

The North Dakota MediQHome Project

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“Medical Home”

“Team-based model of care” led by a physician providing coordinated care throughout a patient’s lifetime, including arrangements with professionals for preventive, acute, chronic illness, and end-of-life assistance.”

Origin – 2004, American Academy of Family Physicians

- Recognized inadequate continuity, safety, and quality.
- Developed concept and gained support from physicians and health plans.

What is MediQHome?

It's easy to think of this program as the model of care your grandparents received from their family doctor, but with a 21st century twist. In today's medical environment, you may see different providers for different symptoms or treatments. With MediQHome, your primary-care doctor becomes your medical home. When you visit other caregivers, your primary doctor is able to see what they are doing to treat you. That's important when it comes to coordinating your care.

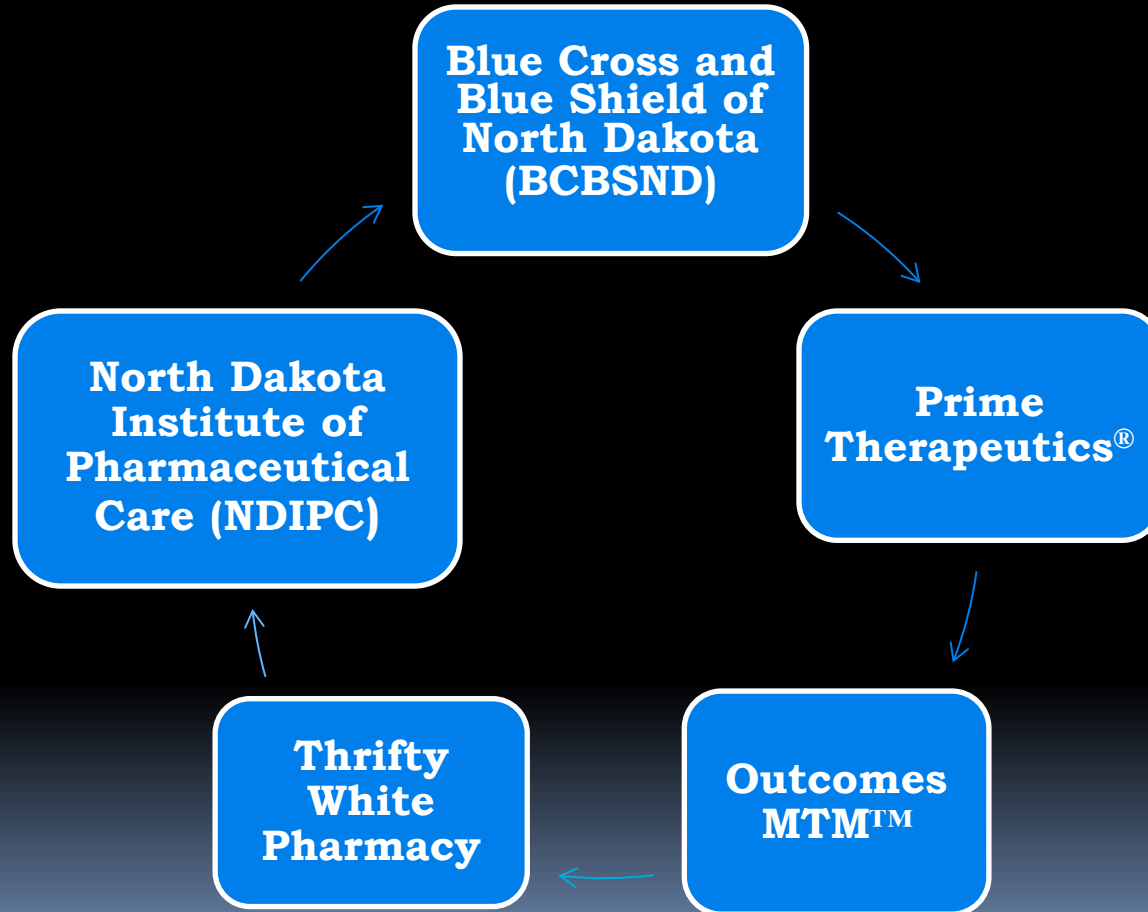
The 21st century twist comes from the MediQHome technological backbone that allows all those medical professionals to collaborate. When all your caregivers see more complete information—you get the right care at the right time.

Medical Home: Pharmacist's Role

Pharmacists can have a role because it requires a *team-based approach* including nurses, physicians, and other professionals.

- Can and should have a role in MTM in this model.
- Typically have been underused in this role.
- Great potential to demonstrate their professional expertise in this model.

Project Partners



Project Partners

Patient-centered health team (primary care and specialist physicians, nurses, etc.) is a blend of programs of the partnering entities:

- Blue Cross Blue Shield of North Dakota (BCBSND)
- Outcomes MTM™
- Prime Therapeutics®
- Thrifty White Pharmacy

North Dakota Institute of Pharmaceutical Care at NDSU, will administer the grant and evaluate the project's clinical, economic, and quality outcomes.₆

Project Partners

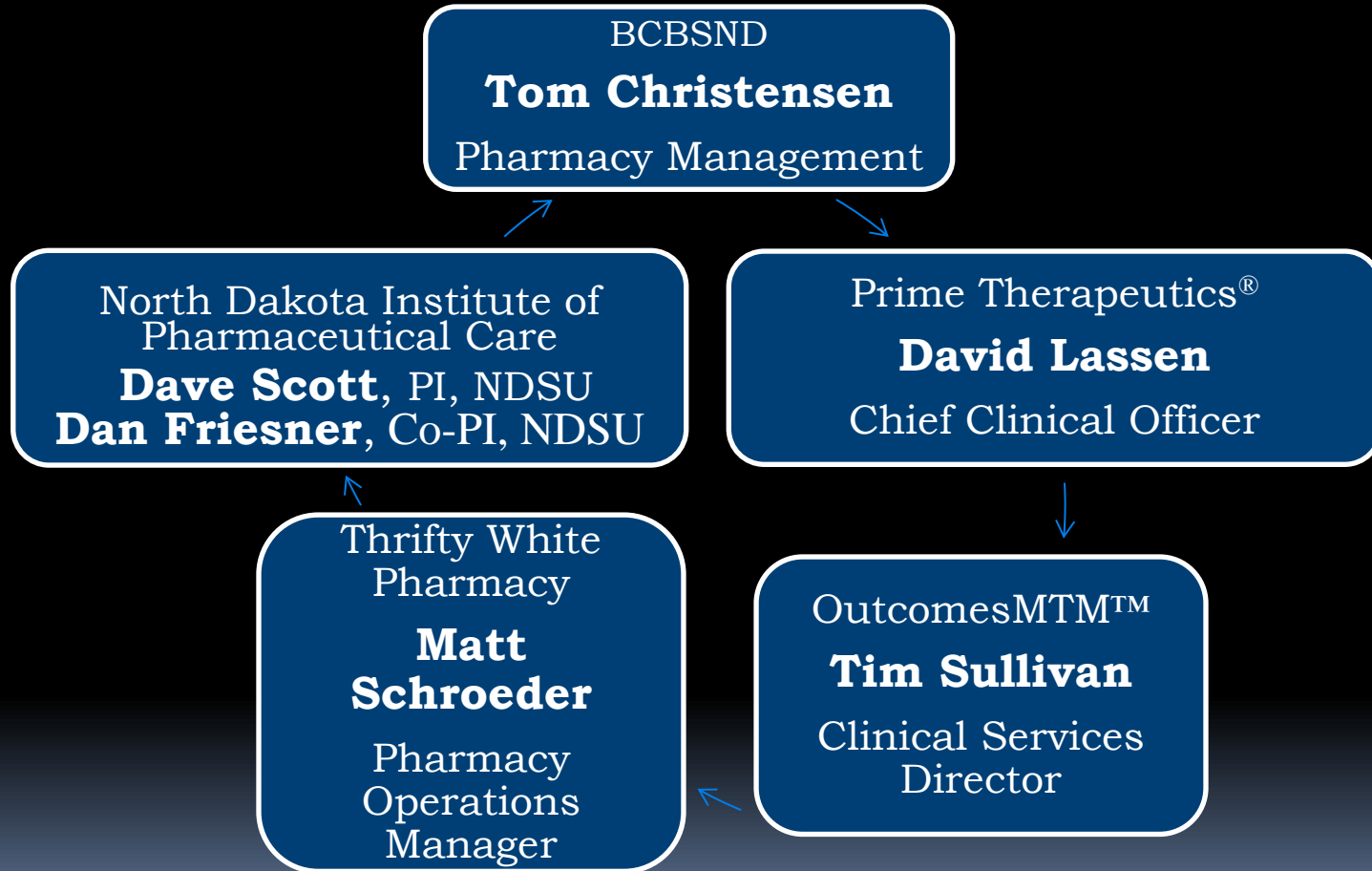
MediQHome

- Founded by Blue Cross and Blue Shield of North Dakota (BCBSND)
- Patient-centered medical home.
- 73% of North Dakota's primary care providers.
- 75-80% of BCBSND members participate.

MDInsight

- Decision program helps the physician to identify care opportunities by creating clinical summaries and reports for each patient.

Project Partners: Team Members



Project Partners

Prime Therapeutics®

- Complimentary to BCBSND and Outcomes MTM™.

GuidedHealth Program

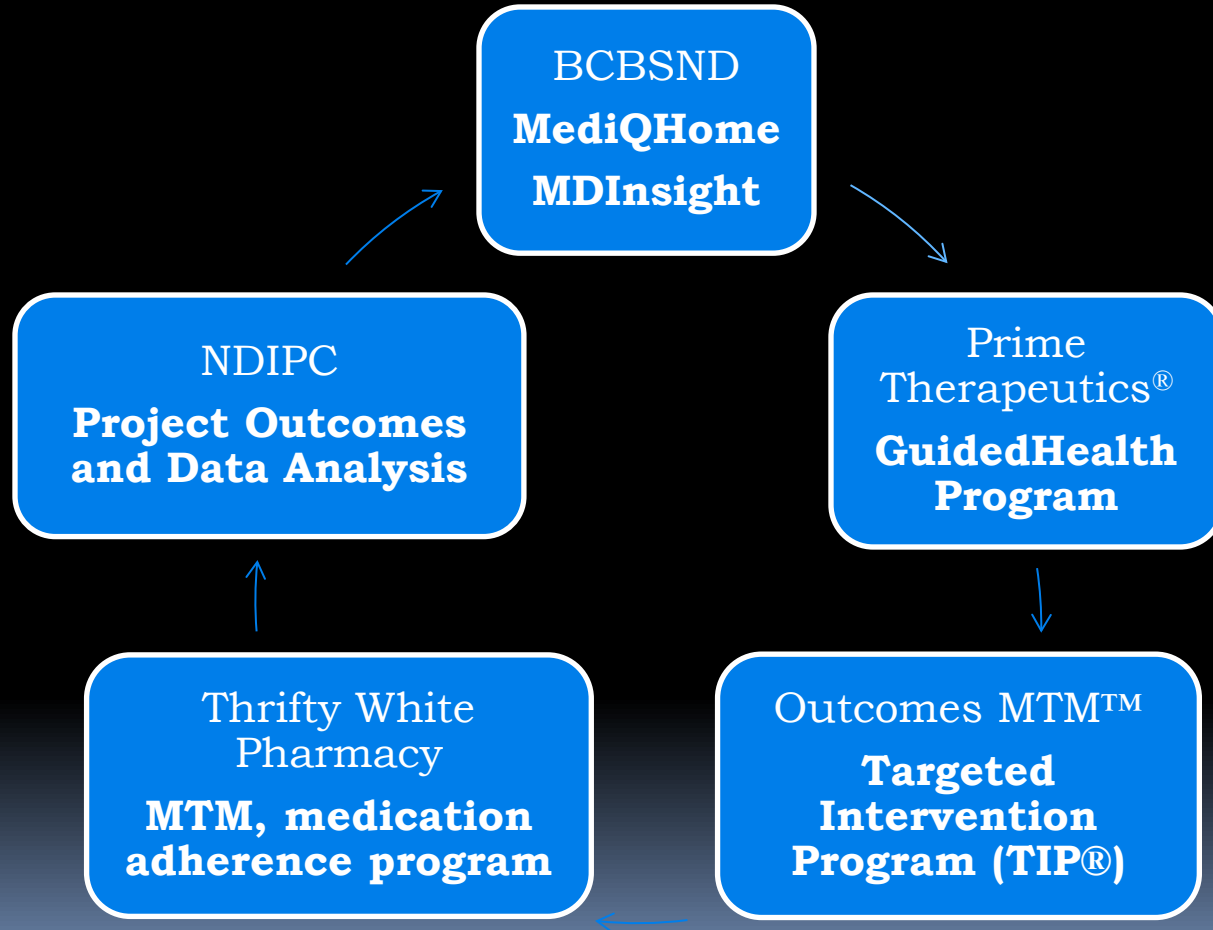
- Clinical integration of medical and pharmacy data that is sent to OutcomesMTM.
- Supplies clinical intelligence to providers to improve outcomes and lower care costs.

Project Partners

Outcomes MTM™

- Complimentary to MediQHome.
Targeted Intervention Program (TIP®)
 - Electronic charting platform for MTM reporting.
 - Feeds targeted interventions to pharmacists.
- 150,000 + BCBSND members are eligible for services.

Project Partners



Pharmacist Intervention

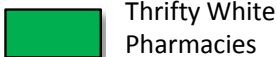
Thrifty White Pharmacy

- Today, community pharmacists provide some MTM services.
- 28 stores in 22 cities in North Dakota

Pharmacist Intervention:

- More MTM Services
- Medication Management Programs:
 - Motivational Interviewing
 - Medication Adherence

(28 Thrifty White Pharmacies in 22 ND cities)

 MediQHome
Providers in
County

MediQHome Advisory Board

The purpose of this board is to provide advocacy and guidance on how to make the project more successful by integrating community pharmacy services into the MediQHome project. Members include:

Eunah Fisher, MD, Medical Director, MediQHome, BCBSND

David Hanekom, MD, Chief Medical Officer, MDdatacor

Tom Christensen, PhD, Manager of Pharmacy Management, BCBSND

Matt Schroeder, Pharmacy Operations Mgr.– Patient Programs, Thrifty White

Sara McKay, PharmD, RPh, White Drug #46

Don Warne, MD, MPH, Director of NDSU MPH Program

David Scott, MPH, PhD, Project Director and Principal Investigator

Dan Friesner, PhD, Co-Investigator

Laura O'Rourke, Grant Coordinator

Physicians will be included in plans to publish the results in medical (NEJM, AJPH, Health Affairs) and pharmacy journals (JAPhA).

Pharmacist Intervention

Development and progress of the patient-centered health team is occurring in 3 phases:

Phase I (Completed):

- **Today**, Thrifty White pharmacists practice MTM functions where there is an existing medical home project (MediQHome) and an existing MTM program (Outcomes).
 - Although these programs lay side-by-side, the shared goals and objectives of the two programs lay the foundation for the “virtual” care team approach envisioned in the proposal.¹⁵

Pharmacist Intervention

Phase II (In Progress):

- Prime and Outcomes are working toward enhancing the Outcomes' Targeted Intervention Program (TIP®) by integrating pharmacy and medical information.
 - Goal: to provide more meaningful opportunities for intervention which should be a significant advancement in current MTM practices.
 - Thrifty White is integrating its services, including immunizations, MTM, medication adherence, and transitions in care services, into the TIP® program.

Pharmacist Intervention

Phase III (The Proposal):

- Project goal is to achieve a fully-integrated medication home within MediQHome, inclusive of community pharmacists serving patients.
 - Vision: to develop infrastructure to support a complete MTM profile (personal medication list, medication action plan, and outcomes monitoring) within the MediQHome system to resolve any medication problems.

Pharmacist Intervention

Phase III (The Proposal):

- **Ideal infrastructure** will support real-time capability for sharing information on identified drug-related problems, interventions made, and outcomes between prescribers, their patients, and community pharmacists.
 - Incorporate medication adherence programs into MediQHome.

This will require buy-in from each of the partners, and significant technological investments and coordination of existing human and information management resources, beyond those currently provided independently by each partner.

MediQHome Project Timeline

Date	Action
June 2012	Submit grant proposal to NACDS Foundation
October 2012	Submit NACDS Foundation supplemental request
Nov. 2012	Notification of award and receipt of NACDS Foundation.
Nov. 2012	Submit study to IRB at NDSU for review and approval
Dec. 2012	Submit RGA and draft of subcontract to NDSU Sponsored Programs
January 2013	Startup of The North MediQHome Project. Begin baseline outcomes tracking.
February 2013	Hire Project Coordinator

MediQHome Project Timeline

Date	Action
May 2013	Work with PCMH leaders to develop and integrate pharmacy services and information technology into the MediQHome
June 2013	Train pharmacy personnel on motivational interviewing.
July 2013	Begin delivery of pharmacy services MTM and medication adherence.
June 2014	Complete year one and report on the mid-project progress
June 2015	Year end report

Research Design

North Dakota Institute of Pharmaceutical Care (NDIPC) at NDSU

- Administer the grant and provide services to assess the project's clinical, economic, and quality outcomes.
 - Dr. David Scott, Director serves as project director and principal investigator.
 - Dr. Daniel Friesner (Co-PI) provides data analysis.
- Annual report of its research publications
 - (www.ndsu.edu/pharmacy/the_north_dakota_institute_for_pharmaceutical_care)

Research Design

Research Objective:

- To develop, and subsequently evaluate the impact of community pharmacist-provided medication management strategies on patient health outcomes within an existing patient-centered medical home.

■ Study Postulated Outcome:

- A significant difference in the improvement of clinical, humanistic, and economic patient outcomes is postulated in the active arm intervention group as compared to the 1st and 2nd control groups.

Research Design

This is a very broad objective, which requires a very broad research design and approach to data analysis.

Additional considerations to consider:

- Existing patient populations
- Existing institutional structures for providing care
- Randomization into test and control groups

Research Design

A quasi-experimental, nonequivalent control group design with two control groups:

<u>Test:</u>	<u>O₁</u>	X	<u>O₂</u>
<u>Control 1:</u>	<u>O₁</u>	Y	<u>O₂</u>
<u>Control 2:</u>	<u>O₁</u>		<u>O₂</u>

O = an observation, with the subscripts 1 and 2 denoting the pre and post-intervention periods, respectively.

X = a full intervention; those receiving integrated care via Thrifty White Pharmacy.

Y = a “partial intervention”; standard MediQHome services without Outcomes or Thrifty White based pharmacy.

Research Design

- The pre-post measurements help control for pre-existing differences in patient health states.
 - Fewer study exclusions
- The two control groups help adjust for confounding effects based on usual and customary care.
 - Control 1 – “partial intervention” (those receiving standard MediQHome services without Outcomes or Thrifty White based pharmacy services).
 - Control 2 - those receiving no intervention.

Inclusion Criteria

To be included in the **Test Group**, the patient must:

1. Be attributed to a primary care provider within the MediQHome.
2. Be eligible for Outcomes MTM services.
3. Receive pharmacy services from an identified Thrifty White Pharmacy.
4. Have continuous eligibility and coverage throughout the study period.
5. Have been identified for at least one Outcomes TIP.

Inclusion Criteria

To be included in the **Control Arm 1 Group**, the patient must:

1. Be attributed to a primary care provider within the MediQHome.
2. Be eligible for Outcomes MTM services.
3. Not receive pharmacy services from an identified Thrifty White Pharmacy.
4. Have continuous eligibility and coverage throughout the study period.
5. Have been identified for at least one Outcomes TIP.

Inclusion Criteria

To be included in the **Control Arm 2 Group**, the patient must:

1. Not be attributed to a primary care provider within the MediQHome.
2. Not be eligible for Outcomes MTM services.
3. Not receive pharmacy services from an identified Thrifty White Pharmacy.
4. Have continuous eligibility and coverage throughout the study period.

Program Outcomes

Clinical Measures

- Biomarkers, i.e., HbA1c, cholesterol levels
- Number of ADRs (adverse drug reactions) identified and avoided
- Drug therapy overuse and underuse
- Therapeutic duplication
- Drug interactions

Clinical Outcomes

- Medication adherence measures
 - Medication possession ratio (MPR)
 - Proportion of days covered (PDC)
- Primary medication non-adherence (PMN) measures
 - Recommended measurement period
 - Alternate measurement period
 - Newly initiated drug therapy

Program Outcomes

- Humanistic outcomes:
 - Patient satisfaction with MTM services
 - Physician satisfaction with pharmacy services

Program Outcomes

- Economic outcomes:
 - Total prescription costs
 - Direct and indirect medical costs
 - Health costs associated with physician, ER, and hospital visits that are avoided due to MTM service
 - Estimated using both actual claims and costs avoided
- Return on investment (ROI) will be measured as a ratio of total savings to programmatic costs and pharmacist reimbursement