Risk)	60%	45%
Optional Measure 2a (At-Risk)**		
Measure 3 (Flu)	70%/90%***	45%

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

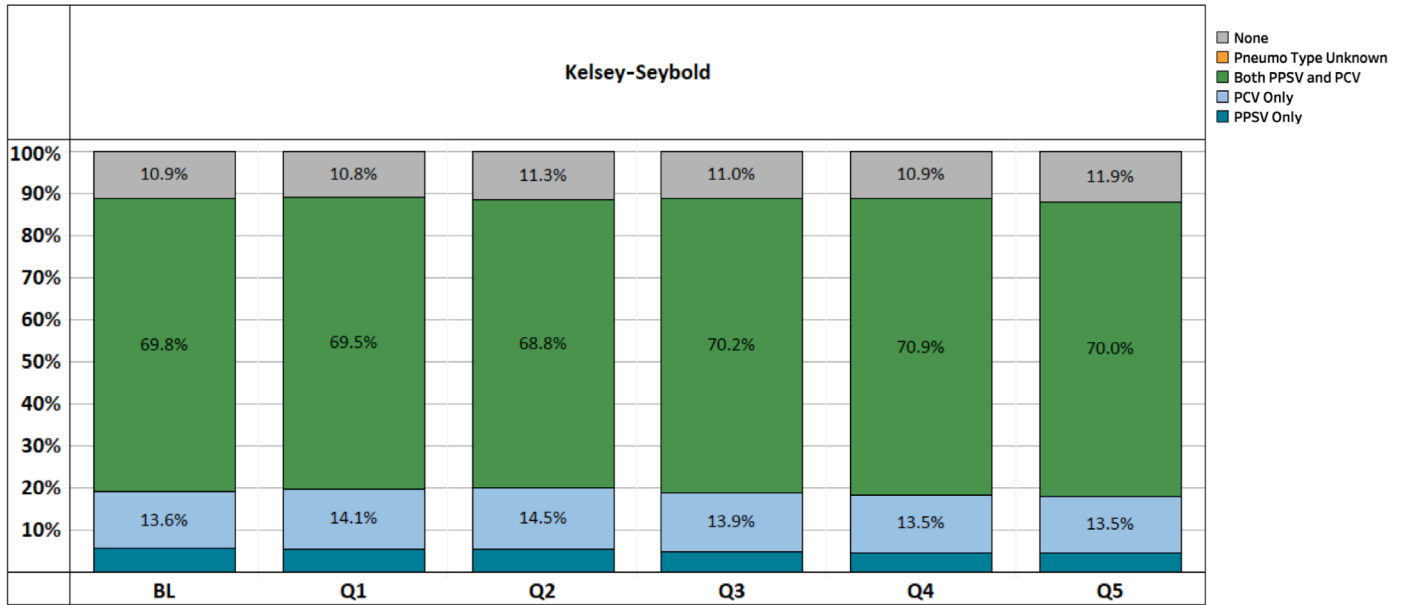
\*\* According to CDC guidelines, it is not currently recommended that the at-risk population receive PCV. Therefore, “PPSV” or “Unknown pneumococcal vaccination” are numerator options for Measure 2a.

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

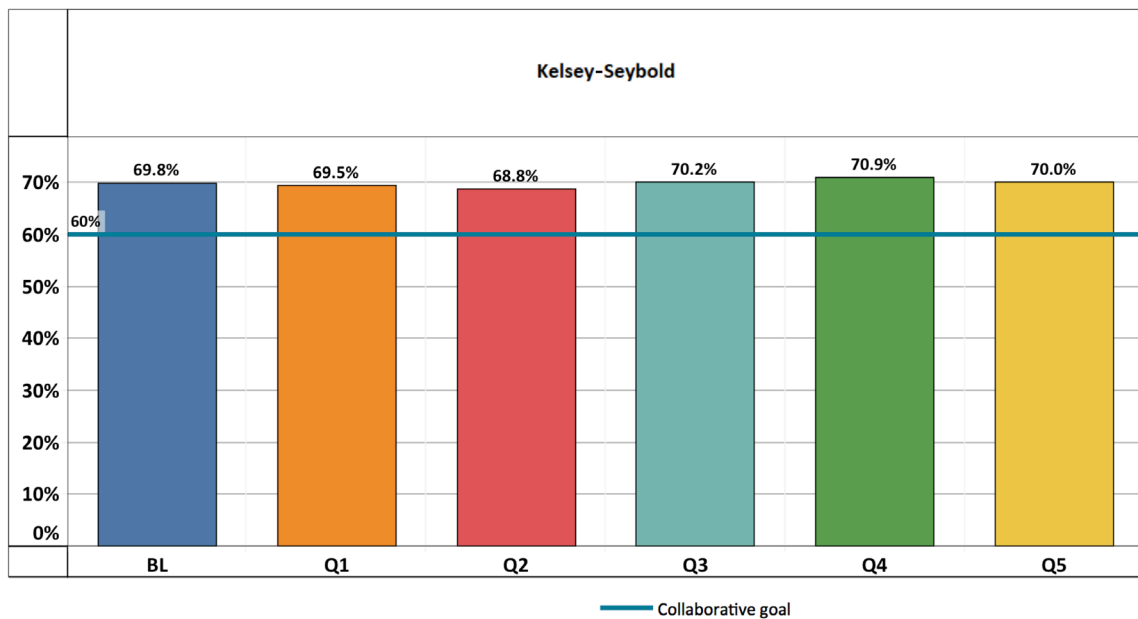
### Measure 1 – Pneumococcal (Any) Immunization for Adults Ages ≥ 65



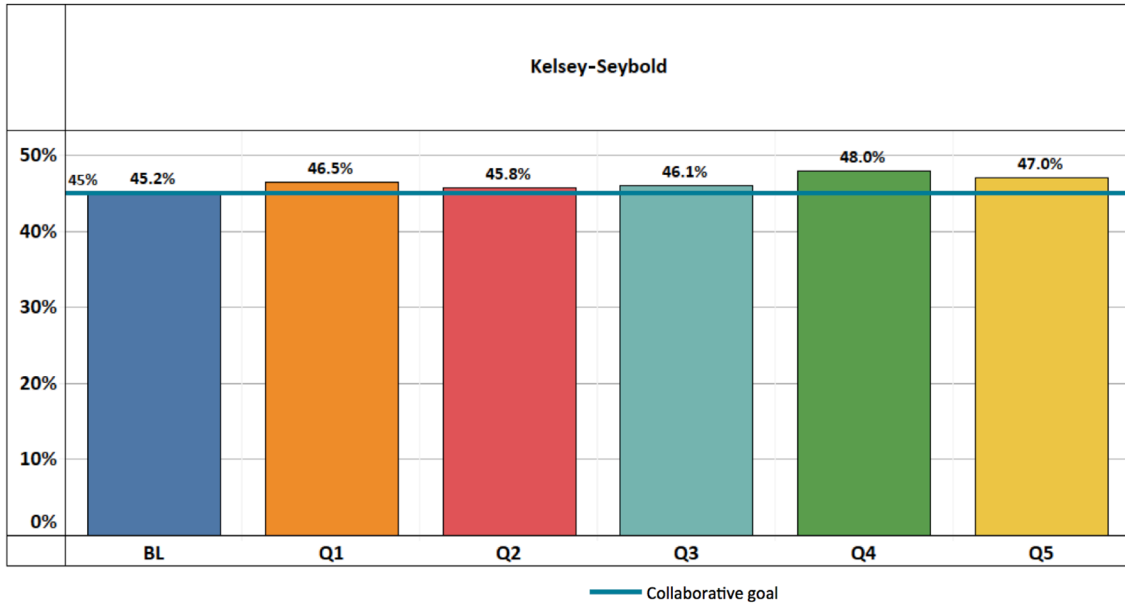
## Measure 1 – Pneumococcal (Any) Immunization for Adults Ages ≥ 65



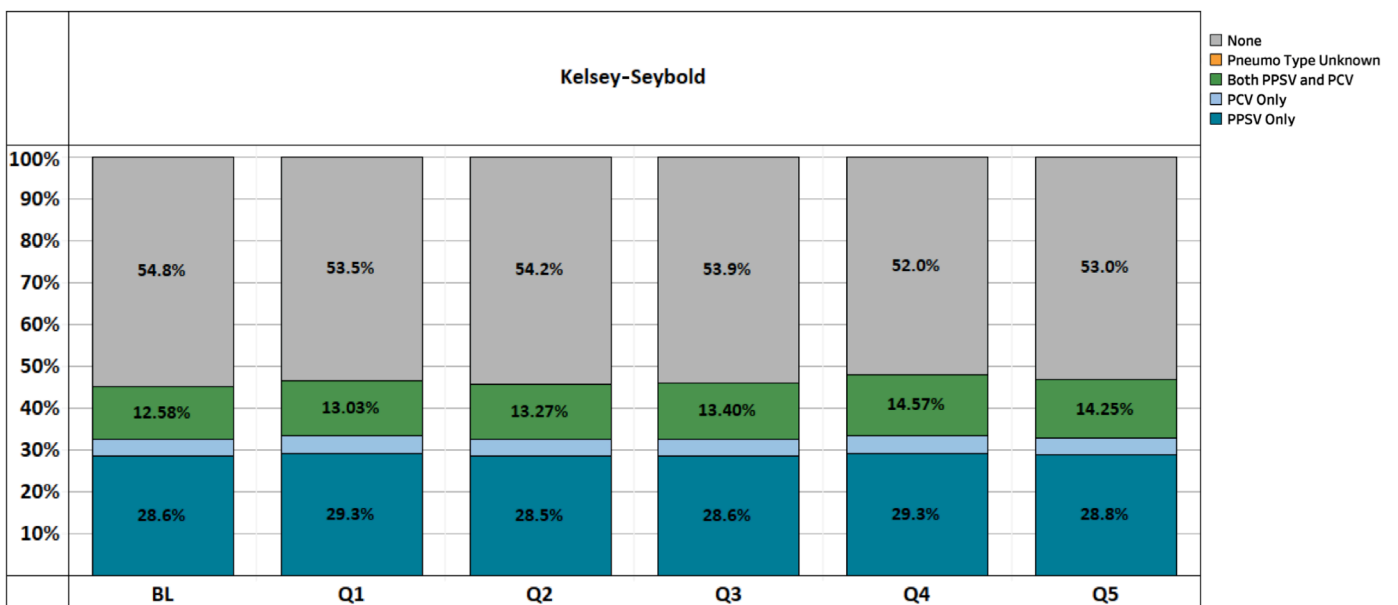
## Measure 1 – Both PPSV and PCV Immunization for Adults Ages ≥ 65



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

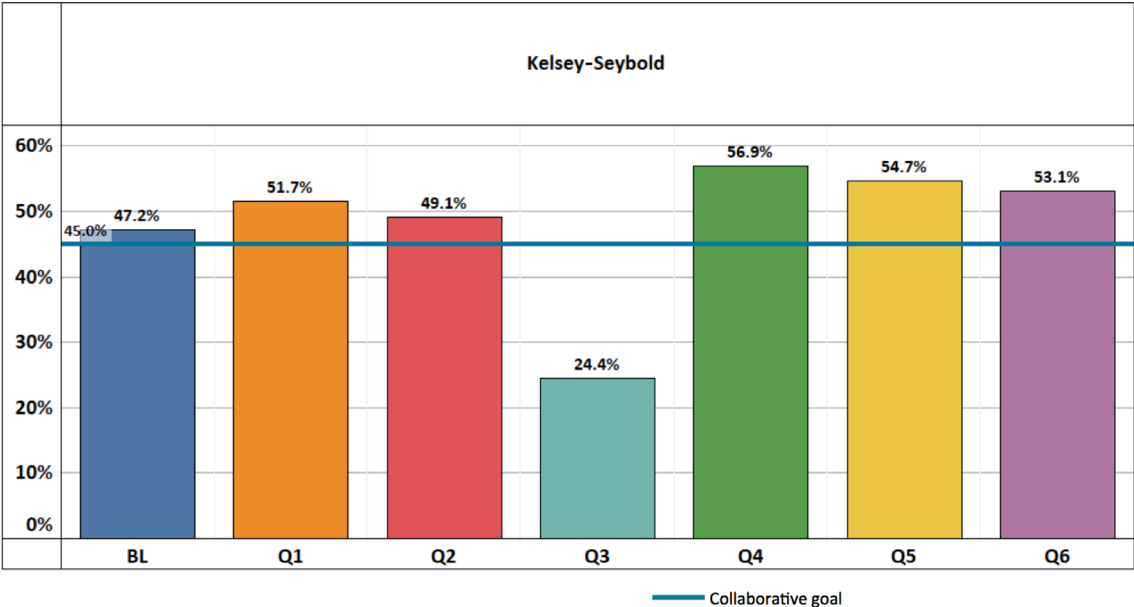


## Measure 2 – Pneumococcal (Any) Immunization for Adults Ages 19–64 with High-Risk Conditions





**Measure 3 – Influenza Immunization, Age ≥ 18**





## Influenza True/False Quiz Award Winners! For 2017-2018 Season

Congratulation to these five lucky winners!

Over 400 employees completed the Influenza True/False Quiz posted October 9<sup>th</sup>. Five winners were randomly selected from those with a score of 100%.

They will each receive a \$25 gift card. Winners had to answer all quiz questions correctly to be eligible to win.

Kelsey-Seybold is determined to help protect our employees and our patients.

Get your flu shot and spread the word to others to get vaccinated!

2017 Flu Quiz Winners
Shantay Phoenix, LVN Coord, Wellness - Kelsey Admin (PAOB)
Denise Linscomb, MA II, Dermatology - Meyerland Plaza
Rose Thompson, LVN, Internal Medicine - Summer Creek
Heather Painter, LVN, Family Medicine - The Woodlands
Carolyn Haynes, LVN, ENT - Main Campus



The screenshot displays the Kelsey University Home Learning Plan interface. At the top, the navigation bar includes the Kelsey University Home logo, 'Learning Plan', and 'The Library' links. A search bar labeled 'Search Content' and a language dropdown set to 'English (US)' are also present. Below the navigation bar, a 'BACK' link is visible. The main content area features a course card for 'Pneumococcal Disease Adult', which is a 'Custom - Course' with a 'Status' indicator. A green 'LAUNCH' button is located in the top right corner of the course card. Below the course card, a presentation viewer is embedded in a browser window. The presentation slide is titled 'Pneumococcal Disease In Adults' and includes a microscopic image of bacteria. The slide footer identifies the 'Kelsey Seybold Clinic Clinical Staff' and shows the slide number '1'.

## Project Team



*Top row, from left to right:* **Curtis Baldrige**, Supervisor of Quality Improvement; **Patrick Carter, M.D.**, Medical Director of Care Coordination and Quality Improvement; **Leon Jerrels**, Director of Quality Improvement

*Bottom row, from left to right:* **Shelly Martinez**, Executive Assistant; **Michele McWashington**, Executive Assistant; **NNebuogor Okwumabua**, Quality Improvement Analyst; **Blanca Lopez**, Quality Improvement Auditor



**AMGA Foundation**

One Prince Street  
Alexandria, VA 22314-3318

[amga.org/foundation](http://amga.org/foundation)



AMGA's Distinguished Data and  
Analytics Collaborator



This project was sponsored by Pfizer Inc.  
Pfizer was not involved in the development  
of content for this publication.