



# IMPACT OF PHARMACIST INTERVENTIONS TO CLOSE CARE GAPS FOR PATIENTS WITH DIABETES

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## INTRODUCTION

MN Community Measurement (MNCM) was engaged in December 2018 to design and administer a study focused on measuring the impact of expanding pharmacy enhanced services in Minnesota to improve health care outcomes for patients with diabetes. The study builds on MNCM's role in the community as a trusted neutral aggregator of data on health care quality and outcomes.

This report provides a detailed look at the study goals, the study methods – including processes used by network pharmacists in completing the identified interventions and methods for measurement and evaluation – and the results of the analysis.

The study was carried out in collaboration with Blue Cross and Blue Shield of Minnesota, Thrifty White Pharmacy, and Pfizer, in addition to the affiliated pharmacies engaged in the network administered by Thrifty White Pharmacy as listed in the appendix to this report.

This study is aligned with MNCM's mission to empower health care decision makers with meaningful data to drive improvement – and complements ongoing efforts to advance diabetes care in Minnesota. Though the community has made significant progress, there continues to be opportunity for improvement.

## CURRENT STATUS OF DIABETES CARE IN MINNESOTA

Of 322,000 adults in Minnesota with diabetes who were included in MNMCM's optimal diabetes care (ODC) measure for health care provided in 2019:

**55%** were not optimally managed as defined by meeting all component targets (N = 177,100)

**12%** were not prescribed a statin medication when appropriate (N = 38,640)

**16%** were not tobacco-free (N = 51,520)

**5%** had no Hemoglobin A1c (HbA1c) test in the last year (N = 16,100)

## THE "D5"

The D5 is a set of five treatment goals that when reached together, represent the gold standard for managing diabetes.



HbA1c < 8.0 mg/dL



Blood pressure < 140/90 mm Hg



Tobacco-free



On a statin medication  
Unless contraindicated



If ischemic vascular disease, on daily aspirin/antiplatelet  
Unless contraindicated

For more information on the MNMCM Optimal Diabetes measure, click [here](#).

# EXECUTIVE SUMMARY

## Study Goals

The goal of the study was to evaluate outcomes of local pharmacy-based interventions to address specific gaps in care for patients with diabetes. This included evaluation of a pharmacy network's ability to:

1. Receive and act on data supplied by a health plan identifying patients with specific gaps in care
2. Deliver targeted interventions when patients with diabetes are in the pharmacy on a monthly basis picking up their prescriptions.

*Gaps in care* in the context of this project are specific medical services, consultation, and/or education that should be delivered to a patient with diabetes to maintain their health.

The interventions being initiated by the pharmacists are intended to close gaps in care and specifically:

- Improve medication adherence for patients with diabetes
- Improve the percentage of patients with diabetes taking statin medications
- Improve the percentage of patients with diabetes who received annual influenza vaccination
- Improve the percentage of patients with diabetes who have completed a Hemoglobin A1c (HbA1c) test
- Improve the percentage of patients with diabetes who are tobacco free

# EXECUTIVE SUMMARY

## Findings

The study period began on August 7, 2019 and ended on July 31, 2020. During this period, MNMCM tracked interventions and outcomes for 1,946 patients who were eligible for reporting, with 6,332 gaps in care that needed attention.

Pharmacists completed 5,053 identified interventions for the patient population during the 12-month period. This resulted in:



**1,400**

patients enrolled in medication synchronization



**1,850**

patients screened for immunizations



**1,097**

immunizations administered



**1,200**

patients screened for tobacco use



**402**

statin medication gaps addressed



**75**

missing HbA1c tests completed

**Overall, 80% of targeted gaps in care were eliminated by the end of the project.**

## COLLABORATING PARTNERS



### MN COMMUNITY MEASUREMENT (MNCM)

MNCM, in its role as a neutral and trusted convener with expertise in measurement, was engaged to serve as administrator of the study. This included design and implementation of the evaluation, production of the evaluation report, and leading development of the dissemination plan to share study outcomes with the community. The study was completed in compliance with MNCM's guidelines for engagement of commercial interests, which ensure that MNCM's work is conducted independently and remains free of influence by parties with a financial stake in the outcome of the work.

### PFIZER, INC.



Pfizer, Inc., identified key participants interested in advancing patient care using the appointment-based model (ABM), and provided funding to support the study. Pfizer advanced ABM within the pharmacy industry and is now working to advance the proper use of medicines through a collaborative approach with pharmacy and payers, and the project design reflects pharmacy's role in improving patient outcomes. Pfizer US Trade and local payer expertise supported continued engagement and execution of milestones. Additionally, Pfizer is providing broad national exposure and dissemination for the patient findings and results of the project.

### BLUE CROSS AND BLUE SHIELD OF MINNESOTA



Blue Cross® and Blue Shield® of Minnesota and Blue Plus® are nonprofit independent licensees of the Blue Cross and Blue Shield Association

Blue Cross and Blue Shield of Minnesota (Blue Cross) served as the collaborating health plan for the study. In addition to providing input into the study design and evaluation plan, Blue Cross provided the necessary monthly data feeds to the pharmacy network administrator listing covered members who had active gaps in care. The lists identified members with issues related to medication adherence, use of statin medications, reported receipt of influenza vaccine, and/or completion of a Hemoglobin A1c (HbA1c) test to inform interventions by network pharmacists. Blue Cross also agreed to allow network pharmacies to bill for completion of HbA1c tests to close identified gaps in care.

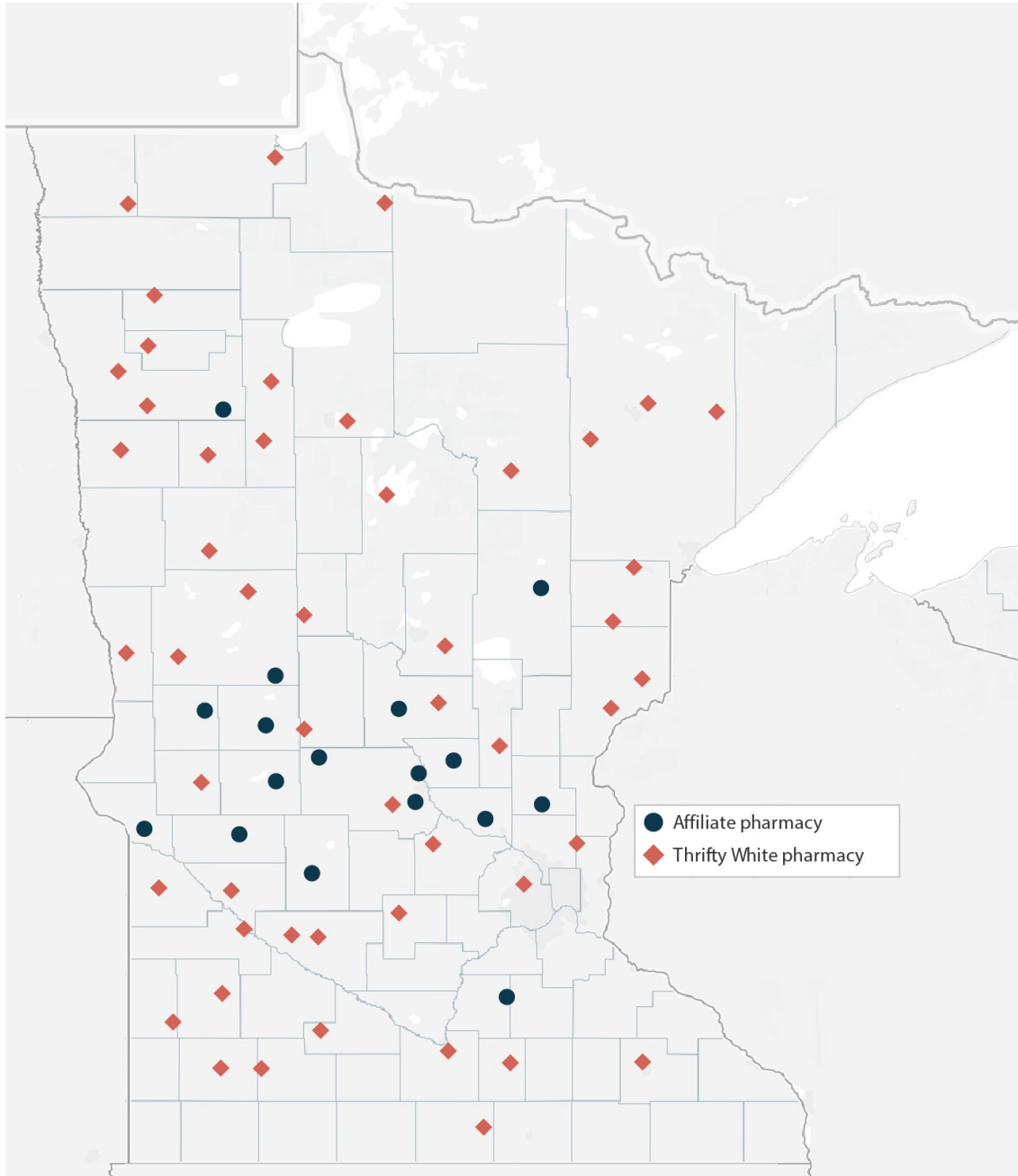
### THRIFTY WHITE PHARMACY



Thriftly White Pharmacy served in dual roles for the study, serving as both the Network Administrator and as a Network Pharmacy (described below). As Network Administrator, Thrifty White managed contracting, training, and on-going management of the Network Pharmacies, including providing a project manager who worked with each pharmacy to maximize their success. Additionally, Thrifty White implemented and customized a patient management platform for use by all participating pharmacies to meet the documentation needs for the project. The platform was used to identify targeted patients, flag the identified gap(s) in care that needed to be addressed, track patient appointment dates, facilitate communication with patients in advance of their appointment, and capture all data necessary for billing, reporting and analysis. Each month, the pharmacy network administrator integrated the payer data feeds into the patient management platform, and transmitted data to MNCM for analysis on behalf of the Network Pharmacies.

# COLLABORATING PARTNERS CONTINUED

## Affiliate and Thrifty White Pharmacies Across Minnesota



## NETWORK PHARMACIES

Network pharmacies leveraged the patient management platform to access details on the patients they serve who were identified as having gaps in care. Pharmacists used the data to inform appropriate interventions to address gaps in care and documented the details of the interventions and care delivered in the patient management platform.

Network Pharmacies include both independent (“Affiliate”) and Thrifty White pharmacies that serve approximately 7,700 Minnesota patients with diabetes who are covered by Blue Cross.

## METHODS

### Pharmacy Processes and Interventions

Participating pharmacies used an appointment-based model (ABM) and medication synchronization (*MedSync*) program to support coordination of medication management for the targeted patients who agreed to participate in this program.

*Medsync* or medication synchronization, is a service that synchronizes and schedules the patient's refill appointments. Enrolling patients into *Medsync* ensures patients have a routine monthly appointment to:

1. Refill their medications
2. Engage with the pharmacist

The routine appointment provides an ongoing opportunity for the pharmacist to deliver additional interventions needed to address gaps in care.

### GAPS IN CARE

*Gaps in care* in the context of this project included specific medical services, consultation, and/or education that should be delivered to a patient with diabetes to maintain their health. The interventions initiated by the pharmacies are intended to close gaps in care and specifically aim to improve the percentage of patients with diabetes who:



Are adherent with their medications



On a statin medication



Received an annual influenza vaccination



Have completed a Hemoglobin A1c (HbA1c) test



Are tobacco free



## METHODS

### Pharmacy Processes and Interventions continued

Network Pharmacies focused first on the intervention to enroll the patient into the *Medsync* program. Each patient enrolled was given a designated appointment day to pick up all their maintenance medications each month. This intervention was intended to help address gaps related to non-adherence to prescribed medications.

The pharmacy teams used the on-going monthly appointments with patients to deliver interventions to address gaps in care identified by Blue Cross in monthly reporting. Additional interventions delivered by pharmacists during these appointments included:

- Completing or providing referral for Hemoglobin A1c (HbA1c) tests
- Recommending and/or providing immunizations recommended by the Advisory Committee on Immunization Practices (ACIP)
- Educating patients on the importance of using statin medications and collaborating with providers to initiate therapy as appropriate
- Screening for tobacco use and initiating tobacco cessation therapy as appropriate

## METHODS

### Measurement and Evaluation Methods

The services measured as part of this project included the following as appropriate for the individual patient:

- Enrolled patient in Appointment-Based Model and Medication Synchronization Program
- Completed or provided referral for Hemoglobin A1c Tests when necessary to assess glycemic control and bill for test via standard claim with appropriate coding
- Recommended and provided all ACIP recommended immunizations when appropriate
- Educated patients on the importance of statin use and collaborated with the provider to initiate therapy when appropriate
- Screened for tobacco use and initiated tobacco cessation therapy when appropriate

Such services were provided during the initial engagement of the patient and during the monthly follow-up face-to-face counseling sessions with the patient in the pharmacy.

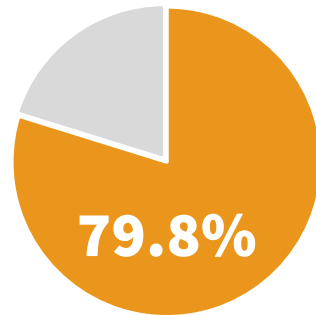
For the purposes of this study, gaps in care were considered closed when Network Pharmacies:

1. Provided and documented delivery of the service
2. Documented the service was provided by an outside source, or
3. Documented the service is no longer required

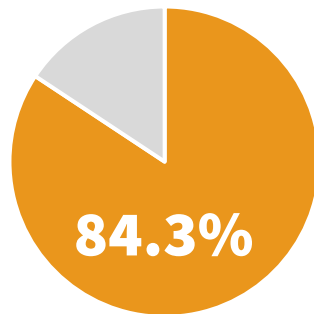
If the patient declined the recommendation, the gap was listed as such and was not listed as closed.

## STUDY RESULTS

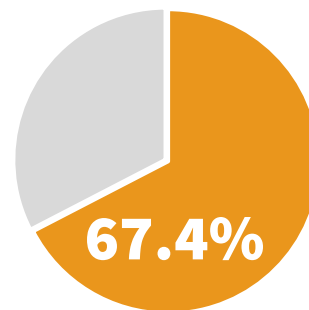
The study period began on August 7, 2019 and ended on July 31, 2020. During this period, MNCM tracked interventions and outcomes for 1,946 patients who were eligible for reporting, with 6,332 gaps in care that needed attention.



of care gaps were closed  
at the end of the program  
(N = 5,053)



of care gaps were closed  
at the 56 Thrifty White  
pharmacies  
(N = 1,430)



of care gaps were closed  
at the 18 affiliate  
pharmacies  
(N = 516)

## NOTE ON COVID-19

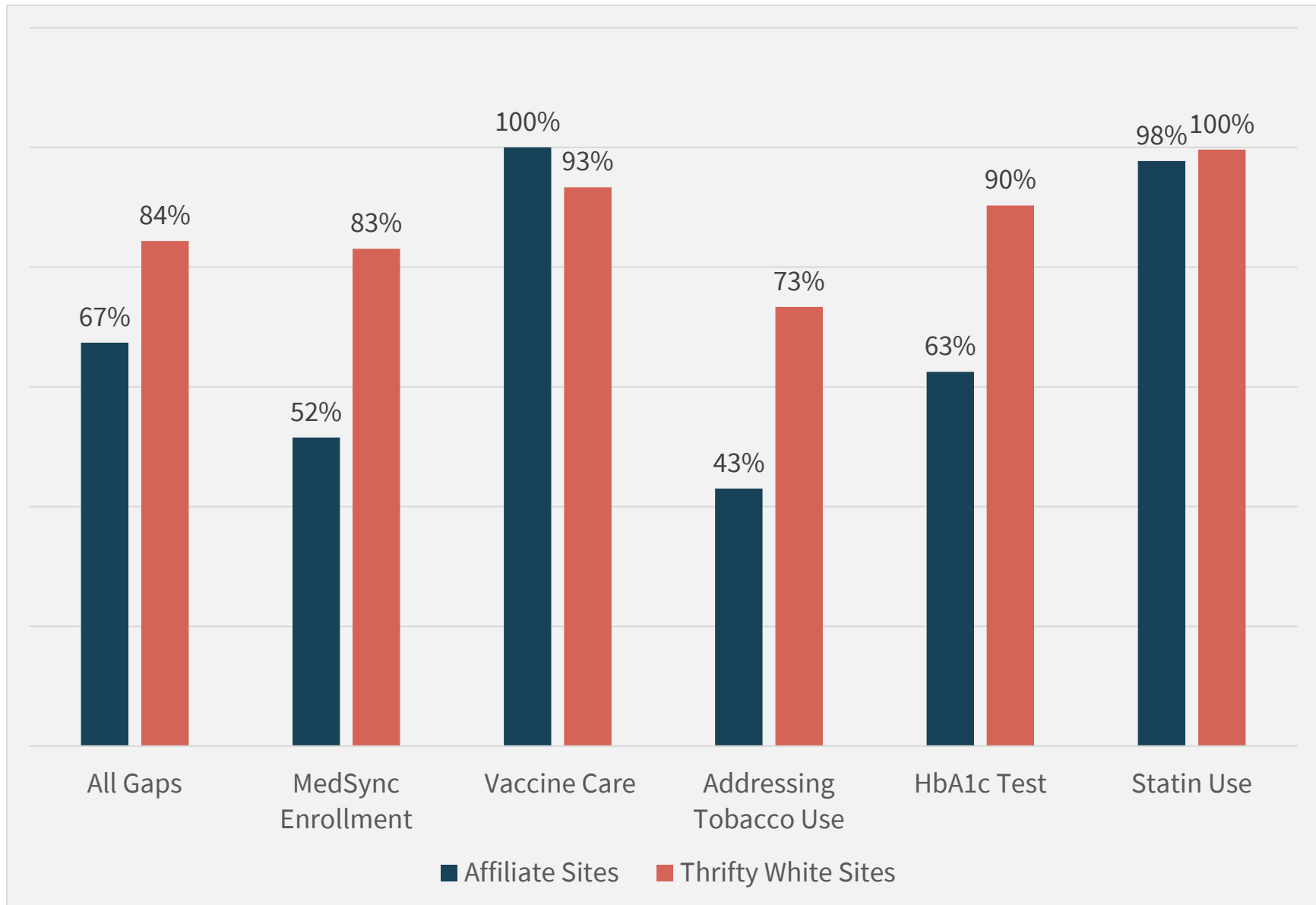
It is noteworthy that the project period overlaps with the height of disruptions in care associated with the COVID-19 pandemic. There was discussion in March 2020 about whether to suspend the project, and participants assured MNCM that they would be able to continue.

The results by measurement month shown in Chart 2 (see p. 13) illustrate that not only was the work able to continue during the peak of the disruptions, but that is when most success was achieved.

Discussions with network pharmacies revealed that contributing factors included an increase in resources available to focus on outreach and interventions due to the business slowdown, as well as improved success in reaching patients at their homes.

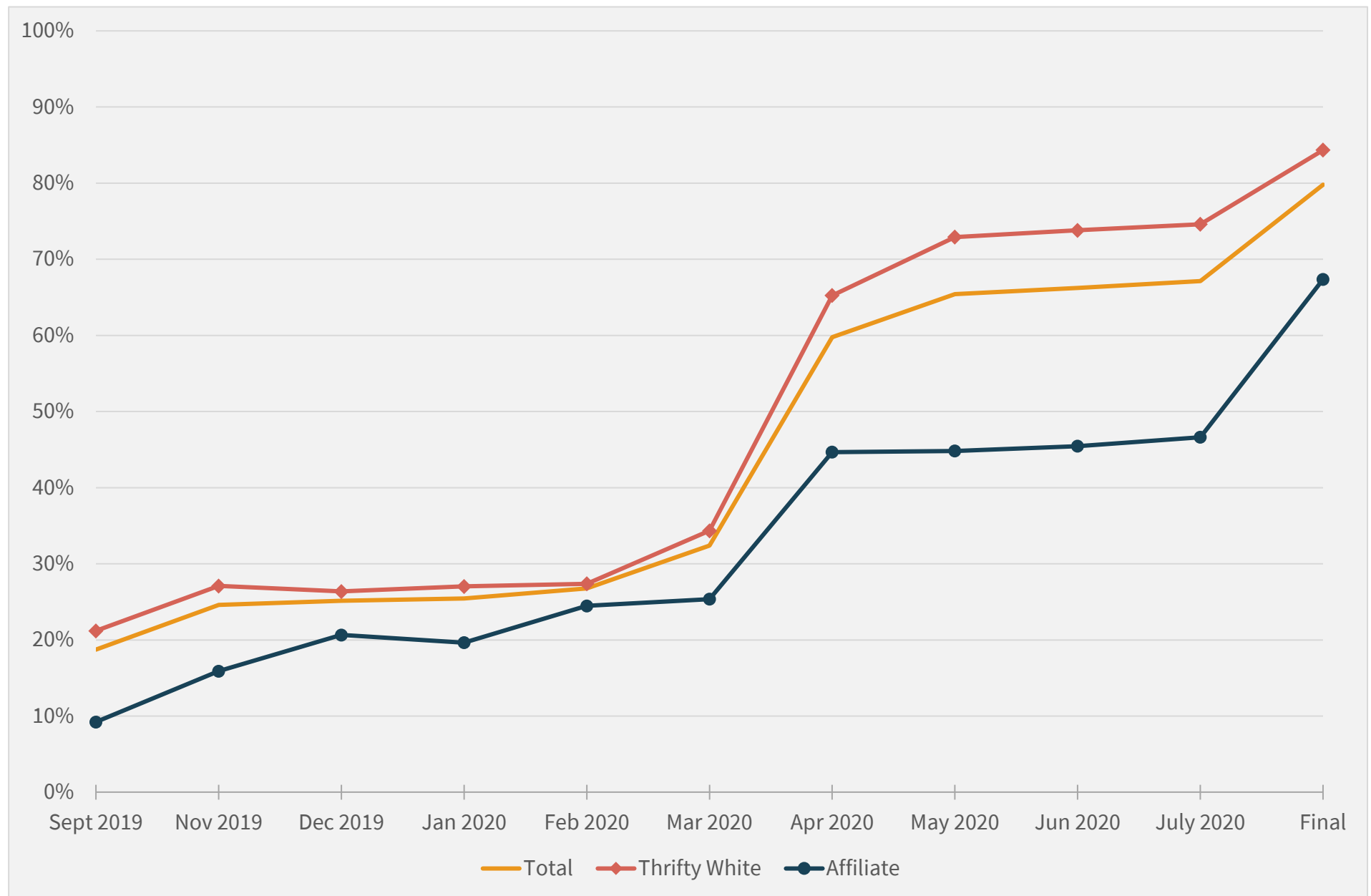
# STUDY RESULTS

## Chart 1: Final Gap Closure Rates



# STUDY RESULTS

## Chart 2: Cumulative Gap Closure Rate by Measurement Month



# STUDY RESULTS

## Analysis

There was an expectation at the start of the project that patient demographics and length of time on the project would have a significant impact on the likelihood of successfully closing care gaps. The data presented in Table 1 demonstrate there is no evidence that patient age, patient sex or length of time enrolled had a noticeable impact on success.

Table 1: Patient Demographics

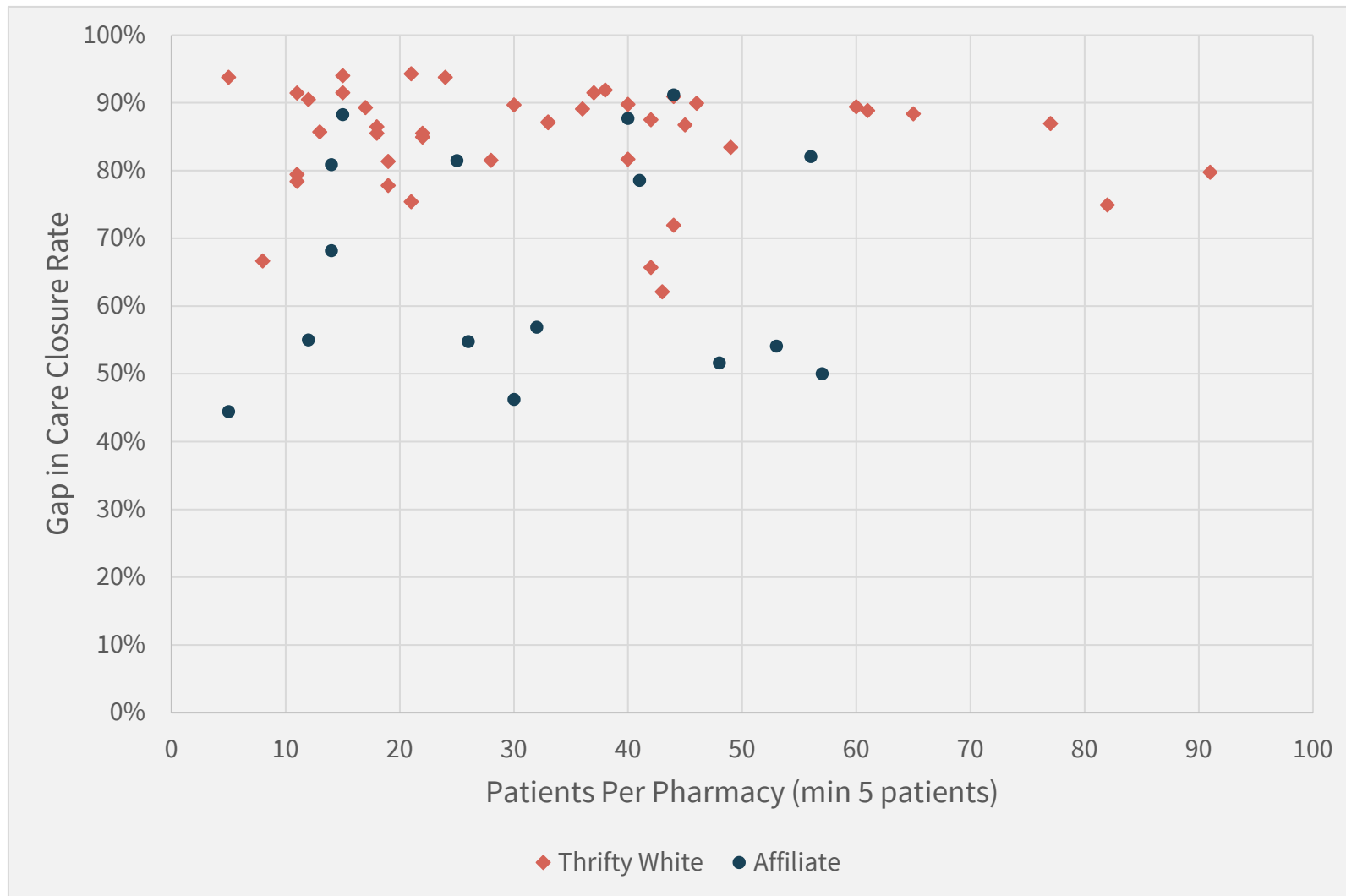
Demographic Variable	Number of Patients	Distribution of Patients	Percentage of Gaps Closed
<b>Sex</b>			
Male	883	45.4%	79.4%
Female	1,063	54.6%	80.1%
<b>Age</b>			
<65	74	3.7%	77.2%
65-74	1,107	57.0%	80.1%
75-84	570	29.1%	79.5%
85+	206	10.1%	79.8%
<b>Length of time enrolled</b>			
6 Months	12	0.6%	86.1%
7 Months	88	4.5%	76.6%
8 Months	190	9.8%	86.4%
9 Months	274	14.1%	82.4%
> 9 Months	1,384	71.0%	78.5%

# STUDY RESULTS

## Analysis continued

Chart 3 illustrates no statistical relationship ( $R^2 < .001$ ) between the number of targeted patients at a pharmacy and the pharmacy's success in closing care gaps.

Chart 3: Distribution of Results by Size of Patient Panel

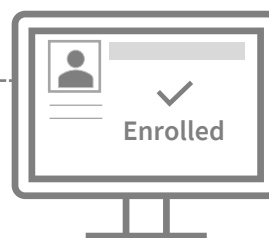


# STUDY RESULTS



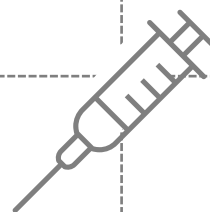
## Affiliate Pharmacies

**1,430** MedSync opportunities  
**83.1%** enrolled



**516** MedSync opportunities  
**67.4%** enrolled

**1,430** gaps in vaccine care  
**93.4%** gaps closed



**516** gaps in vaccine care  
**100%** gaps closed

**1,430** gaps in addressing tobacco use  
**73.4%** gaps closed



**516** gaps in addressing tobacco use  
**43.0%** gaps closed



# STUDY RESULTS CONTINUED



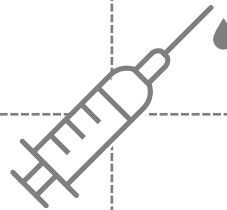
## Affiliate Pharmacies

**72** gaps in HbA1c tests  
**90.3%** gaps closed

**16** gaps in HbA1c tests  
**62.5%** gaps closed

**275** gaps in statin use  
**99.6%** gaps closed

**131** gaps in statin use  
**97.7%** gaps closed



## DISCUSSION AND CONCLUSIONS

Overall, pharmacist interventions completed during the project period resulted in closure of 79.8% of care gaps.

The results are encouraging and suggest that coordination between health plans and local pharmacists can be an effective strategy to engage patients, complete necessary screenings, and deliver recommended care.

### Further study

Including a larger patient population and multiple payer participants would be beneficial to confirm the results of this evaluation and deepen the community's understanding of the impact of pharmacy-based interventions on care outcomes.

Enhancements to include engagement of medical groups as collaborating partners, and examination of clinical outcomes and health care costs for targeted populations would be beneficial to inform future care delivery and value-based payment models.

TOTAL GAPS CLOSED:  
79.8%



4,637 gaps in care  
84.3% gaps in care closed



1,695 gaps in care  
67.4% gaps in care closed

# APPENDIX

**TABLE 2: GAPS SUMMARY**

Gaps Summary	TW Pharmacies	TW % Complete	Affiliate Pharmacies	Affiliate % Complete	Total Patients	Total % Complete
<b>Total Patients Enrolled</b>	1,430		516		1,946	
<b>Total Gaps in Care</b>	4,637		1,695		6,332	
Total Open Gaps	475		508		983	
Total Declined Gaps	251		45		296	
Total Completed Gaps	3,911	84.3%	1,142	67.4%	5,053	79.8%
<b>Total <i>MedSync</i> Opportunities</b>	1,430		516		1,946	
Open <i>MedSync</i> Enrollment	23		206		229	
Declined <i>MedSync</i>	219		44		263	
Completed <i>MedSync</i> Enrollment	1,188	83.1%	266	51.6%	1,454	74.7%
<b>Total Vaccine Care Tasks</b>	1,430		516		1,946	
Open Vaccine Screenings	95		0		95	
Declined Vaccine Screenings	0		0		0	
Completed Vaccine Screenings	1,335	93.4%	516	100.0%	1,851	95.1%
<b>Total Addressing Tobacco Use Tasks</b>	1,430		516		1,946	
Open Tobacco Screenings	350		294		644	
Declined Tobacco Intervention	31		0		31	
Completed Tobacco Screenings	1,049	73.4%	222	43.0%	1,271	65.3%
<b>Total HbA1c Test Gaps</b>	72		16		88	
Open A1c Gaps	7		6		13	
Declined A1c Gaps	0		0		0	
Completed A1c Gaps	65	90.3%	10	62.5%	75	85.2%
<b>Total Statin Use Gaps</b>	275		131		406	
Open Statin Gaps	0		2		2	
Declined Statin Gaps	1		1		2	
Completed Statin Gaps	274	99.6%	128	97.7%	402	99.0%

## PARTICIPATING PHARMACIES

### Thrifty White pharmacies

**Thrifty White Drug #759**

*Ada, MN*

**Thrifty White Pharmacy #103**

*Alexandria, MN*

**Thrifty White Pharmacy #787**

*Annandale, MN*

**Thrifty White Pharmacy #746**

*Bagley, MN*

**Thrifty White Pharmacy #791**

*Baudette, MN*

**Thrifty White Pharmacy #769**

*Bemidji, MN*

**Thrifty White Pharmacy #738**

*Brainerd, MN*

**Thrifty White Pharmacy #781**

*Breckenridge, MN*

**Thrifty White Drug #747**

*Clearbrook, MN*

**White Drug #107**

*Cloquet, MN*

**Thrifty White Pharmacy #776**

*Cold Spring, MN*

**Thrifty White Drug #729**

*Crookston, MN*

**Thrifty White Pharmacy #023**

*Detroit Lakes, MN*

**Thrifty White Pharmacy #734**

*Fergus Falls, MN*

**Thrifty White Pharmacy #735**

*Fergus Falls, MN*

**Thrifty White Drug #750**

*Fertile, MN*

**Thrifty White Pharmacy #773**

*Forest Lake, MN*

**Thrifty White Pharmacy #728**

*Grand Rapids, MN*

**Thrifty White Pharmacy #788**

*Grand Rapids, MN*

**Thrifty White Drug #760**

*Granite Falls, MN*

**Thrifty White Pharmacy #741**

*Hibbing, MN*

**Thrifty White Pharmacy #782**

*Hinckley, MN*

**Thrifty White Pharmacy #792**

*Hoyt Lakes, MN*

**Thrifty White Pharmacy #793**

*Hutchinson, MN*

**Thrifty White Drug #756**

*Karlstad, MN*

**Thrifty White Drug #755**

*Madison, MN*

**Thrifty White Pharmacy #752**

*Mahnomen, MN*

## PARTICIPATING PHARMACIES

### Thrifty White pharmacies continued

**Thrifty White Pharmacy #789**  
*Mankato, MN*

**Thrifty White Pharmacy #037**  
*Perham, MN*

**Thrifty White Drug #758**  
*Springfield, MN*

**Thrifty White Pharmacy #727**  
*Waseca, MN*

**Thrifty White Drug #722**  
*Marshall, MN*

**Thrifty White Pharmacy #779**  
*Pierz, MN*

**Thrifty White Drug #736**  
*Thief River Falls, MN*

**Thrifty White Pharmacy #783**  
*Wells, MN*

**Thrifty White Pharmacy #767**  
*Milaca, MN*

**Thrifty White Drug #762**  
*Plymouth, MN*

**Thrifty White Pharmacy #768**  
*Tyler, MN*

**Thrifty White Pharmacy #775**  
*Westbrook, MN*

**Thrifty White Pharmacy #770**  
*Montevideo, MN*

**Thrifty White Pharmacy #740**  
*Red Lake Falls, MN*

**Thrifty White Pharmacy #038**  
*Virginia, MN*

**Thrifty White Pharmacy #022**  
*Willmar, MN*

**Thrifty White Pharmacy #754**  
*Moose Lake, MN*

**Thrifty White Pharmacy #765**  
*Renville, MN*

**Thrifty White Pharmacy #778**  
*Wadena, MN*

**Thrifty White Pharmacy #742**  
*Morris, MN*

**Thrifty White Pharmacy #786**  
*Rochester, MN*

**Thrifty White Drug #748**  
*Walker, MN*

**Thrifty White Pharmacy #790**  
*Olivia, MN*

**Thrifty White Pharmacy #772**  
*Sandstone, MN*

**Thrifty White Drug #749**  
*Walker, MN*

**Thrifty White Drug #745**  
*Osakis, MN*

**Thrifty White Pharmacy #774**  
*Slayton, MN*

**Thrifty White Pharmacy #780**  
*Warroad, MN*

# PARTICIPATING PHARMACIES

## Affiliate pharmacies

**Trumm Drug Downtown**

*Alexandria, MN*

**Trumm Drug Clinic Pharmacy**

*Alexandria, MN*

**Breen's Thrifty White Pharmacy**

*Benson, MN*

**Coborn's Big Lake #2031**

*Big Lake, MN*

**Trumm Drug Elbow Lake**

*Elbow Lake, MN*

**Coborn's Foley #2002**

*Foley, MN*

**Nord's Pharmacy**

*Fosston, MN*

**Trumm Drug Glenwood**

*Glenwood, MN*

**Coborn's Isanti #2046**

*Isanti, MN*

**Coborn's Little Falls #2006**

*Little Falls, MN*

**Thrifty White Pharmacy**

*McGregor, MN*

**Herrmann Thrifty White Pharmacy**

*Montgomery, MN*

**Carlson Drug**

*Ortonville, MN*

**Trumm Drug Parkers Prairie**

*Parkers Prairie, MN*

**Coborn's Riverside #2007**

*Sartell, MN*

**Coborn's Sauk Centre #2022**

*Sauk Centre, MN*

**Cash Wise Waite Park #3009**

*Waite Park, MN*

**Cash Wise Clinic Willmar #1801**

*Willmar, MN*