AMGA

Advancing High Performance Health

AMGA Foundation

Adult Immunization (AI) Best Practices Learning Collaborative, Group 3: Case Study

North Mississippi Medical Clinics, Inc.

Tupelo, MS

Organizational Profile

North Mississippi Health Services (NMHS), with headquarters in Tupelo, Mississippi, is a 650+ bed regional referral center. With approximately 450 providers representing over 50 specialties and over 6,200 employees, NMHS's integrated system is comprised of five affiliated hospitals, behavioral health inpatient services, outpatient services, women's hospital, nursing homes, home health services, inpatient and outpatient hospice services, post-acute and rehab services, wellness centers, and ambulatory clinics. The ambulatory clinics—North Mississippi Medical Clinics, Inc. (NMMCI)—serve 24 counties in North Mississippi and Northwest Alabama. NMMCI has 180+ providers, more than 50 of whom are advanced practice clinicians, providing care at over 30 ambulatory primary care and specialty clinics. As a two-time recipient of the Baldrige Award, NMHS is nationally recognized for quality and safety.

Executive Summary

NMMCI was the focus of the AMGA Adult Immunization Best Practices Collaborative (AI Collaborative). Providing pneumococcal vaccination to the age 65 and older population and influenza vaccination to patients aged six months and older has been hardwired in Primary Care and most specialty clinics at NMMCI for several years. For this collaborative, the organization concentrated on 19-64-year old at-risk and high-risk patients.

The first step in the process was asking Infectious Disease to validate the pneumonia immunization algorithms for 19-64 year olds. With their blessing, it was easier to obtain support from Primary Care and other specialty providers. Initially, one barrier was not being able to have point of care prompts in the electronic medical record (EMR). Asking Primary Care, without adequate clinical decision tools, seemed like a bigger opportunity to err on side of right patient/right vaccine. Therefore, initial focus was on the specialty areas of Diabetes Treatment Center, Pulmonary, and Rheumatology clinics. It seemed like focusing on specialty clinics, where most all patients would be considered for a pneumonia vaccine, would help ensure appropriate vaccination.

Next steps were to meet with specialty providers and share the at-risk and high-risk algorithms. Staff were then included where discussions of the algorithms, workflows, costs, and reimbursement were shared. Additional time was spent on algorithm scenarios to ensure all nurses were educated and comfortable. There was frequent follow-up at daily huddles, staff meetings, and with nurse supervisors and office managers. This provided opportunities to monitor, answer questions, and provide feedback. Similar rollout to primary care providers and staff followed a few months later.

Acronym Legend

AI Collaborative: AMGA's Adult Immunization Best Practices Collaborative

EMR: Electronic Medical Record

HP2020: Healthy People 2020

NMHS: North Mississippi Health Services

NMMCI: North Mississippi Medical Clinics, Inc.

Program Goals and Measures of Success

AI Collaborative Goals

Collaborative goals were set for the Adult Immunization AI Collaborative (Groups 2 and 3 participants). The collaborative goals were set 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).

NMMCI Goals

- Pneumococcal vaccination 65 and older 90%
- Pneumococcal vaccination high-risk 19-64 45%
- Pneumococcal vaccination at-risk 19-64 40%
- Influenza vaccination 18 and older 48%

In addition to the above, two overall goals were identified. First, to continue to improve on pneumococcal vaccination rates of the age 65 and older population and influenza vaccination rates of six months and older patients where processes have already been in place. Second, to initiate pneumococcal vaccination for at-risk and high-risk patients ages 19-64 where there had not previously been any deliberate focus.

Data Documentation and Standardization

Data documentation was already being captured in the EMR and registry for pneumonia vaccine 65> and for flu vaccine >six months. The registry, Meridios, provided monitoring of outcomes for each measure.

Population Identification

Patients aged 65 and older who are eligible for pneumococcal vaccination and patients six months and older who are eligible for influenza vaccination were already being identified in both the EMR and registry. There was not a change in workflow for vaccinating these populations.

Pneumococcal vaccination for at-risk patients and high-risk patients ages 19-64 was first initiated at three specialty clinics—Diabetes, Pulmonary, and Rheumatology. With both at-risk and high-risk patients, these specialties were able to recognize a large majority of the patients seen who were eligible for vaccination.

Primary Care had a delayed start of a few months, until clinical decision tools were in place in the EMR. However, prompts were limited to diabetics and cigarette smokers, which greatly narrowed the scope of vaccinating all at-risk and high-risk patients. EMR prompts identified patients based on problem list, age, and prior vaccination history.

Intervention

NMMCI used Meridios registry to monitor and report selected measures. Meridios updates daily from the EMR (which is Centricity), using underlying data from observation terms associated with problem list, vaccination history, and patient age. Custom denominator lists were created by the Meridios Information Technology lead and updated for each reporting period. These lists, along with reporting templates, were used to retrieve data needed for AMGA reporting and to identify populations for NMMCI interventions.

Additional aspects of intervention included:

- Algorithms were reviewed and approved by Infectious Disease, as well as shared with other providers from whom approval was sought
- The Adult Immunization Fact Sheets from The National Foundation for Infectious Diseases were used to educate providers, staff, and patients
- Point of care prompts were used for at-risk diabetic patients and cigarette smokers

Each of the three specialty clinics involved in the AI Collaborative took a different approach to workflow initially.

- Diabetes Treatment Center took the approach to rule out patients who did not need the pneumonia vaccine with the understanding that most all their diabetic patients would meet criteria.
- Pulmonary initially had a very manual, labor-intensive workflow of pre-visit chart review, in which staff would identify patients on their next day's schedule who were in need of vaccination. Involving both clerical and clinical staff, it was determined after several months that this was not a sustainable model. The nurses then took on the role of identifying patients that met criteria for vaccination at the point of care. If the need for vaccination was questionable, nurses would ask for the provider's input.
- Rheumatology took the approach of pre-visit screening to identify 10-12 patients daily to offer the pneumonia vaccine to. Seeing large volumes of patients daily, this team did not feel they had adequate staffing to vaccinate all patients who met criteria for a pneumonia vaccine during their visits.

In addition, Primary Care clinics followed clinical decision tools for their diabetic patients and cigarette smokers.

Reimbursement for pneumococcal vaccination for patients aged 19-64 was a big concern of providers and office managers, as it was desired that patients were not left with increased out-of-pocket costs. Reports were obtained initially and periodically to monitor reimbursement rates. Data was shared with providers and office managers showing excellent reimbursement.

Outcomes and Results

The highest improvement in immunization for 19-64 year old at-risk patients was experienced by the Diabetes Treatment Center, with a 28% increase from 35% to 63%. Overall, patients with diabetes were the most targeted for pneumococcal immunization through the Diabetes Treatment Center and Primary Care's use of point of care prompts for diabetic patients.

Measurement Period		Measurements			
Phase	Report Period	Pneumococcal Immunization age ≥ 65	Pneumococcal Immunization for adults age 19-64 with High-Risk Conditions	Pneumococcal Immunization for adults age 19-64 with At-Risk Conditions	Influenza Immunization for Adults age ≥ 18
PV Baseline Year	7/1/16–6/30/17	79%	18%	29%	48%
PV Qtr 1	7/1/17–9/30/17	81%	26%	31%	44%
PV Qtr 2	10/1/17–12/31/17	82%	31%	33%	57%
PV Qtr 3	1/1/18–3/31/18	82%	30%	37%	55%
PV Qtr 4	4/1/18–6/30/18	82%	32%	39%	53%
PV Qtr 5	7/1/18–9/30/18	83%	35%	41%	20%

*NMMCI normally measures flu season from the first of September through the first of March the following year.

Lessons Learned and Ongoing Activities

It was determined that identifying and vaccinating patients at the point of care worked best with the staffing in place at most clinics. This was a standard workflow already in place for ages 65 and older pneumococcal immunization and influenza immunization. The opportunity to have had more robust prompting at the point of care in the EMR would have engendered the ability to capture more at-risk and high-risk patients ages 19-64.

Transition to a new EMR (Epic) will occur in April 2019. With the ability to utilize Best Practice Advisories and Health Maintenance reminders for both flu and pneumonia vaccines, there is the expectation that the system will continue to improve adult immunization rates in the years to come.

References

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

Appendix

Collaborative Goals

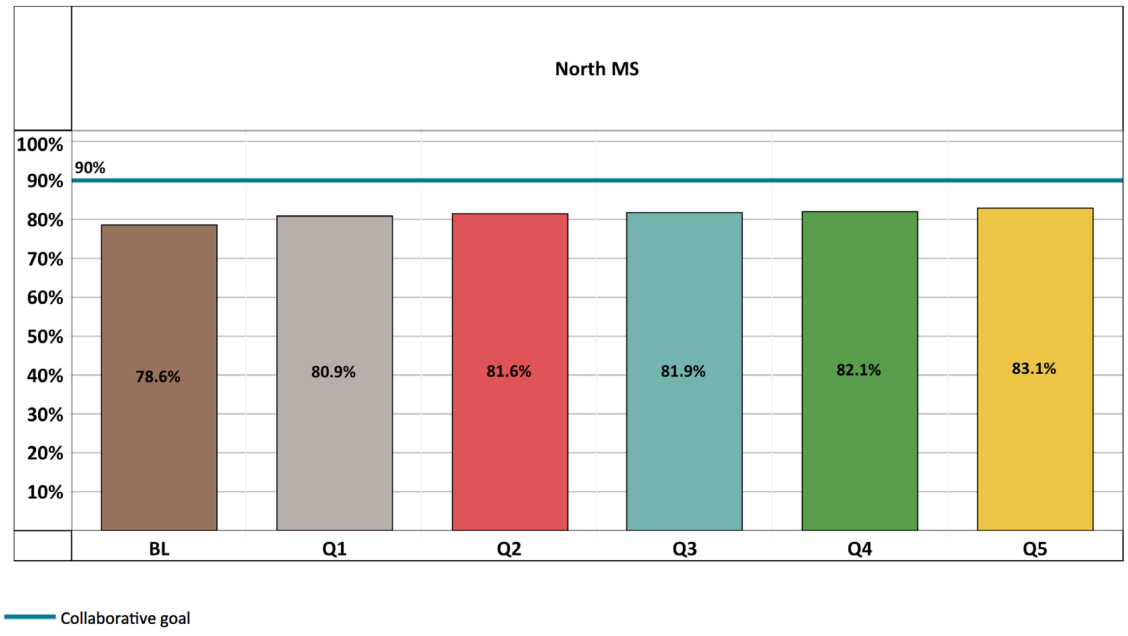
Measure	Healthy People 2020	Collaborative Goal
Measure 1 (65+) Any	90%	90%
Measure 1 (65+) Both PPSV and PCV*	90%	60%
Measure 2 (High-Risk)	60%	45%
Optional Measure 2a (At-Risk)**		
Measure 3 (Flu)	70%/90%***	45%

* 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.

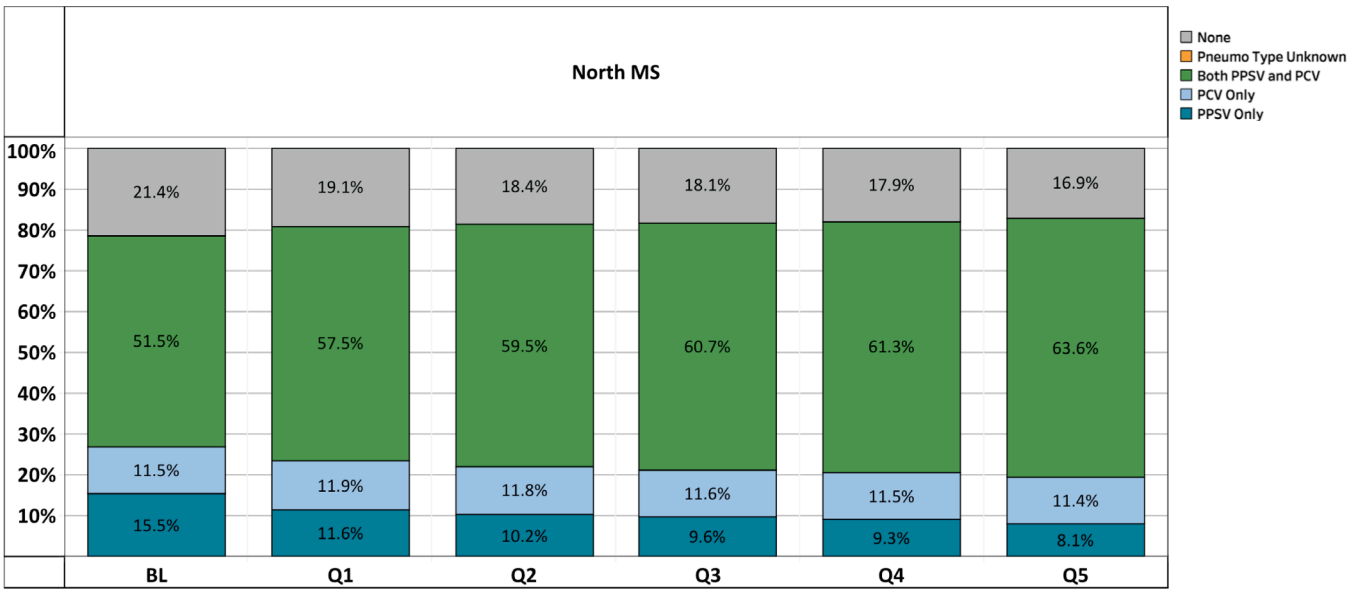
*** 70% for all patients, 90% for Medicare patients

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

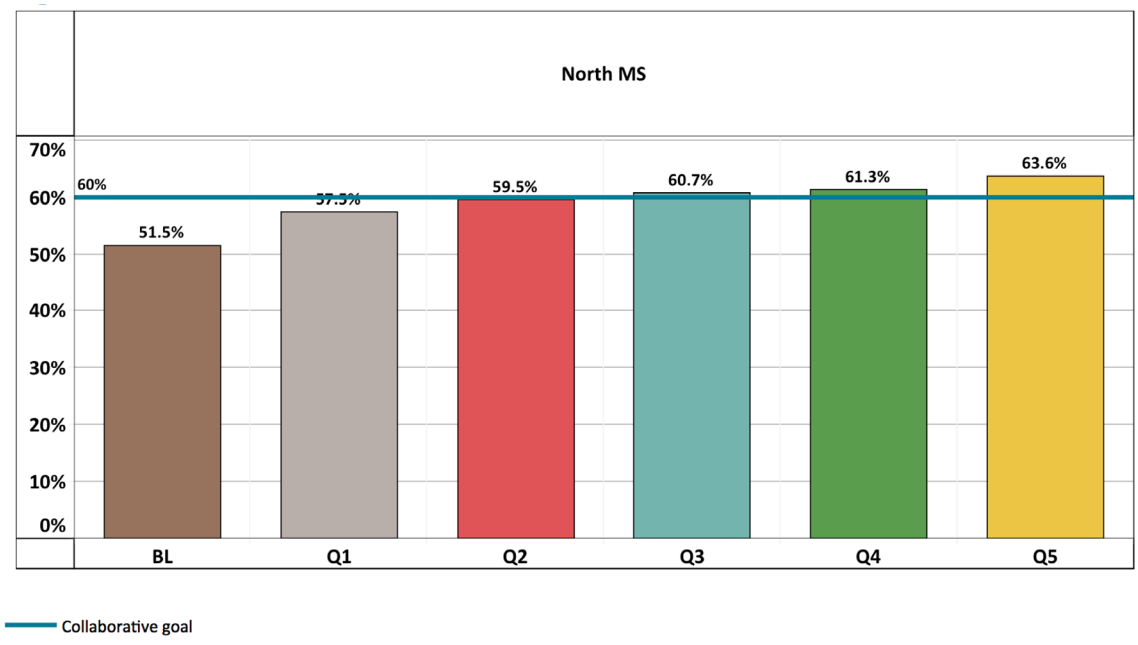


Appendix

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

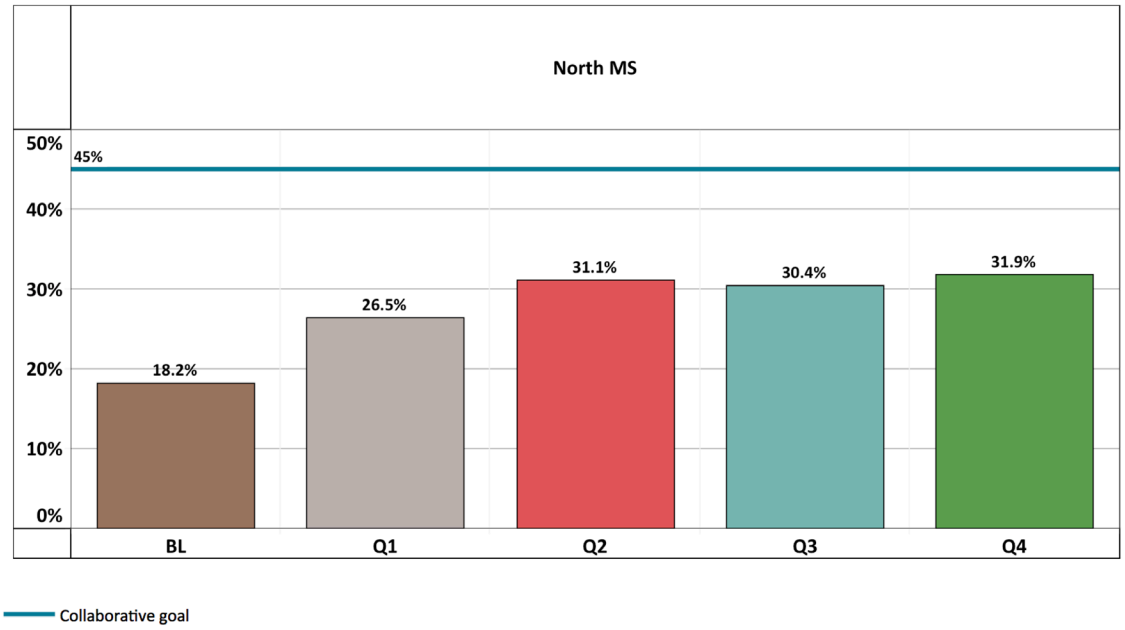


Measure 1 – Both PPSV and PCV Immunization for Adults Ages ≥ 65

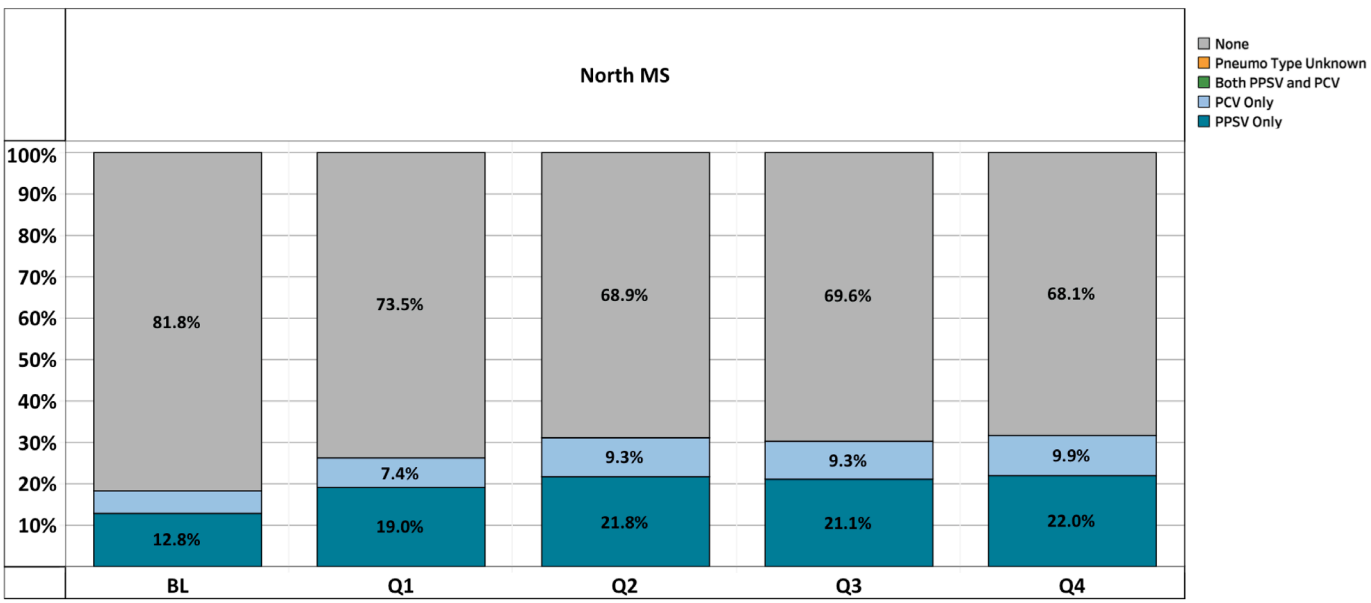


Appendix

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

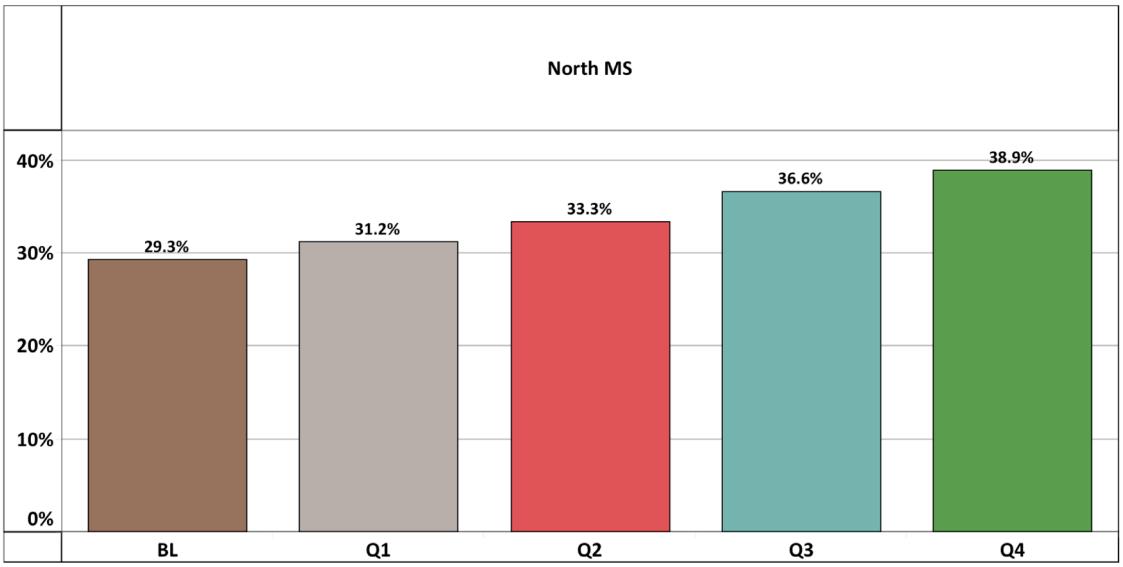


Measure 2 – Pneumococcal (Any) Immunization for Adults Ages 19–64 with High-Risk Conditions

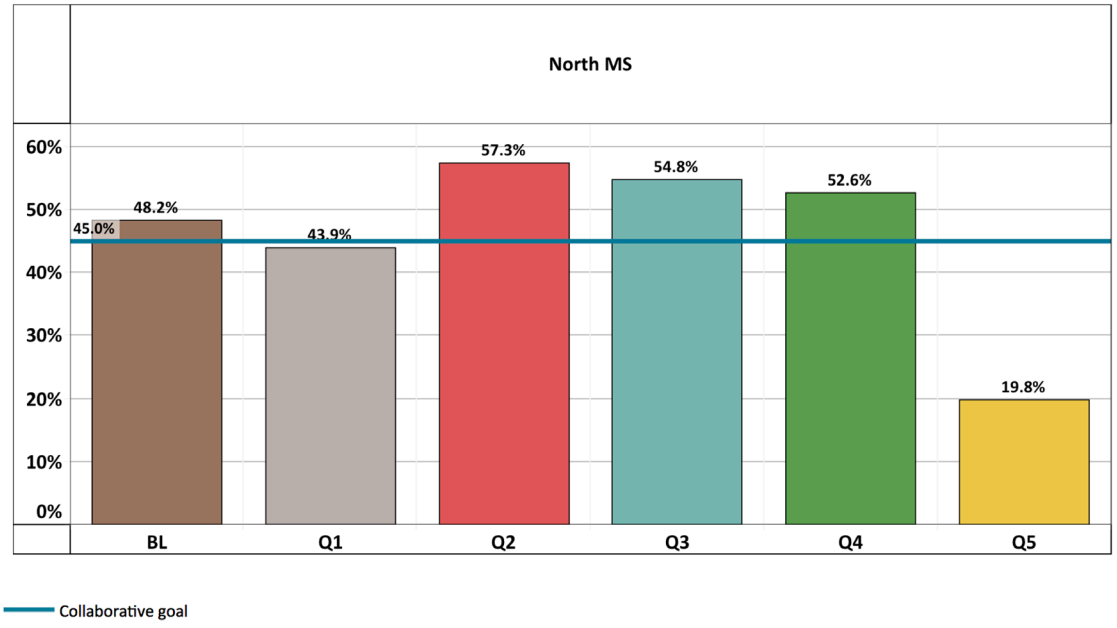


Appendix

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



Measure 3 – Influenza Immunization, Age ≥ 18



From left: Triana Stephens, Clinical Data Analyst; Lisa Nunnery, R.N., Quality Outcomes Manager

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