

# Initiative to Increase Pneumococcal Vaccination Rates in Rural Georgia Federally Qualified Health Center Clinics

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#### Abstract

A Federally Qualified Health Center (FQHC) in rural Southwest Georgia increased pneumococcal pneumonia vaccine coverage among eligible patients through a quality improvement pilot program via several interventions: population management tool providing monthly feedback; educational seminar for providers and staff; educational materials for patients; standing order protocols; and physician-led education for vaccine-hesitant patients. Two physician champions, trained by the American College of Physicians, served as project leaders in four clinics. Clinical champions used employed the above strategies to maximize screening rates in their respective clinics. Six other participating clinics did not have a champion but were encouraged to use the same interventions.

### Background

Albany Area Primary Health Care (AAPHC) is a Federally Qualified Community Health Center in Albany, Georgia. AAPHC has a total of 18 service delivery sites that serve the residents of Baker, Calhoun, Dougherty, Lee, and Terrell Counties (Southwest Georgia). In 2016, AAPHC provided care to 37,944 patients with a total of 150,333 visits. Services at AAPHC are provided by 81 providers (33 physicians, 34 mid-level providers, 5 dentists, and 9 mental health professionals). In 2015, the pneumococcal pneumonia adult immunization rate was 41% across the AAPHC network of clinics. To combat the low pneumococcal immunization rate, AAPHC planned and implemented the Pneumococcal Immunization Initiative. The primary goal of the initiative is to address the follow three areas of concern:

- 1. The wide disparity in the immunization rates within the AAPHC patient population when compared to state and national levels
- 2. Lack of cohesion among the various reporting agencies used for reimbursement including: Patient Centered Medical Home (PCMH), Accountable Care Organization (ACO), Uniform Data System (UDS), Healthcare Effectiveness Data and Information Set (HEDIS), Meaningful Use, and private insurance
- Pneumococcal vaccinations are a vital, but often neglected part of preventive health care
  for the high-risk population with one or more of the following diagnoses: Diabetes,
  Chronic Obstructive Pulmonary Disease (COPD), Human Immunodeficiency Virus (HIV),
  Systemic Lupus Erythematosus (SLE), and Coronary Artery Disease (CAD)

## Objective

To increase the number of patients, age 65+ and/or high-risk patients, who receive the pneumococcal vaccinations (PPSV23, PCV13). The change began by educating staff during April 2016 and initial pilot implementation began in four clinics in May 2016, and was later put into practice in all adult clinical sites. The intervention was implemented by all team members, quality improvement staff, data analysts, administrative and clinical staff.

# Methodology

- Prior to patient visits, clinical staff reviewed the Georgia Registry of Immunization Transactions and Services (GRITS) or other similar sources for vaccine records and recorded any vaccinations found in the Electronic Medical Record (EMR).
- Vaccination handouts were given to all eligible patients when they registered at the clinic's front desk. The handouts were provided in patients' native language and at a comprehension level comparable to the patient's education level.
- Training and implementation of standing orders was used by nursing staff who performed initial patient triage.
- Providers were educated on standardized talking points for patients regarding the pneumococcal vaccine [see Centers for Disease Control (CDC) pocket cards].
- Pneumococcal vaccinations were administered to all eligible patients prior to the provider encounter.



Figure 1. Percentage change from start of clinical champion campaign (May 2016) to end of clinical champion campaign (February 2017)

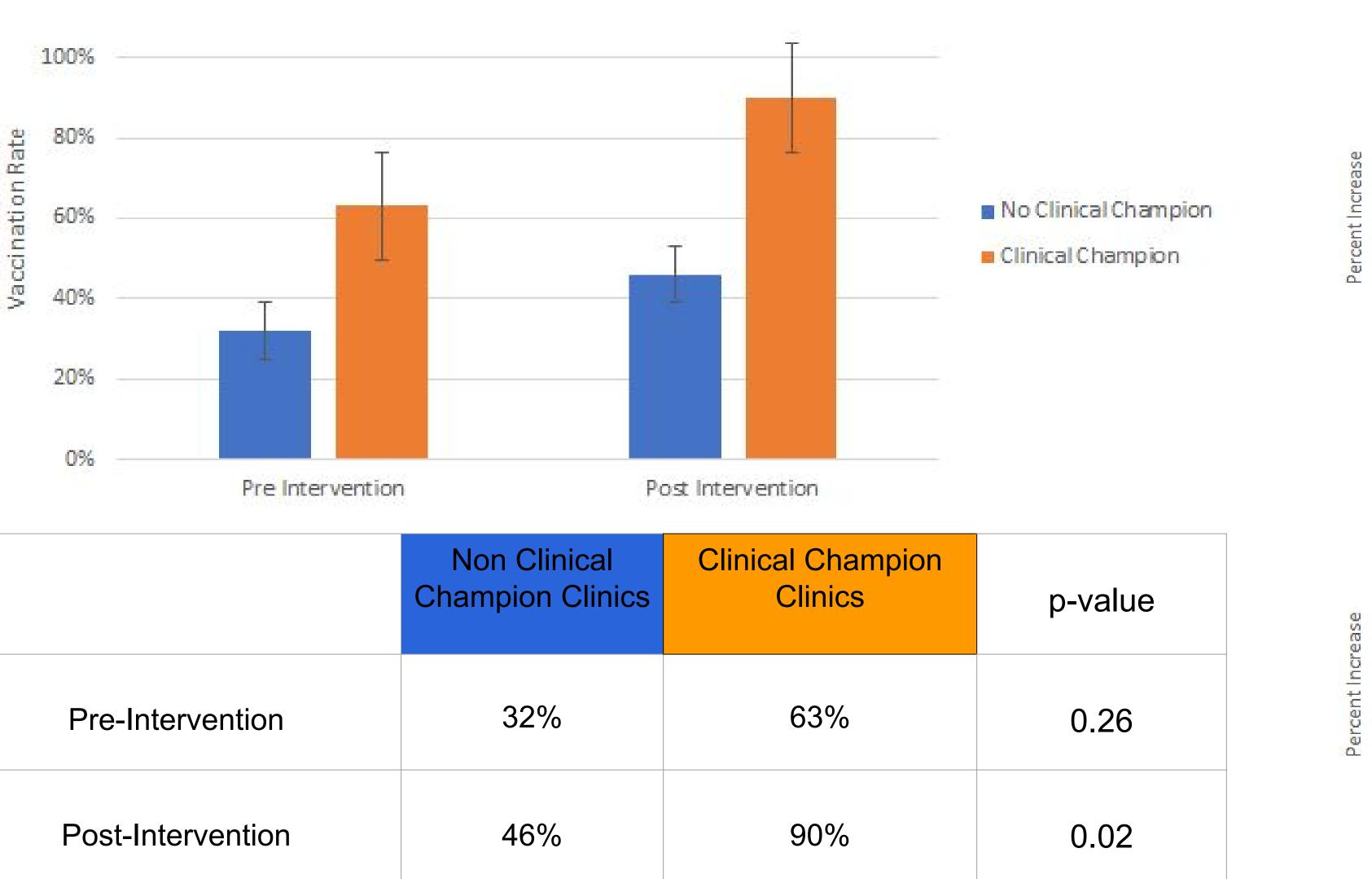


Figure 3. Comparison of pre and post intervention vaccination rates to examine statistically significant differences between clinics with and without a clinical champion.

Pneumonia Vaccination Status for Older Adults > (Pneumonia vaccine at any time) | 2017 February

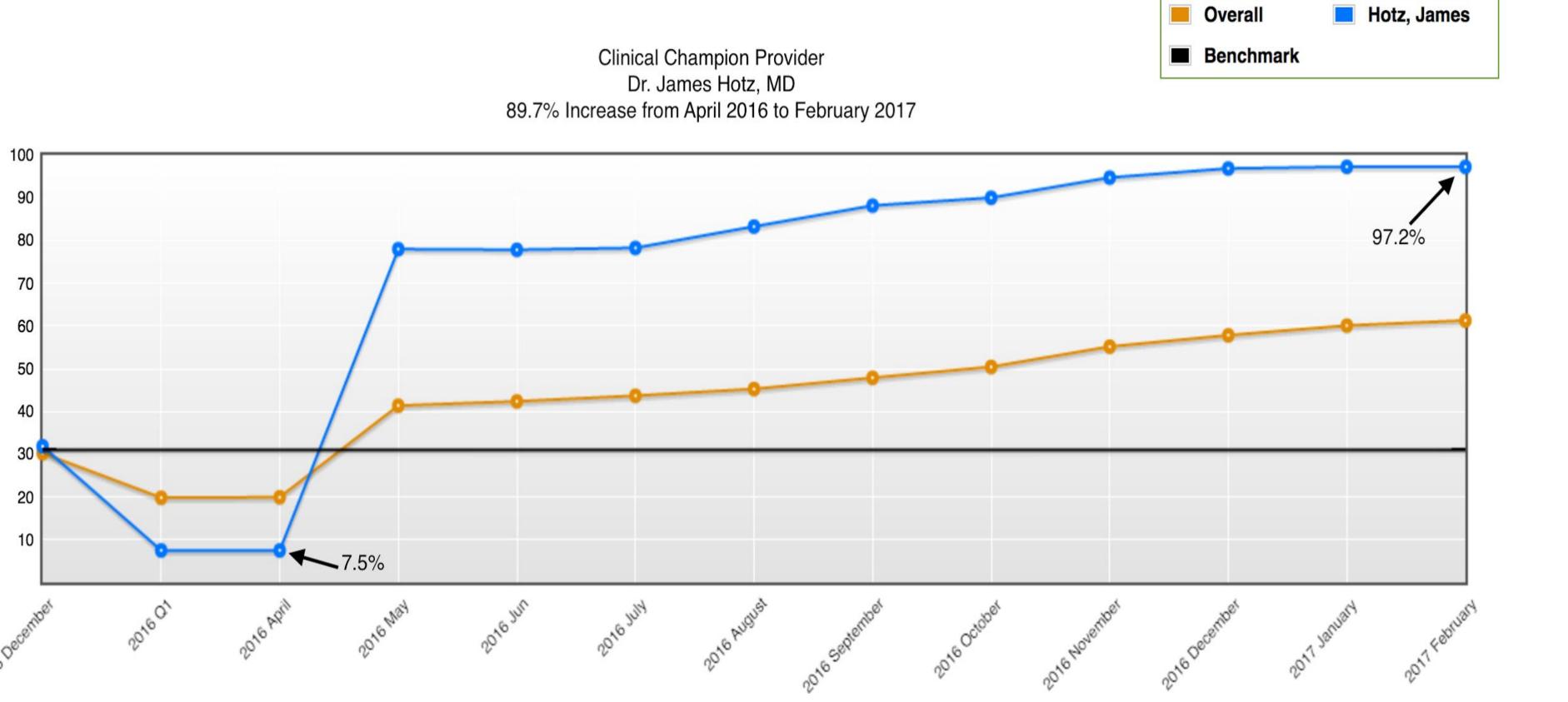
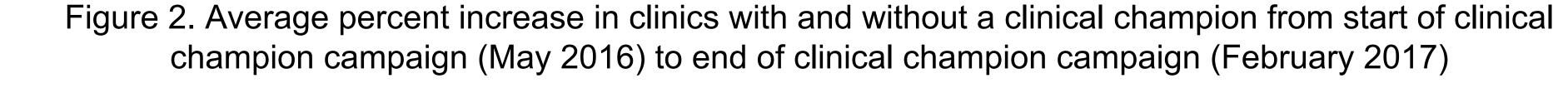


Figure 5. Clinical champion provider percent increase from April 2016 to February 2017.



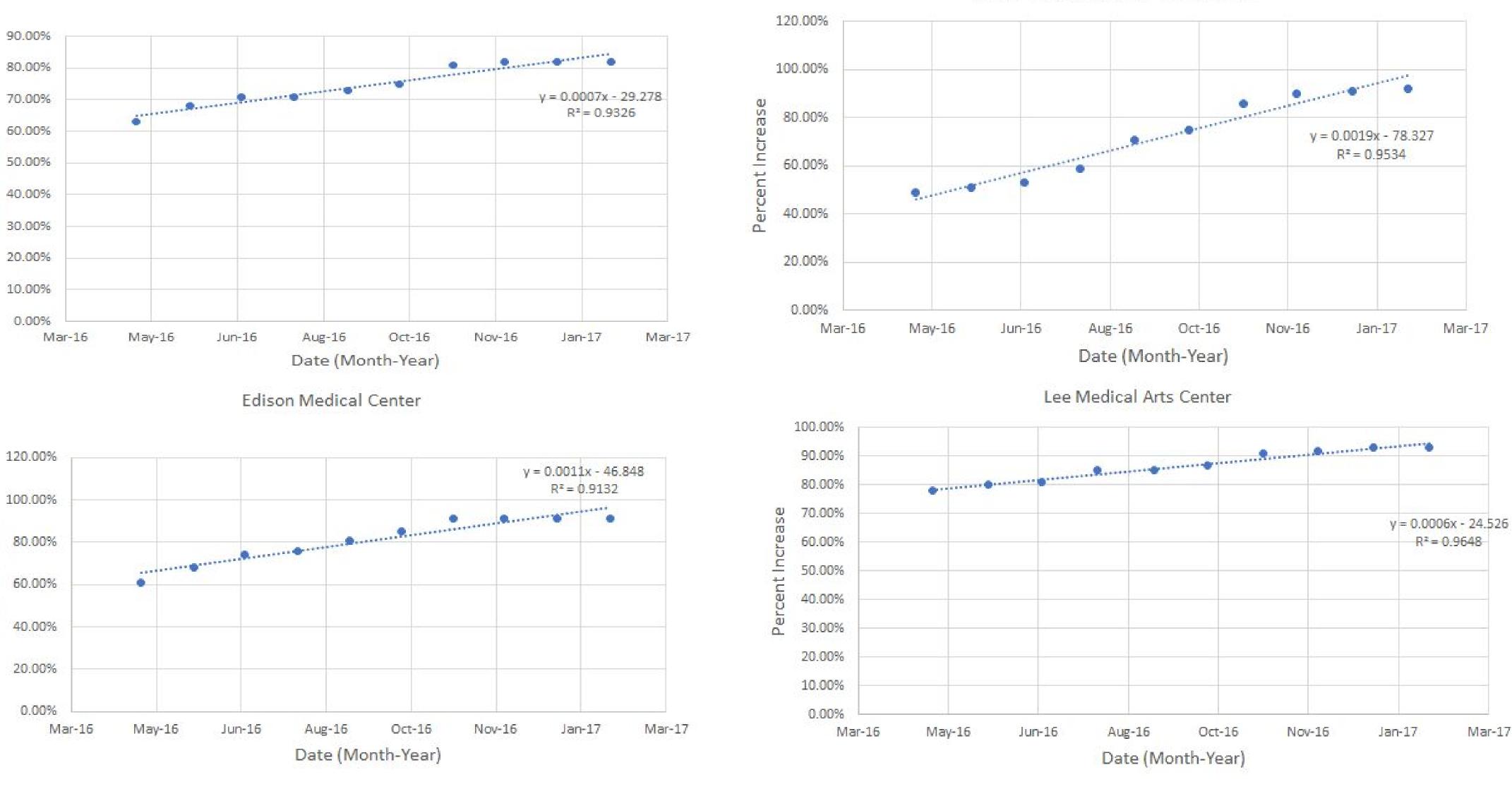


Figure 4a-d. Linear trend line of clinics with clinical champion. Adjusted start time of May 2016 to allow for provider training and to inform staff of workflow process.

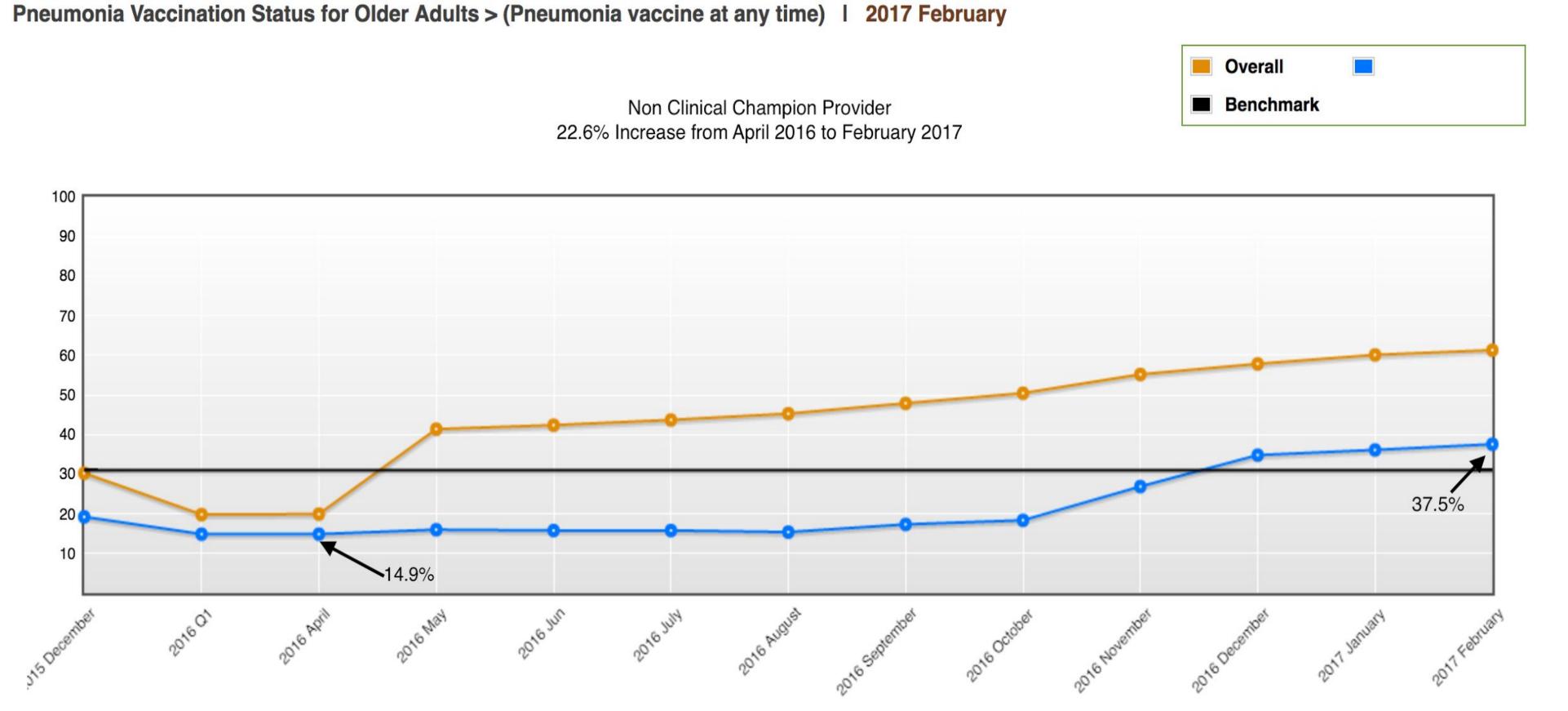


Figure 6. Nonclinical champion provider percent increase from April 2016 to February 2017.

#### Conclusion

Pneumococcal vaccination rates rose from 19.9% to 60.1% (n=4,082 patients) in 10 months. The top three performing physicians were from the champions' clinics and had increases of +90%, +69% and +62.2%. The bottom three physicians were from non-champion clinics. There was a trend toward increased rates in non-champion clinics during the later months, possibly because of the monthly reports, which allowed peer-to-peer comparisons.

After 10 months, from May 2016 to Feb 2017, the immunization rates electronically documented for the 4,082 patients in the study group rose from 19.9% to 60.1%. Sites where clinical champions practiced had the greatest increase in screening. The top three physicians in the champion' clinics had rates of 97.2%, up from 7.5; 94.6%, up from 25.6 and 92.8%, up from 30.6. The bottom three physicians were all in clinics with no champion and ended the ten months at 38.1%, 36.1% and 34.5%. There seemed to be a significant trend to increase immunization rates during the later months of the pilot in the non-champion clinics as monthly reports came out and physicians saw their rates lagging behind their peers.

### Clinical Implications

According to the American Thoracic Society, one million adults are hospitalized annually for pneumonia or an associated complication, and roughly 50,000 of those adults will ultimately die. It ranks as the second most common cause of adult hospitalization second only to childbirth. Even if a patient can make a full recovery, there can be serious long-term consequences. Adults that recover from a pneumonia infection have an increased risk of reduced exercise tolerance, cardiovascular disease, cognitive decline, and decreased quality of life for an extended period of time<sup>1</sup>. In 2015, pneumonia was responsible for \$10,600,000,000 in health care related costs and ranks in the top ten of most expensive medical conditions during inpatient hospitalizations. Numerous studies have shown the high rates of morbidity and mortality associated with advanced age and pneumonia. Some studies suggest that 90% of all pneumonia deaths occur in the elderly. With current population trends, it is estimated by 2020 the United States could see 65 million people age 65 and older at an increased risk for acquiring pneumonia<sup>2</sup>.

With the implementation of clinical champions, AAPHC was able to achieve a 40% clinic-wide increase in screening rates for eligible patients. Through patient engagement, education, and follow-up AAPHC was able to bend the curve on pneumonia vaccination and also measurably keep the aging population healthier. The study focused on implementing provider and staff education as well as a workflow process ensuring patients were offered the vaccine at multiple visits and given information throughout the process. Patients presented with this information multiple times were more likely to receive the vaccine.

With an aging population, it is important to remember the importance of pneumococcal vaccinations. In addition, the subset of patients under the age of 65 who qualify should be included in vaccination efforts. The burden of pneumonia is heavy but can be reduced one vaccination at a time.

### Acknowledgements

The researchers and authors of this study would like to thank the patients of AAPHC for their support and willingness to participate in our various research projects. This study would have not been possible without the support staff at the clinical champion clinics, our individual clinical champions and their tireless efforts. Lastly we would like to acknowledge Forward Health Group for their technical and analytical support and also the various student researchers that contributed to the project.

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