



Advancing High Performance Health

AMGA Foundation

Adult Immunization
Best Practices
Learning Collaborative
Case Study

Springfield Clinic



Organizational Profile

Springfield Clinic, founded in 1939 by five physician partners, was one of the first multispecialty medical clinics to form in Central Illinois. It has become Illinois' second-largest private multispecialty clinic, serving a population of nearly one million patients throughout the Central Illinois region. Through numerous local mergers and physician recruitment, Springfield Clinic has grown to include 274 physicians and 147 advanced practice providers (APPs).

Springfield Clinic's Primary Care division is comprised of 15 locations with 66 physicians and 58 APPs. A wide variety of ancillary services are offered, including: Laboratory, Radiology, Audiology, Behavioral Health, Physical Therapy, Sleep Disorders Center, Clinical Research Department, and two retail Optical Centers.

Springfield Clinic also has a free-standing Ambulatory Surgery & Endoscopy Center (including four GI suites, five OR suites, and two pain treatment rooms) with approximately 28,000 procedures performed annually.

Springfield Clinic also offers: an Anticoagulation Management Program in two locations; a Breast Health Center, accredited by the National Accreditation Program for Breast Centers (NAPBC); a Dietetics and Nutrition program; The Diabetes Learning Center; Licensed Clinical Social Workers; and a Clinical Pharmacist. Prompt Care services are offered at four locations in three cities for walk-in acute care, 12 hours a day, 365 days a year. Patients also have access to a 24-hour TeleNurse system staffed by RNs.

Springfield Clinic has received the following recognition and accreditations:

- National Committee for Quality Assurance (NCQA) Level 3 Patient Centered Medical Home Recognition in 2013 for 13 primary care and pediatric locations, with recognition maintained in 2016. (Recognition will be achieved for the two primary care locations that joined the Clinic in 2015 and 2016)
- Accreditation by the Accreditation Association for Ambulatory Health Care since 1991
- Designation as an Accountable Care Organization (ACO) in January 2015.

Executive Summary

Nearly 50,000 adults in the United States die each year from vaccine-preventable infectious diseases or their complications. Despite strong public health recommendations, vaccination coverage levels among adults in the United States have remained relatively unchanged in the past decade.

As one of seven care provider groups from around the country participating in the AMGA's Adult Immunization Best Practices Collaborative (AI Collaborative), Springfield Clinic focused on the population of patients for whom they provided pneumococcal vaccine preventive and designed specific interventions focused on improving immunization rates, including:

- Educational materials provided to medical offices
- Outreach letters sent to patients
- Educational marketing campaign developed for the community

The interventions resulted in improved pneumococcal vaccination rates in the 65 and older population in the three pilot offices by 11% overall. The clinic exceeded the AI Collaborative stretch goal and achieved the 90% ACO/Healthy People 2020 goal in two of the three pilot offices.

The following lessons were learned:

- Clinical staff were not entering vaccines appropriately and data about vaccines were not "mineable" unless the dropdown calendar was used in the immunization entry field.
- Providers and staff needed to increase focus on obtaining records of vaccines administered by other healthcare providers and appropriately documenting those immunizations in each patient's immunization record.

Program Goals and Measures of Success

Springfield Clinic's overarching goals were:

1. To increase awareness regarding adult immunizations throughout the organization and the community
2. To improve vaccination rates, first in three pilot locations, and then clinic-wide

3. To meet or exceed the AI Collaborative stretch goals
4. To strive to meet the Healthy People 2020 (HP2020) goal of 90%, as well as the ACO 90th percentile goal.

Collaborative Goals

Before establishing goals, baseline data for each group was reviewed by Optum Analytics and immunization rates were calculated. After reviewing national goals and available national data, and with input from the AI Collaborative advisors, goals were set for the AI Collaborative.

The minimum goal was based on the CDC National Health Interview Survey (NHIS) estimates of national immunization rates for 2012-2014 time periods (the most recent available at the time). Pneumococcal immunization rates in the NHIS were 59.9% for adults aged ≥ 65 years. For adults aged 19-64 who were determined to be at high risk for developing invasive pneumococcal disease, NHIS rates were 20.0%.¹ For influenza, NHIS immunization rates for adults aged ≥ 19 years were reported to be 43.2%.²

HP2020 goals from the federal Office of Disease Prevention and Health Promotion were selected as challenge goals or goals on the high end. HP2020 goals are: Age 65+ Pneumococcal 90%, High-Risk Pneumococcal 60%, and Influenza 70%.

A “stretch” goal was established between each group’s baseline and HP2020. The stretch goal was set at 50% of the gap between baseline and HP2020. Where one stretch goal is reported for all groups, it is based on the median.

Data Documentation and Standardization

At the initiation of the AI Collaborative, Optum One analyzed the potential areas of immunization documentation sources for the groups in this Collaborative and determined that immunizations were captured in:

- Rx Tables
- Rx Patient Reports
- Immunization Tables
- Health Maintenance Tables
- CPT/G codes
- ICD-9 codes

Significant variation in documentation patterns can be seen across groups, resulting from variations in EMR provider and configuration, immunization documentation protocols, and adherence to documentation protocols. For the groups in the Collaborative, pneumococcal and influenza vaccinations were most commonly documented in Immunization Tables, Health Maintenance Tables, and CPT/G codes. The least commonly used sources for documentation among the groups were Rx Tables and Rx Patient Reports.

For the AI Collaborative groups that demonstrated documentation between multiple sources, the Optum team provided this data so that groups could determine a standardized documentation best practice internally.

Springfield Clinic utilized Optum to obtain immunization data reports. Medical records were reviewed for those patients who did not have documentation of vaccination, seeking documentation of vaccination obtained outside of the clinic, in scanned documents or within the visit note. Final gap reports were sent to the offices, along with results of the review, and meetings were conducted in person with the clinical staff to discuss the outcome and plan for outreach to patients.

Population Identification

The population for patients needing pneumococcal and flu vaccine is identified within the measure criteria through claims data, as well as medical record data, utilizing Optum to identify the patient population.

Adult immunizations, including pneumococcal and influenza vaccines, are provided in 14 of the 15 of Springfield Clinic’s Primary Care locations (one Primary Care location serves the pediatric population only), as well as specialty areas including the Departments of Pulmonary, Allergy, Infectious Disease, Women’s Health, and Oncology.

Springfield Clinic’s Primary Care offices are in four locations in the Springfield, Illinois area, and ten locations throughout Central Illinois, covering multiple counties. Several of the locations outside of Springfield have small outreach locations in surrounding towns that are covered by their providers.

Intervention

Springfield Clinic initially selected one pilot site to participate in the initiative, and later expanded to three pilot sites. In preparation, a pneumococcal vaccine administration algorithm (age/timing), based on the CDC algorithm,³ as well as the Immunization Action Coalition pneumococcal vaccine high-risk grid⁴ was sent to the three pilot offices. Providing educational materials to the pilot offices resulted in outreach calls to patients and an increased focus of providers/staff on adult vaccines as an issue of concern. Outreach letters were developed for the three pilot offices to send to patients highlighting gaps in vaccinations and this information was also made available in the patients' electronic health records.

A marketing campaign was created to increase patient awareness, which included:

- Development of an adult immunization patient fact sheet as well as adult immunization posters for offices
- Creation of a vaccination information web page with dates/times for fall flu clinics posted
- Display of adult vaccine facts on LED signs at Main Clinic and local YMCA
- Creation of a HEALTH MATTERS Spotlight on adult vaccination with a local television channel, broadcast locally throughout January 2016 (the Spotlight involved Springfield Clinic's Chief Clinical Officer, Director of Quality, a Family Medicine physician, and a patient).

Springfield Clinic's action plan included the following steps:

- Develop algorithm(s) for pneumococcal vaccine to assist providers in medical decision making
- Further develop the Care Coordination service line with Clinical Care Coordinators, Wellness Coordinators, and Patient Care Advocates in offices to assure that pre-visit reviews for preventive care (as well as chronic disease care) are part of the duties performed by the Patient Care Advocates
- Increase Medicare Annual Wellness Visits performed by the Clinical Care Coordinators or Wellness Coordinators, to include identifying missing vaccines, as the Care Coordination service line further develops

- Educate clinical staff to improve immunization documentation methods
- Investigate the State Immunization Registry capabilities regarding adult vaccination and the status of bi-directional sharing of vaccine information (currently the interface only has the capability for Springfield Clinic vaccines to be uploaded electronically to the registry, but data is not flowing from the Registry to Springfield Clinic's record)
- Investigate the possibility of data sharing with pharmacies through Direct Messaging.
- Develop outreach letters for Care Teams to utilize, and create and distribute gap reports based on results for outreach calls/letters to patients.

Outcomes and Results

Pneumococcal vaccine reports were obtained utilizing Optum One, and medical records were reviewed for those patients who had gaps, or to determine if immunizations had been obtained elsewhere and were not documented appropriately in the immunization record. Thus, Springfield Clinic internal results differ from the AI Collaborative reports (Figures 1 and 2).

Baseline reports for the three pilot offices were obtained, and it was determined that, after interventions, the offices' immunization rates improved (Figure 3). After education was provided to all Clinic providers, pneumococcal vaccine reports were obtained for all Springfield Clinic providers (Figure 4) and gap reports provided for outreach purposes. Educational meetings occurred with clinical staff and providers in cases where the provider did not meet the organizational goals.

Springfield Clinic focused on the pneumococcal vaccine preventive population, and has plans to initiate focus on the high-risk pneumococcal vaccine population this year.

Lessons Learned and Ongoing Activities

Initially, working with three pilot locations worked very well—particularly because there were issues identified with documentation of vaccinations, requiring review of medical records to obtain accurate data. The Marketing Department was invaluable in helping to develop the campaign and resources for providers and patients.

In retrospect, had Springfield Clinic focused on the entire clinic review sooner—in order for education and intervention to occur—better outcomes could have been achieved earlier. All providers were sent information on the initiative, including the algorithms and patient education materials and posters; however, they did not receive the “push” with gap reports to increase their focus on closing immunization gaps. Education and discussion with clinical staff and providers is occurring now.

The primary challenge was the time constraints imposed by the necessity of performing an extensive medical records review in order to obtain accurate reports for providers. The entire clinical population for pneumococcal vaccine was 24,000, and approximately half of those medical records were reviewed for vaccines given elsewhere.

Springfield Clinic is still exploring how to obtain pharmacy data through Direct Messaging. This is an IT project that is one among many. Communicating with pharmacies throughout multiple towns and counties is a challenge, so this remains a work in progress.

Efforts to achieve bi-directional sharing of immunization data with the state immunization registry continue and may remain a challenge for some time to come.

Next steps include:

- Continue with plans to capture data from pharmacies and share data with the state immunization registry.
- Work with specialists and Primary Care on the pneumococcal high-risk population.
- Starting in mid-summer each year, develop an influenza vaccine campaign, utilizing a registry or a point-of-care system to provide real-time gap reports to providers.
- Continue focused educational efforts with providers and staff on recording immunizations given elsewhere, particularly influenza vaccines.
- Because the Care Coordination service line is under development and not yet fully staffed, ensure that Care Coordinators and Patient Care Advocates focus on vaccine offer/administration at Annual Wellness Visit and pre-visit record reviews.
- Review the pneumococcal high-risk population in working with the specialty departments as well as Primary Care.

Acronym Legend

APP: Advanced Practice Provider

CDC: Centers for Disease Control and Prevention

CPT/G-Codes: Current Procedural Terminology

NCQA: National Committee for Quality Assurance

NHIS: National Health Interview Survey

References

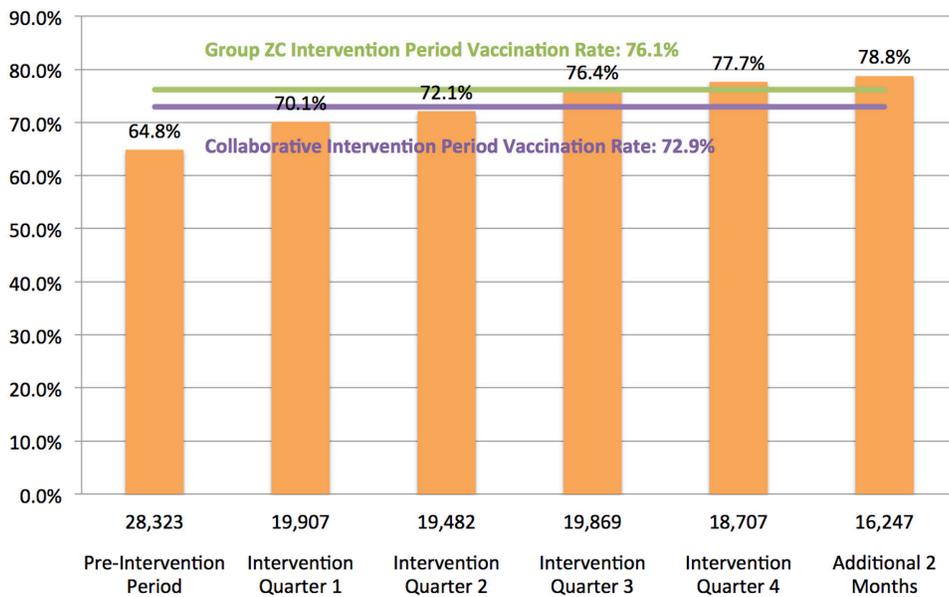
1. Williams WW, Lu, PJ, O’Halloran, A, Bridges, CB, Pilishvili, T, Hales, CM, & Markowitz, LE. (2014) Centers for Disease Control and Prevention (CDC). MMWR MorbMortal Wkly Rep. 2014;63(5):95-102 <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6305a4.htm>.
2. Williams, WW, Lu, PJ, O’Halloran, A, Kim, DK, Grohskopf, LA, Pilishvili, T, Skoff, TH, Nelson, NP, Harpaz, R, Markowitz, LE, Rodriguez-Lainz, A, & Bridges, CB. (2016) Surveillance of Vaccination Coverage Among Adult Populations — United States, 2014; Surveillance Summaries / February 5, 2016 / 65(1):1–36 <http://www.cdc.gov/mmwr/volumes/65/ss/ss6501a1.htm>.
3. Pneumococcal algorithm: CDC - Use of 13-Valent Pneumococcal Conjugate Vaccine and 23-Valent Pneumococcal Polysaccharide Vaccine Among Adults Aged ≥65 Years: Recommendations of the Advisory Committee on Immunization Practices (ACIP); MMWR / September 19, 2014 / Vol 63 / No. 37.
4. Pneumococcal high risk grid: Immunization Action Coalition, www.immunize.org/catg.d/p2019.pdf, Item #P2019 (2/15).

Intervention Period Definitions

- Pre-Intervention: 03/01/2013 - 02/28/2015
- Quarter 1: 03/01/2015 - 05/31/2015
- Quarter 2: 06/01/2015 - 08/31/2015
- Quarter 3: 09/01/2015 - 11/30/2015
- Quarter 4: 12/01/2015 - 02/28/2016
- Additional 2 Months: 03/01/2016 - 04/30/2016
- Intervention Period: 03/01/2015 - 04/30/2016

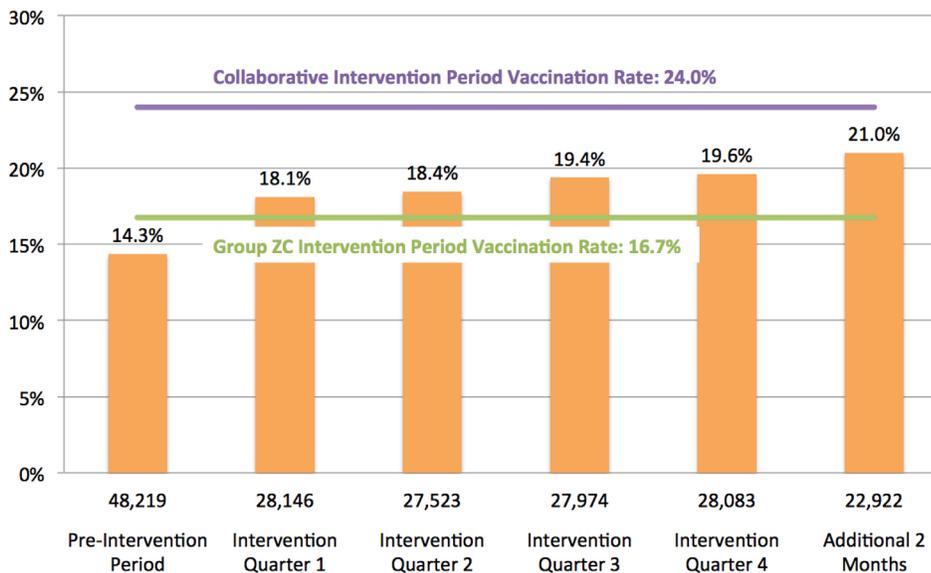
Figure 1: Springfield Clinic AI Collaborative Results: Pneumococcal Vaccines

**Group ZC: Pneumococcal Vaccine Rates
(Any PV, Age 65+) Multiple Periods**



Net Change in % Patient Vaccination Rate (Pre-Intervention to Intervention): 11%

**Group ZC: Pneumococcal Vaccine Rates
(Any PV, Age 19-64, High Risk) Multiple Periods**



Net Change in % Patient Vaccination Rate (Pre-Intervention to Intervention): 2.4%

Figure 2: Springfield Clinic AI Collaborative Results: Influenza Vaccines

**Group ZC: Influenza Vaccine Rates
Multiple Periods**

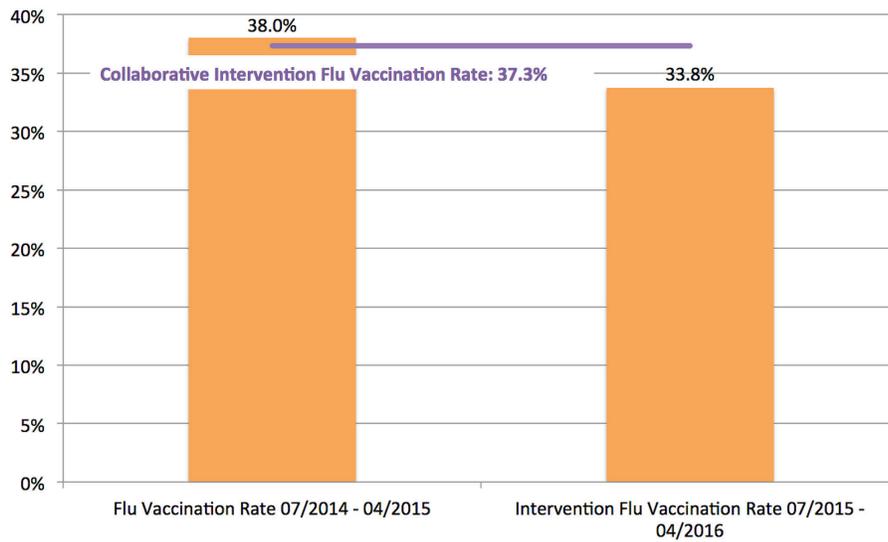


Figure 3: Internal Report on Pilot Offices

Pneumococcal Vaccination Measure

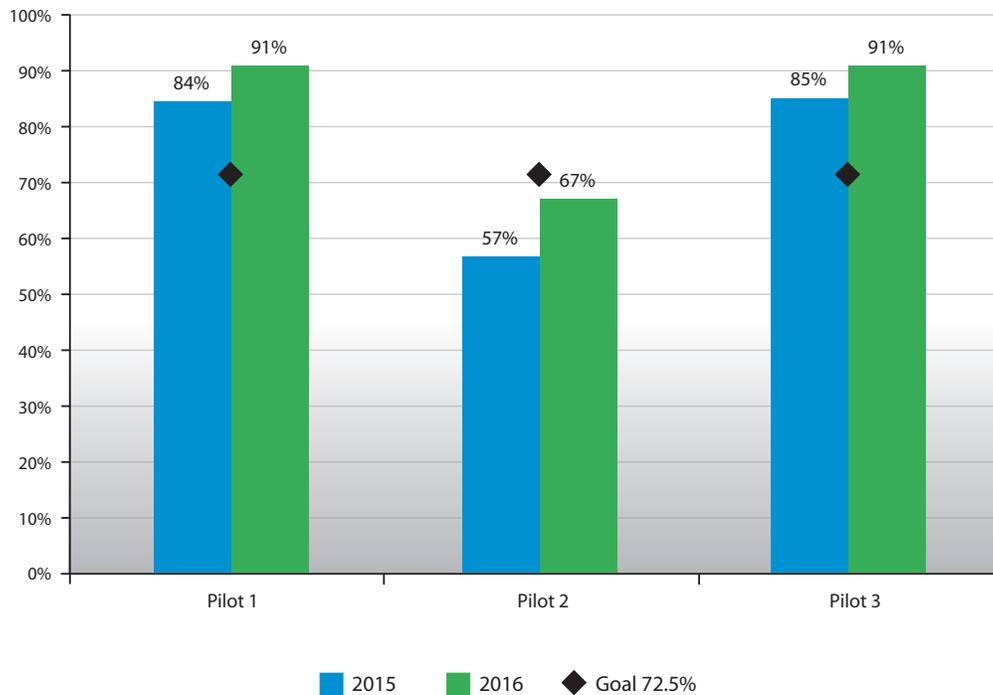
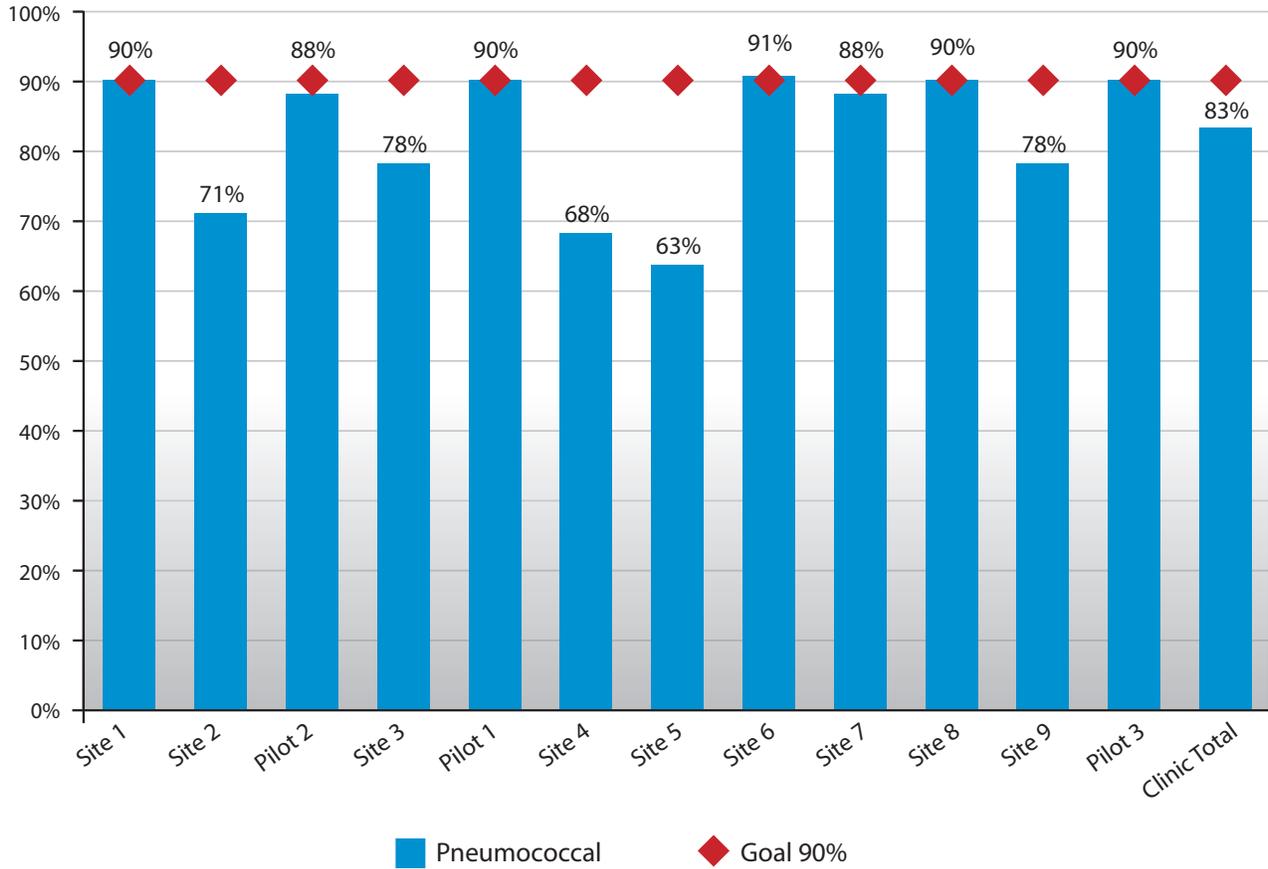


Figure 4: Internal Report on All Providers

Springfield Clinic Pneumococcal Vaccination Measure Status
1/1/2015 – 12/31/2015



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