Case Study

North Dakota Improves Diabetes through a Cross-sector Approach to Prevention and Commitment to High-Quality, Guideline-based Care

North Dakota’s network of public health, healthcare, payer, business, and community partners are implementing the following pillars of approach to reduce the burden of diabetes across the state: 1) strengthen prevention infrastructure, 2) increase access to self-management education, 3) drive guideline-based care, 4) improve care quality and use of data, 5) leverage telehealth, and 6) align payment with quality of care. This case study describes these key levers to strengthen systems for diabetes prevention and control. The sections below provide background, key partners, pillars of approach, outcomes, spread and sustainability, next steps, lessons learned and recommendations.

BACKGROUND

As with the rest of the country, the epidemic of diabetes and associated health complications have a large impact on health and healthcare costs in North Dakota. Although new diabetes diagnoses decreased slightly from 2010-2014, diabetes prevalence in North Dakota increased from 6.9 percent in 2010 to 8.6 percent in 2014. In 2015, North Dakota ranked eighth overall for diabetes in America’s Health Rankings, an annual assessment of the nation’s health on a state-by-state basis. However, most North Dakotans have one or more of the five risk factors for diabetes, including high blood pressure, high cholesterol, being overweight or obese, not getting enough physical activity, and not eating enough fruits and vegetables on a daily basis. The total medical costs and lost work and wages for people diagnosed with diabetes reaches $400 million in North Dakota. Diabetes disproportionately affects lower-income North Dakotans and American Indians, who account for the highest proportion of non-white residents in the state.

Over ten years ago, public health leaders in North Dakota worked strategically to identify and develop channels of messaging that would provide a sustainable approach to addressing the burden of chronic disease and associated risk factors in the state. With bipartisan political support, they identified two channels to pursue and offered broad paths that resonated with many different partners. These were worksite wellness and school wellness. This marked a shift away from the traditional disease-specific approach for health promotion in the state and generated new opportunities to positively impact resident health across the state.

1 The 2015 ranks are based on self-report data from CDC’s 2014 Behavioral Risk Factor Surveillance System (BRFSS).
An example of the results of one of the channels of messaging is the North Dakota diabetes action plan legislation\textsuperscript{11}, HB 1443, passed in 2013 to strengthen cross-sector collaboration in addressing the burden of diabetes in the state. The statute requires the North Dakota Department of Health (NDDOH), the North Dakota Department of Human Services, the North Dakota Indian Affairs Commission, and the North Dakota Public Employees Retirement System (PERS) to biennially report on the burden of diabetes on North Dakotans, diabetes-related efforts across the agencies, and propose recommendations to the legislature to address the epidemic. The state published their first report, the \textit{North Dakota Diabetes Report}, on June 1, 2014. The report reiterated several priorities in state health promotion plans that would be most effective in improving outcomes for people with diabetes.

North Dakota’s \textit{State Health Improvement Plan (SHIP)} provides an overarching framework for public health networks, state agencies, and local public health units to align efforts on shared priorities and outcomes to support health improvement. The 2014-2016 SHIP identified diabetes as one of the top ten health status areas most in need of improvement. The SHIP highlights two cross-cutting priorities: worksite wellness and health information technology (IT). The state has made notable advances in health IT in recent years, implementing a system for direct secure messaging to allow providers to securely exchange information back and forth with other providers or community partners. This helps make the processes for transitions of care, patient follow-up, and patient referral more efficient and effective. The state also established a query-based service to collate information across systems into a clinical portal that gives a horizontal view of patient care over time. This means that for someone who may have gotten their hemoglobin A1c tested in multiple locations that are using different electronic health record (EHR) systems, a provider can query the clinical portal to find the lab reports for care management and treatment plans. There are different levels of access to the portal and multiple partners using it, including medical providers, local health units, and NDDOH (mainly for immunizations).

\textsuperscript{11} Beginning in 2011, states began passing diabetes action plan legislation that require state Medicaid programs, state employee health programs, and other public programs (agencies on the front line of diabetes prevention and control efforts) to biennially assess the medical and financial impact of diabetes and work together on a plan to guide state agency efforts and solutions for legislature.
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As the state health agency, NDDOH is well-positioned to lead diabetes prevention and control efforts in the state. The agency’s role in reducing the burden of chronic diseases and associated risk factors – by supporting the state’s worksite wellness priority area as identified in the state health improvement plan, among others – is outlined in the North Dakota State Plan to Prevent and Manage Chronic Disease. The 2012-2017 plan provides guidance for NDDOH chronic disease program areas, including the Diabetes Prevention and Control Program (DPCP), to work towards with state and local-level partners.

The NDDOH DPCP goals include:
1. Reduce diabetes-related disease and death rates
2. Prevent type 2 diabetes among high risk groups
3. Improve quality of life for residents with diabetes

To achieve these goals, the program supports diabetes prevention efforts through the National Diabetes Prevention Program (NDPP), education that reflects the National Standards of Diabetes Self-management Education, quality improvement for better care surveillance evaluation, and coordination between partners.
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“*If we could get into all 28,000 businesses in the state of North Dakota with consistent wellness messages dealing with their healthcare problems as well as their risk factor prevention – if I could get into all the schools in North Dakota I would be strategically reaching the family with consistent messages from two strategic directions. That would probably be the most important thing that I could do to improve the health and wellness of families in the state.”* — Terry Dwelle, State Health Official

### KEY PARTNERS

A wide range of partners have been critical in North Dakota’s efforts to support cross-cutting efforts to improve prevention, treatment, and control of diabetes in the state.

- **Healthy North Dakota Collaborative** is a work group made up of state and private sector employees committed to working toward a common goal. The work group started in 2002 as an advisory committee to address priority areas for the Healthy North Dakota public health initiative. ND DOH provides leadership and coordination of the group.

- **Statewide Vision and Strategy Group** is a steering committee that emerged from the Healthy North Dakota Collaborative. After five to seven years, members recognized the need for strategic leadership involvement to help advance health improvement in the state. In response, ND DOH convened a round 35 organizational leaders to join the Statewide Vision and Strategy Group to develop the state’s first state health improvement plan. Membership consists of CEOs representing long-term care, medical providers, hospitals, businesses, third party payers, medical schools, and others.

- **North Dakota Diabetes Coalition** membership consists of health professionals and diabetes partners from healthcare systems, local public health units, and the Indian Health Service. The coalition, administratively supported by ND DOH, serves as a central clearinghouse for diabetes information, provides diabetes-related continuing education (including nurses, certified diabetes educators, dietitians, mid-level providers, and physicians), and opportunity for educator networking and best practice sharing.

- **American Diabetes Association’s (ADA)** North Dakota affiliate aims to spread the use of ADA diabetes standards of care to primary care practices and healthcare professionals. They aim to keep providers connected across healthcare systems and involve community members through representation on the board. ADA also leads advocacy efforts for improving access to quality diabetes care in schools and rural settings.

- **Blue Cross Blue Shield of North Dakota (BCBSND)** houses the state worksite wellness initiative and operates the MediQHome program based on the patient-centered medical home model.

- **North Dakota State University Extension Service (NDSU Extension)** is the state’s land grant university. Thirty-two of the 53 counties in the state have staff that work on nutrition and wellness education. They conduct direct education as well as policy, systems, and environmental work to promote chronic disease prevention. NDSU recently hired a full-time staff person dedicated to advancing partnerships and policy to expand the NDPP with NDDOH.

- **Healthcare provider associations and medical societies** including the North Dakota Academy of Family Physicians, Nurse Practitioner Association, and Physician Assistant Association. These organizations provide education to healthcare professionals about guideline-based diabetes care as well as community-based lifestyle and self-management programs that can help improve outcomes for patients with diabetes.

- **Quality Health Associates** of North Dakota has collaborated with healthcare professionals, organizations, and communities across the state to improve the quality of care provided to the...
people of North Dakota. Their priority area, as directed by the Centers for Medicare and Medicaid Services, is reducing disparities in diabetes care by providing diabetes self-management programming through the Diabetes Education and Empowerment Program. They share mutual goals with NDDOH to promote diabetes self-management education to improve prevention and treatment using health IT.

- **Public Employees Retirement Board (PERS)** is the insurance plan for state employees. The plan represents around 65,000 people in North Dakota throughout government systems.
- **Healthcare systems** large and small, urban and rural, across the state are involved in diabetes care. Sanford Health System and Altru Health System are mentioned in this case study.
- The **North Dakota Health IT Director** works on the state’s health information exchange, the North Dakota Health Information Network, and leads direct secure messaging, telehealth, and other initiatives that support information access and exchange to improve health.
- **Community partners**, including businesses and churches, promote diabetes prevention, management, and treatment by connecting residents with relevant programs and resources.

**PILLARS OF APPROACH**

North Dakota pursued the six approaches described below to achieve the goal of reducing the burden of diabetes by reaching residents where they work, live, and receive care.

![Figure 3. North Dakota’s pillars of approach to reduce the burden of diabetes.](image)

1. **Strengthen the prevention infrastructure in worksites, healthcare systems, and communities.**

   **North Dakota’s Worksite Wellness Initiative**

   Once the Healthy North Dakota Collaborative and state health agency leadership identified worksite wellness as a strategic priority, NDDOH committed to providing state-level coordination of a **worksite wellness initiative** and training for businesses across the state. They hired an out-of-state company to train 40 state and local employees to become certified licensed trainers in worksite wellness, with a focus on risk factor prevention (i.e. physical activity, healthy eating, healthy weight maintenance). This initiative garnered support from stakeholders and helped shape North Dakota’s current comprehensive worksite wellness program. The training helped leaders understand that risk prevention efforts often take years to show a return on investment and that businesses wanted to more quickly see results and impacts on their bottom line. So, NDDOH customized their worksite wellness approach to include four evidence-based clinical interventions.
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Based on research and expert recommendations that these could provide a shorter-term return on investment and reduce the time employees are away from work, NDDOH identified the following interventions: 1) chronic disease management; 2) case management for people with multiple, complex conditions; 3) access to quality nurse phone line services to reduce inappropriate emergency department visits; and 4) access to on-site clinics staffed by mid-level providers for biometrics, such as hemoglobin A1c\(^{\text{III}}\) or blood pressure checks.

The current worksite wellness initiative was launched in North Dakota in 2009 as a collaboration between NDDOH, BCBSND, and the Dakota Medical Foundation. Since 2013, BCBSND has housed the state’s worksite wellness office and hosts annual summits. Despite the transition, the spirit of the program has stayed the same—it serves everyone in the state. On average, there are 250-300 businesses that attend the summits to learn from national experts about best practices and participate in trainings on how to implement successful programs in their workplaces.

Benefits of Worksite Wellness for Diabetes Prevention and Control

“Helping employees be more physically active, eat more healthfully, and maintain a healthy weight can go a long way toward preventing the development of diabetes. For those who already have diabetes, further problems can be prevented or delayed by keeping blood glucose, blood pressure and cholesterol under control.” – North Dakota Worksite Wellness Toolkit

Healthcare Systems’ Investment in Prevention

In 2014, two major healthcare systems in the state approached state public health leadership with the same request: help with creating a new business model that included risk factor prevention, as they were moving away from disease-oriented care and fee-for-service reimbursement to outcomes-based reimbursement. Since they were already working with businesses on injury prevention, North Dakota’s Sanford Health – the largest, rural, not-for-profit healthcare system in the country – assigned their occupational medicine department to lead worksite wellness efforts. In an innovative example of public health and primary care integration, the state health agency and Sanford identified a target area where both partners were already working with businesses, local public health, and paramedics to improve access to disease prevention and management support services in worksites. From this work, funded by the health system, they are developing a template for the integration of public health and primary care in the worksite.

Healthcare systems are also investing in their own medical weight management programs and public wellness facilities for their communities. While the weight management programs are not

\(^{\text{III}}\) Hemoglobin A1c (A1c) is a blood test to screen for and diagnose diabetes and prediabetes in adults. For people without diabetes, the normal range for the A1c test is between 4 percent and 5.6 percent. Hemoglobin A1c levels between 5.7 percent and 6.4 percent indicate increased diabetes risk. Levels of 6.5 percent or higher indicate diabetes (Source: NIH).
specifically focused on diabetes, they are based on many of the same principles as NDPP that lower the risk of diabetes. In the city of Grand Forks, Altru Health System supported the development of an expansive new wellness facility for the community and uses it for their medical weight loss and lifestyle change program.

Community Lifestyle Change Programs

NDDOH is committed to increasing access to evidence-based lifestyle change programs to help prevent diabetes and is partnering with state and local entities to do it. NDSU Extension is grounded in teaching nutrition through programs such as Food Wise SNAP-education program and Dining with Diabetes, both of which instruct people with diabetes about how to eat well using healthy cooking techniques. Since their work aligns well with NDPP, NDDOH partnered with the state extension program to identify new sites and expand training for lifestyle coaches. Together they launched an initiative to expand NDPP leveraging community-clinical linkages between extension agents and healthcare partners in two communities—Lisbon (a rural community) and Grand Forks (a larger community, with around 55,000 residents)—selected based on NDDOH data indicating gaps in community services. DPCP funded two positions (at 0.3 full-time equivalent employees a piece) to help develop and promote these programs, which were offered free of charge by NDSU Extension. Extension agents and healthcare partners often co-taught and healthcare organizations provided space for the classes. The extension agents worked with providers and parish nurses to recruit participants. The state currently has 16 recognized NDPP sites and half of them reflect this community-clinical linkage model.

2. Increase access and referrals to accredited and recognized diabetes self-management education.

To help strengthen community-clinical linkages and promote team-based care to help patients manage their diabetes, one of DPCP’s priorities is to support engagement of individuals in their efforts to reach optimal health by increasing access to diabetes self-management education (DSME). Based on the evidence supporting DSME’s effectiveness in improving outcomes for people with diabetes, DSME is also included in the diabetes action plan report. DPCP led the effort to increase the number of accredited American Academy of Diabetes Educators (or ADA-recognized) DSME programs across the state by recruiting and supporting sites. Accreditation and recognition allow programs eligibility for reimbursement and ensure patients are referred to quality programs. DPCP staff reached out to healthcare provider associations to promote referrals to accredited or recognized programs. They also supported family medicine practices and other sites with developing DSME programs. DPCP staff conducted a statewide assessment of DSME programs to increase awareness of all of the accredited and recognized DSME programs available across the state.

3. Drive guideline-based diabetes care across the state.

North Dakota has an advantage when it comes to standardizing diabetes care statewide: it is a small state with a tight-knit professional community of diabetes educators and specialists. The North Dakota Diabetes Coalition and NDDOH helped with the state rollout of standardized protocols in primary care

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IV Diabetes self-management education (DSME) is the process of teaching people to manage their diabetes. The goals of DSME are to control the rate of metabolism (which affects diabetes-related health), to prevent short- and long-term health conditions that result from diabetes, and to achieve for clients the best possible quality of life, while keeping costs at an acceptable level. DSME can be provided in a variety of community settings, including community gathering places, the home, recreational camps, worksites, and schools.
and diabetes centers across the state. One of the state’s diabetes specialists and a key provider champion for diabetes standards of care, Eric Johnson, assistant medical director of the Diabetes Health Center at Altru Health System and associate professor at the University of North Dakota School of Medicine and Health Sciences, led efforts to provide clinics with user-friendly diabetes standards of care and promote them through lectures, meetings, and social media. As a member of the ADA Primary Care Advisory group, Johnson helped publish a summarized version of the lengthy ADA standards, *Standards of Medical Care in Diabetes—2016 Abridged for Primary Care Providers*. The ADA North Dakota affiliate, Diabetes Coalition, and NDDOH disseminated the abridged standards statewide and offered guideline-oriented continuing medical education opportunities throughout the year.

The DPCP and Diabetes Coalition host an annual statewide diabetes summit that is well attended by registered nurses, certified diabetes educators, registered dietitians, DSME coordinators, and others. DPCP surveyed diabetes educators throughout the state to better understand their needs and challenges and used the results to inform the summit programming. The most recent summit also included educational topics of interest to diabetes prevention lifestyle coaches. Altru Health System also hosts a large diabetes medical conference biennially that draws around 300 healthcare professionals and nursing students from the eastern part of the state. Both events are focused on promoting the most updated ADA guidelines and offer continuing education credits. ADA members, with leadership from the Altru Diabetes Center, create opportunities to speak often to a wide variety of medical professionals to promote unified standards of care through professional associations and societies including North Dakota Chapters of the Academy of Family Physicians, American College of Physicians, and the Society of Obstetrics and Gynecology. They also provide outreach through the Center for Rural Health at the University of North Dakota, state physician assistant and nurse practitioner meetings, and health systems’ grand rounds. To further reach medical residents, Johnson does a yearlong diabetes education series for the family practice residency in Bismarck.

“Mostly nurses, certified diabetes educators (CDEs), and licensed registered dietitians (LRDs) attend the Diabetes Summit, and they take the up-to-date information back to their clinics. They are the ones who drive a lot of the guideline-based care in North Dakota.” – Eric Johnson, Diabetes Coalition

4. Assess health systems to identify opportunities for clinical quality improvement and to increase use of data to identify individuals with diabetes.

In 2015, DPCP reached out to Altru Health System to pilot a health systems assessment, a survey tool to assess ambulatory and acute care settings and identify opportunities for improvement, focused on two of the state’s priority National Quality Forum measures: diabetes control measure 0059 (NQF 59) and hypertension control measure 0018 (NQF 18). The Manager of Primary Care Programs for Altru Health System, based in Grand Forks, led the assessment process. After clearing it with colleagues in the quality division, the manager sent it out to physician leaders across all Altru North Dakota clinic and hospital locations that see hypertensive and diabetic patients and received valuable responses that could be used for planning next steps.

“Those that we had involved [in the assessment] felt it helped to open our eyes as to what we were doing. I think what I was really impressed about, or what I really appreciated, was that the level of honesty that was shown in some of the answers. And so there was some really good insight that our physician leaders were able to share in terms of our processes.” – Michael Little, Altru Health System
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The priority opportunities that Altru identified from the assessment were: 1) unify standards for diabetes care across the system; 2) improve follow-up for patients with diabetes after they are discharged from the hospital; and 3) develop a systematic way to screen for patients with pre-diabetes. The assessment revealed that the diabetes center was using ADA standards of care, but there were variations across other specialties and practices in how providers were managing diabetes or pre-diabetes. They discovered that there was dissention among staff about protocols for treating pre-diabetes because of conflicting national recommendations.

To address the priority of unifying standards, the health system developed Altru Medical Standards guidelines for chronic disease management for patients ages 18-75, based on the MN Community Measurement quality standards (Appendix A). One of the main tenets of the standards is an annual (or more frequent) exam of patients for chronic disease management. There are additional guidelines specific to diabetes, hypertension, and vascular disease. The standards were implemented just a few months following the assessment in spring 2015. Providers receive quality reports regularly to track their progress toward meeting targets for optimal care (Appendix B).

<table>
<thead>
<tr>
<th>Altru Standards: Chronic Disease Management</th>
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<tbody>
<tr>
<td><strong>Diabetes Management Appointment Frequency</strong></td>
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<tr>
<td>Patients diagnosed with diabetes will be evaluated by their primary care provider or another member of the healthcare team (ex: medical home coordinator, diabetic educator) at a minimum the following times:</td>
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<tr>
<td>o Patients achieving Altru standards will be evaluated twice per year.</td>
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<tr>
<td>o Patients not achieving Altru standards will be evaluated at least three times per year.</td>
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<tr>
<td>o Achieving Altru standards means that the patient has met the following criteria:</td>
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<tr>
<td> HgbA1c &lt; 8</td>
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<tr>
<td> Blood Pressure &lt; 140/90</td>
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<tr>
<td> Statin prescribed in patients age 40-75, intolerance documented, or other reason for not taking a statin</td>
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Altru introduced a medical home model using registered nurses to follow-up with patients to improve diabetes and chronic disease management. The assessment findings identified hospital discharge as a transition when patients lose momentum and do not follow-up. In response, Altru is increasing their capacity to provide diabetes education and support in the hospital by cross-training medical home nurses. They also changed the hospital discharge protocol. Now the standard is for the primary care practice team to reach out to the patient to establish a follow-up visit within seven days of discharge.

Based on the medical home model, Altru is using health coaches across internal medicine, family practices, regional clinics, and medical homes to proactively identify patients with diabetes who haven’t had an A1c test in the past year, or, if they were tested, had an elevated A1c test (greater than 9%) for follow-up with a provider. They have identified roughly 2,400 patients with diabetes in their system who meet this criteria. The health coaches and trained nurses review patient registries in the EHR to generate patient lists and share these with each provider. Together they discuss next steps and develop a plan for patient outreach. Communication also works the other way; physicians will refer patients struggling with medication adherence or self-management to the nurse, who will then reach out to the patient according to the physician’s request. The Altru Standards provide guidance to help nurses with their patient outreach protocols.
A challenge for the health system is that, since they still use a fee-for-service model, the time nurses spend in the hospital doing patient follow-up costs the health system because it is not reimbursed. However, driven by their commitment to quality, Altru is trying to increase the time for nurses to do hospital rounds and aims to hire a full-time position to provide diabetes education, support, and patient follow-up.

5. Expand access to diabetes care in rural areas through telehealth.
In 2014, two small clinics in rural areas outside of Grand Forks approached Eric Johnson with the Diabetes Health Center at Altru Health System about providing specialist care via telemedicine for patients with diabetes. The distance roundtrip to the medical facilities in Grand Forks was over 300 miles for residents in these areas, which was a barrier to receiving quality diabetes care. Johnson agreed to assist and began trialing virtual consults one or two half days a month with patients in remote clinics. During a telehealth visit, a diabetes educator or nurse is in the room with the patient and Johnson uses a webcam to conduct the visit, which are billed like an in-person visit so that there is no extra cost to the patient. From Johnson’s perspective, an added benefit of these new partnerships is that there is more engagement from smaller, rural clinics and new opportunities to disseminate guideline-based care and offer training on standards of care to the Certified Diabetes Educators and licensed Registered Dietitians in these clinics.

Telemedicine consults are available to complement primary care and referring provider patient services. The diabetes specialist can serve as a resource for primary care providers to set-up diabetes care plans and patient follow-up, but the referring provider will often monitor the patient’s progress. Altru will continue to identify additional clinics, even outside of the health system, interested in telemedicine diabetes services for their patients.

At the state-level, PERS is testing a two-year pilot with their membership for reimbursing telehealth services. The costs and savings results from the pilot will be presented to state lawmakers and used to inform legislation for third-party payer-covered services. To support this project, the state has convened a telehealth work group to discuss how to better facilitate telehealth usage. Work group members represent large and small health systems, state medical and hospital associations, and other interested parties.

6. Align payment with care management and quality of care.
BCBSND started the value-based care MediQHome program in 2007 to improve quality of care through collaborative decision-making, coordination of patient care, and use of a clinical information management system. MediQHome is a flexible patient-centered medical home that focuses on patients with chronic conditions, including diabetes. Their model aligns quality of care with payment reimbursement and offers a quality-based incentive to providers to participate through a care management fee for patients with complex conditions and chronic diseases. The care management fee structure provides an opportunity to incorporate more quality and population health metrics into the payment structure. BCBSND also provides practices with a tool, MDInsight, to help measure the quality of clinical care, support care management, and population health. The tool can help providers identify gaps in care and gain efficiencies in their work flow. In collaboration with NDDOH’s DPCP and the Heart Disease and Stroke Prevention Program, BCBSND is helping providers across the state improve the quality of healthcare for diabetes and other chronic conditions.
OUTCOMES
North Dakota’s varied approaches have improved diabetes care and strengthened infrastructure and cross-sector partnerships to advance chronic disease prevention and control across the state, as exemplified by the following results.

- **More patients receiving optimal care for diabetes.**
  o Altru Health System’s 2015 quality goal was to increase the percentage of patients receiving optimal care for diabetes, based on the Optimal Diabetes Care Minnesota Community Measure, from 26 percent to 38 percent as measured by care management year-to-date values.\(^V\) From December 2014 to December 2015, their score increased to 42 percent, exceeding their goal by four percentage points. They continue to make progress toward their overall goal of achieving 53 percent of patients meeting the optimal diabetes care measure.
  o Since offering telemedicine, Altru’s Diabetes Center has discovered a number of patients with type 1 diabetes in remote areas who were not receiving care. Through the telemedicine connection, these patients are now looped into care with their local clinic and a diabetes specialist.
  o Four years after implementing the MediQHome program, BCBSND reported a 64.3 percent improvement in optimal diabetes care.\(^7\) BCBS also reported a steady improvement over five years in overall comprehensive diabetes rates in participating MediQHome sites across the state.

- **More worksite wellness resources and programs.**
  o BCBSND and partners launched a state worksite wellness website and distributed over 3,000 copies of the [worksite wellness toolkit](#). 
  o Since 2010, they have hosted 16 Gearing Up for Worksite Wellness trainings and have trained over 270 attendees. They have also hosted seven worksite wellness summits and reached over 1,900 attendees.
  o As of 2010, more than 60 worksite wellness programs have been implemented in the state.

- **More people accessing DSME and NDPP.**
  o North Dakota has the highest percentage of people with diabetes accessing DSME in the country and is continuing to grow. In the past few years, the state has seen a 14 percent growth rate of the number of people with diabetes accessing DSME programs. Additionally, all tertiary health systems in the state now have referral mechanisms in place for DSME. There are currently 18 accredited or recognized DSME programs with a total of 47 DSME sites in North Dakota.
  o The National Diabetes Prevention Program continues to grow in North Dakota: there are currently 16 programs with CDC pending or full recognition and more sites in development. Collaboration between the DPCP, NDSU Extension, and Sanford Health has helped provide training to nearly 70 lifestyle coaches since 2012, with the most recent training for 17 lifestyle coaches held in August 2016. With assistance from the DPCP, NDSU Extension plans to have two agents become master trainers, helping to build capacity for the NDPP. NDSU Extension embraced their new role in partnering

\(^V\) This score is a composite of the following measures: BP < 140/90, Hemoglobin A1c < 8 percent, on a statin and no tobacco use.
community health with healthcare systems to prevent diabetes. Of the 16 programs currently in place, approximately half are a collaborative effort between extension and healthcare facilities, providing a supportive referral network.

- **Stronger cross-sector partnerships and collaboration.**
  - The diabetes action plan legislation served to open lines of communication among the four state agencies required to work together to develop the diabetes report and resulted in more information sharing among agencies. It also provided a purpose for diabetes surveillance data.
  - Through state-level work groups and advisory committees, stakeholders discovered new opportunities to work together and align efforts. The worksite wellness initiative is an example of how public health, healthcare, payer, and businesses sectors can collaborate to shape and incentivize a strategy, whether they are providing input on policy, financing, business, program components, or insurance plans for employees. Prior to worksite wellness, healthcare systems were not working much with businesses outside of occupational health.
  - BCBSND has valued stronger working relationships with partners including NDDOH and Quality Health Associates, the state’s quality organization. At the community and clinical level, efforts to expand access to lifestyle and self-management resources have strengthened community-clinical linkages and promoted a team-based care approach by assuring referring healthcare providers that diabetes prevention and diabetes education programs align with patient care goals.

### SPREAD AND SUSTAINABILITY
The following key elements will support the spread and sustainability of successful efforts to date.

- **Payment models that support prevention, quality of care, and self-management.**
  - Altru will be working on shifting payment models from fee-for-service to quality-based to align with how they are using health coaches and care management.
  - DCPC is working to obtain third party reimbursement for NDPP. Data from the CDC Diabetes Prevention and Recognition Program and other sources are being used to support this effort.
  - Third party payers are already reimbursing for accredited or recognized DSME programs.

- **Point-of-care algorithms in clinical workflows.**
  - NDDOH and partners will continue to spread existing prediabetes algorithms to clinics statewide to standardize practice and increase referrals to NDPP.

- **Creative ways to finance prevention infrastructure.**
  - The state’s worksite wellness initiative is funded by health plans and third party payers.

- **Leverage existing community networks and plans.**
  - In the future, NDSU Extension master trainers and agents will do outreach to community-based health providers such as community health workers or parish nurses.

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“Sustainability really depends on all of us not providing direct patient care figuring out ways to work with those who do provider direct care without being over burdensome but yet have a positive impact.”

– BCBSND
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to offer lifestyle coach training to expand their educational reach. They have partnered with NDSU Extension’s Faith Communities Alive network of churches to spread NDPP to those communities and rural health systems to offer education in more remote areas. NDSU Extension staff are also engaging medical facilities in multiple counties to discuss how to incorporate the NDPP into community health improvement plans. The clinic outreach is also critical to increase patient referrals to the program.

- **Business plan for health information technology.**
  o Health IT leaders in the state are working on a business plan for the North Dakota Health Information Network. This plan will include a roadmap for future infrastructure, return on investment, and sustainability models.

- **Continued commitment from partners.**
  o Having a range of partners from the state, local, and community level, as well as from the public health, healthcare, and payer segments is crucial to successfully implement systems change and enact a comprehensive approach.

NEXT STEPS

Stakeholders have identified the following steps to continue advancing their work.

- **Expand health systems assessment and quality improvement work.** NDDOH will identify opportunities to spread lessons learned from the pilot health assessment and additional systems to work with to improve patient identification and quality of care.

- **Explore opportunities to strengthen EHR and health IT capacity.** Clinics have referral mechanisms in place for DSME programs, but not for pre-diabetes. NDDOH will work with clinics to address this.

- **Continue to expand access to DSME and support education coordinators.** NDDOH contacted all of the hospitals throughout North Dakota and developed a database of potential diabetes education sites. They will continue to provide outreach to those sites to help develop programs and support diabetes education coordinators to ensure quality, consistent education across the state. DCPC offered mini-grants to five programs developing accredited or recognized DSME programs this past year.

- **Promote awareness of pre-diabetes and expand NDPP.**
  o The state plans to try to increase the number of sites that offer NDPP and support the lifestyle coaches that teach the programs and enhance the referral mechanisms. NDDOH and NDSU Extension will support the lifestyle coaches through a peer networking group and help them collect evaluation data from their classes.
  o NDSU Extension is developing their own ad campaign based on the Ad Council’s diabetes campaign.
  o NDDOH plans to develop a concept of using physician champions to promote the NDPP, build coalitions within the organization to promote awareness of pre-diabetes, and increase referrals. Champions can help spread the use of algorithms, such as the ones from the AMA and CDC Prevent Diabetes STAT toolkit, for referrals at point of care and retrospective analysis of EHRs.

- **Develop a diabetes information portal** in partnership with the University of North Dakota’s Public Health Program. Payers, legislators, and public health professionals have expressed
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interest in using data to inform action across the state. Plans are just getting underway, beginning with exploring how to include data from public and private payers.

- **Expand telehealth for virtual diabetes education.** Altru is providing equipment for nurse educators in outlying areas to enable participation in telemedicine consults or diabetes education.

- **Reach patients without a primary care physician.** In Altru’s current medical home model, nurses focus on patients who have primary care physicians. Moving forward, they plan to build on the existing structure to develop a system to do panel management and have medical staff reach out to this gap population of patients without a primary care physician to connect them to care.

- **Update the North Dakota Diabetes Report.** NDDOH led development of the second edition of the report completed in June 2016.

**LESSONS LEARNED**

- **The Healthy North Dakota Coordinator was critical to the success of the Healthy North Dakota work group.** The coordinator, funded by NDDOH, facilitated the process of bringing the public and private sector together to discuss the perceived and real needs in the state and develop solutions. The coordinator played an essential role in helping the group figure out how to work more efficiently toward common goals.

- **It is important to find common ground across the political spectrum and for sectors to get health on the agenda.** After passing of the Patient Protection and Affordable Care Act, policymakers considered new options for funding prevention programs. To help catalyze action, health advocates and leaders changed their approach and focused on finding topics, such as economic development, that offered common ground when addressing the legislature. They framed the worksite as a social determinant of health and suggested worksite wellness as a strategy to benefit economic and population health. That messaging began to resonate with state legislators and helped open dialogue among people with different points of view, which in turn paved the way for the diabetes action plan legislation and other health policy. This required getting to know partners and understanding their worldview.

- **Leadership engagement is key to building momentum with state partners.** It was important to the success of cross-sector partnership that the state health official reached out to the leader of state chamber to build meaningful relationships. To foster collaboration, leadership set the tone that public health was not coming with solutions, but approaching the business sector with questions such as, “What do you need to do to engage businesses in worksite wellness?” and “What do you need us to be involved with?”

- **It is essential to expand world views for a cross-cutting approach to health improvement.** NDDOH leadership recognized that state health agency employees needed training in order to be leaders in multi-sector, forward-thinking health initiatives such as public health and primary care integration in worksite wellness. To help program staff move beyond a traditional, siloed approach to public health and strengthen cultural communication concepts, NDDOH offered
leadership training to staff. The training focused on helping people understand different world views, such as other ethnic or racial groups, legislators, or private sector partners.

- **Establishing the infrastructure for worksite wellness or other cross-cutting initiatives takes patience and collaboration**, but without these pieces in place many of the efforts for diabetes or other chronic diseases would not have happened. NDDOH needed to allow time for other stakeholders to really engage and develop a sense of ownership of initiatives. Often this timeframe takes longer than a grant period and may require work outside of grants. At times it is more productive to set public health priorities aside and focus on stakeholders’ motivations, given that organizations are only going to invest their time and energy into their perceived need, not necessarily public health priorities. They used the mindset that the sustainable way forward is to be patient with the process and move at a pace that keeps stakeholders focused on the end goal. At times this means compromising priorities and timelines in the short-term.

- **Healthcare providers need to find ways to network outside of health systems.** The opportunities for providers to cross-fertilize through state meetings, coalition activities, and trainings have been very well-received. Public health and healthcare have seen value in providing venues for providers to interact with others in the diabetes community to connect across health systems and geographic locations.

- **Shift to quality of care drives health IT improvements and more health information exchange.** Payment for quality of care demands more readily accessible information and the capability to synthesize it quickly in order to act on it. The shift to quality continues to be a big motivator to increase uptake of health IT across the state. Another motivator is the need to compile the full picture of a patient’s medical care. Often a complex medical condition like diabetes with many other risk factors requires patients to see an array of specialist providers in addition to their PCP. Health IT and telehealth also connect people in rural communities with more specialized care.

- **Partner with groups and events where people with diabetes are already engaged.** Altru Health System trialed a diabetes type 2 support group for six months and found that the structure and program were not successful with their patient population. They have since abandoned that model and are moving forward plans to partner with existing groups such as the ADA Step Out Walk or youth diabetes camps to support their patient population. They have learned to be more strategic about where patients are already engaged to avoid duplicating services.

**RECOMMENDATIONS FROM NORTH DAKOTA**

- **Take the long view.** Look outside of grants to do things, especially partnership engagement.

- **Have patience.** Grants can be prescriptive with timeframes that can undermine partner engagement at times. Find ways to move forward that allow for engaging people to find solutions to problems.

- **Leverage other health system initiatives** such as Million Hearts and work around high blood pressure.

> “One of my suggestions to my colleagues would be - you're going to have to work with [other sectors] if you're going to deal with some of the issues that we have in public health, and you can't force them just by policy to do that. You've got to find those bridges with partners.” –Terry Dwelle, State Health Official
Case Study

• **Narrow down the field of health objectives.** Instead of addressing health conditions individually with partners, find ways to bundle them into broader initiatives such as Million Hearts and workplace wellness to narrow down areas of focus.

• **Establish a strong governance structure for a health information exchange (HIE).** Secure buy-in from all stakeholders. HIEs can help providers deliver the best medical care by providing all the information on a patient when they need it. It may also make their job easier and save money.

• **Develop use cases and communicate what you are going to do.** Keeping the patients at the forefront – doing it for the good of the patient. Provide the best medical care with all the information you need. Legislative perspective is about the patient’s need for good leadership from the governance structure of the HIE.

• **Start small.** Pilot programs and make it good before expanding, whether for NDPP or other self-management education programs.

• **Get buy-in from multiple levels.** Various groups have an important role, ranging from guidance to operationalization, as well as a need to engage leadership, physicians, nursing staff, and others. Good communication with each of these groups is key.

• **Conduct an in-depth assessment of clinic operations and performance.** Invite a broad range of input.

• **Get to know your partners** through in-person meetings and site visits. Challenge assumptions and better understand other organizations’ strengths and challenges. Identify ways to align efforts and spread success.

“Keep the patient in the forefront. I go back to that because I had a legislator tell me one day, ‘[The health information exchange] has nothing to do with the dollars. It has everything to do with the patient and the quality of care and the quality of life for people.’” – Sheldon Wolf, Health IT Director

RESOURCES

- 2016 Abridged ADA Standards of Care (PDF)
- AMA and CDC Prevent Diabetes STAT toolkit
- ADA Standards of Medical Care in Diabetes—2016 Abridged for Primary Care Providers
- Blue Cross Blue Shield North Dakota MediQHome
- Blue Cross Blue Shield North Dakota MediQHome Field Notes (PDF)
- CDC’s National Diabetes Prevention Program
- Dr. Eric Johnson’s Diabetes YouTube channel
- Healthy North Dakota
- North Dakota Diabetes Prevention and Control Program
- North Dakota Diabetes Report (PDF)
- North Dakota Health Information Network
- North Dakota State Health Improvement Plan (PDF)
- North Dakota State Plan to Prevent and Manage Chronic Disease (PDF)
- North Dakota State University Extension – Faith Communities Alive
Case Study

North Dakota State University Extension – Dining Well with Diabetes
North Dakota State University Extension – Food Wise SNAP-education
North Dakota Worksite Wellness
North Dakota Put Wellness to Work Toolkit (PDF)

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REFERENCES

APPENDIX A

Altru Health System

HIGH RELIABILITY
- **Standards** - A clear and unambiguous standard that is understood by all. We adhere to the standard 100% of the time.
- **Process** - A work process that incorporates standard accomplishment. The work-flow makes it easy to achieve the standard and hard to miss it.
- **Feedback** - A feedback loop that is essentially real-time and provides actionable intelligence.
- **Error Removal** - A process to quickly determine root causes and remove them. Error cause removal prevents the same error occurring in the future.

ALTRU STANDARDS: CHRONIC DISEASE MANAGEMENT
The following standards will apply to those patients age 18 to 75.

**Chronic Disease Management Annual Exams**
- Patients will have annual exams conducted by their attributed primary care provider.
- Annual exam will consist but not be limited to the following:
  - **Patients with Diabetes**
    - Order Lab Tests (HgbA1c, and LDL, if appropriate)
    - Statin therapy indicated for patients age 40-75, document intolerance, or other reason for not prescribing statin
    - Check and Document Blood Pressure
    - Recheck Blood Pressure if greater than 140/90
    - Screen and Document Tobacco Status
    - Conduct and Document Foot Exam
    - Ask and Document Eye Exam
  - **Patients with Vascular Disease**
    - Order Lab Tests (LDL), if appropriate
    - Statin therapy indicated, document intolerance, or other reason for not prescribing statin
    - Check and Document Blood Pressure
    - Recheck Blood Pressure if greater than 140/90
    - Screen and Document Tobacco Status
    - Screen and Document Daily Aspirin Therapy
  - **Patients with Hypertension**
    - Check and Document Blood Pressure
    - Recheck Blood Pressure if greater than 140/90

**Diabetes Management Appointment Frequency**
- Patients diagnosed with diabetes will be evaluated by their primary care provider or another member of the health care team (ex: medical home coordinator, diabetic educator) at a minimum the following times:
Case Study

- Patients achieving Altru standards will be evaluated twice per year.
- Patients not achieving Altru standards will be evaluated at least three times per year.
- Achieving Altru standards means that the patient has met the following criteria:
  - HgbA1c < 8
  - Blood Pressure < 140/90
  - Statin prescribed in patients age 40-75, intolerance documented, or other reason for not taking a statin

**Vascular Disease Management Appointment Frequency**
- Patients diagnosed with vascular disease will be evaluated by their primary care provider or another member of the health care team (e.g., medical home coordinator, diabetic educator) at a minimum the following times:
  - Patients achieving Altru standards will be evaluated once yearly.
  - Patients not achieving Altru standards will be evaluated at least twice per year.
  - Achieving Altru standards means that the patient has met the following criteria:
    - Blood Pressure<150/90; patients age >59 with no diabetes or chronic kidney disease
    - Blood Pressure<140/90; patients age 18-59 or with diabetes or chronic kidney disease present
    - Statin prescribed, intolerance documented, or other reason for not taking a statin
    - Aspirin therapy compliant, or intolerance or refusal documented

**Hypertension Management Appointment Frequency**
- Patients diagnosed with hypertension will be evaluated by their primary care provider or another member of the health care team (e.g., medical home coordinator, diabetic educator) at a minimum the following times:
  - Patients achieving Altru standards will be evaluated once yearly.
  - Patients not achieving Altru standards will be evaluated at least twice per year.
  - Achieving Altru standards means that the patient has met the following criteria:
    - Blood Pressure<150/90; patients age >59 with no diabetes or chronic kidney disease
    - Blood Pressure<140/90; patients age 18-59 or with diabetes or chronic kidney disease present

**PROCESS**
- The Medical Home Nurses will identify patients that are due for annual exams and send a letter to encourage them to schedule a visit with their primary care provider.
- Medical home nurses will monitor the patient lists and physician documentation to determine if follow-up visits were recommended by the patient’s physician. If so, the medical home nurses will contact the patient to encourage scheduling of those follow-up visits, if the patient has not already done so.
Other Resources Available to Physicians:

- Physicians can opt-in to the medical home program, which means the medical home nurses can follow or manage the care for all the physician’s patients diagnosed with diabetes, vascular disease, and/or hypertension without a referral.

- Medical home nurses can review a physician’s schedule and print patient care summary reports for patients with diabetes and cardiovascular disease. The patient care summary reports highlight those services that are either overdue or over target so the physician can address/order with the patient during their encounter.

- Medical home nurses upon request by the physician can contact patient’s pre and post visit to answer questions, remind them of the education/treatment provided during their encounter and validate a follow-up appointment has been scheduled.

- Patients that have an elevated blood pressure can return for blood pressure follow-up visits (nurse only visits). The patients return on a weekly basis until their blood pressure has reached the Altru Standards. If the patient has issues reaching the optimal blood pressure target, the nurse will work with the physician/nurse to address other treatment options.

- Smart sets are available in EPIC to use for chronic care visits, containing all components to achieve optimal care.

**ALTRU STANDARD: MEDICATION MANAGEMENT**

The following standard will apply to all patients and to all medications with the exception of birth control.

**Medication Refills**

- Patients will be seen by their primary care provider at least once per year prior to receiving a refill on their medication.
  - Medication refills can be given for a one-time 90 day period of time, which would allow the patient time to schedule an appointment with their physician if not seen within one year.

**PROCESS**

- A reminder to physicians will be placed in EPIC of the last annual exam date. The EPIC functionality will include the date of the patient’s last visit with a reminder to refill only enough medication until that patient is able to schedule an appointment with the physician.
## APPENDIX B

**Altru Health System Blinded Physician Report for Diabetes and Hypertension Quality Measures**

### Medical Home Compliance for 2016-02

**Care Management | 2016-03-10**

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