

# **Regional Extension Assistance Center for HIT (REACH) Impact in Minnesota and North Dakota**

## **Achieving Meaningful Use of EHRs**

---

**Final Report  
April 2016**



## **Regional Extension Assistance Center for HIT (REACH) Impact in Minnesota and North Dakota**

### **Executive summary**

The Health Information Technology for Economic and Clinical Health (HITECH) Act, enacted as part of the American Recovery and Reinvestment Act of 2009, provided funding for the Office of the National Coordinator for Health Information Technology (ONC) to establish 62 regional extension centers to assist primary care providers in the adoption and meaningful use of electronic health records (EHRs). The REC program was designed to leverage local expertise to provide practical, customized technical assistance support to primary care providers within specific regions eligible for federal Meaningful Use Program incentives, with special emphasis on small, rural, and underserved primary care providers. Small, rural hospitals were added to the client base of RECs shortly after the program launched.

REACH—the Regional Extension Assistance Center for HIT—formed as a program of an alliance of nonprofit organizations dedicated to helping clinics, small hospitals, and other settings in Minnesota and North Dakota improve care by implementing and effectively using EHR systems. Its mission was to assure that each of its clients achieved Stage 1 meaningful use (MU), the first phase of the federal EHR incentive programs. The program focused on meaningful use as a way to improve health and health care, to reduce disparities, and to engage patients and their families.

REACH was a program of Key Health Alliance, an association of Stratis Health, National Rural Health Resource Center, and The College of St. Scholastica, which coordinated with Quality Health Associates of North Dakota and the University of North Dakota, School of Medicine and Health Sciences, Center for Rural Health.

At the start of the program, REACH set ambitious goals to bring and 3,600 clinicians and 124 critical access and rural hospitals to achieve Stage 1 meaningful use. Services were available to Minnesota and North Dakota primary care clinicians and small and rural hospitals, both with and without an EHR. REACH deployed a process consultation approach, focused on providing tools and building clinicians' skills to make their own changes in an informed and sustainable way.

The program ran from June 2010 through February 2016. During its six years of service to improve care by implementing and using EHR systems, REACH worked across the two states with nearly 5,100 clinicians at 662 clinic locations—far exceeding its goal of 3,600 clinicians—and assisted 121 critical access and rural hospitals.

REACH achieved its goal to bring 3,600 clinicians to Stage 1 MU. The program supported an additional 1,489 clinicians in adopting and optimizing their EHRs. REACH ranked seventh in the nation among all RECs for the number of clinicians it assisted to successfully achieve Stage 1 MU. REACH contributed to Minnesota and North Dakota physicians' progress using health IT. As of December 2015, Minnesota led the nation with 82% of office-based physicians having demonstrated meaningful use through the Medicare EHR Incentive Program. North Dakota ranked fourth at 68%. For office-based physicians with a certified EHR system electronically sharing patient health information with external clinicians, North Dakota ranked highest 58.8%, compared to the national average of 32.5%, in 2014.

REACH client hospitals made impressive strides. Nearly all succeeded in achieving meaningful use (94%) and implementing certified EHRs, computerized physician order entry and quality reporting (98%)—critical stepping stones to using EHRs to improve care delivery. Nationally, REACH had the greatest number of hospitals achieve Stage 1 meaningful use.

Federal and state system issues impeded progress toward meaningful use. Key challenges included two major revisions to the Meaningful Use Program. Additionally in Minnesota, REACH clients of all types and sizes indicated that the lack of a strong health information exchange (HIE) infrastructure often hindered their ability to exchange information, and the delay in launching the Medicaid incentive program impacted the very small clinics' ability to pay their EHR vendors. Hospitals and clinics faced numerous EHR challenges that REACH helped to address, from interpreting meaningful use rules as they were released to facilitating vendor communication. The REACH program provided a structured framework and tools to guide organizations from assessment to optimization.

Assistance through the REACH program helped health care organizations develop technological capabilities and companion change management skills that will allow them to progress to meet federal requirements in Stage 2 meaningful use to advance clinical processes and Stage 3 to improve clinical outcomes for patients. In the final month of the REC program, REACH met with clients to understand ongoing e-health needs, identify opportunities to further improve care, and assess the work still needed to meet Stage 3 requirements. Key areas impacted by the changes they made to achieve meaningful use were reviewed, as well as the ongoing support they need to improve health and health care delivery.

REACH offers several recommendations for next steps related to using e-health to transform care and help clinicians and health care organizations succeed in alternative payment models.

- **Data Security.** Small providers need to sustain their newly developed data security risk assessment practices. The marketplace needs to have resources and experts, available at a feasible cost to small practices, which can assist with facilitating ongoing security requirements.
- **Patient Experience and Engagement.** To aid patient engagement, health care providers need to continue to improve their clinical summaries in terms of ease of use, health literacy, and alignment with patient preferences and values. For patients and their care teams to have a unified view of their health, continued exploration is needed to assess the most effective way of integrating patients' health information from their various providers.
- **Patient Safety.** The next greatest opportunity for improving patient safety through EHRs is to enhance electronic information exchange between care settings during transitions of care, particularly looking at medication reconciliation and continuity of care plans.
- **Health Information Exchange.** Integrating care and extending care coordination into the community will be key to efficiently and effectively support the growing number of people who have complex health conditions. Health care organizations need to develop meaningful collaborations and partnerships with long term and post-acute care, public health, mental and behavioral health, and social service organizations. And, these organizations need to begin adopting and using information technology that supports their integration with hospitals and clinics.
- **Population Health.** Health plans and large health systems need to expand their understanding of patients to include social determinants of health, as care needs to drive deeper into community supports to focus on the health and wellbeing of populations. Ongoing education is

needed to support smaller health care organizations with how to optimize use of their EHRs to understand their populations and guide service development.

- **Incentive Programs.** Clinicians and their organizations need to be engaged and fully participating in value-based payment programs supported by effective use of health IT to avoid penalties and receive positive payment adjustments in the future, and most importantly, to deliver high quality, high value, and patient-centered care.
- **Change Management Skills.** Organizations need to develop a culture of continuous improvement so they can respond to the rapidly evolving health care market, which aims to improve health status and reduce cost.
- **Clinician Experience.** Vendors need to ensure their products are user friendly for clinicians and that data can be extracted in easy and actionable ways. Clinicians need to understand how the data they input into the EHR is used to build greater value for patients, in population health initiatives and quality improvement.

As part of a national plan, REACH had a critical role in successfully advancing use of health IT in Minnesota and North Dakota in support of better patient care. The program exceeded its ambitious goals, and served as a national leader in the REC community and with ONC.

## National drive to leverage technology to improve quality of care

Due to a lack of resources and/or expertise, small and rural provider practices have been especially challenged to adopt and optimize health information technology (IT) to improve the quality of care they provide to their patients. These clinicians play an essential role in the national health care delivery network by serving as the home-base for preventive care, the safety net in rural and underserved areas, and the linkage to the broader health care system, such as hospitals and specialists. The regional extension center (REC) program was designed to leverage local expertise to provide practical, customized support to meet the needs of local primary care clinicians, and to do so in a non-biased way.

**“The EHR is going to increase administrative capacity. It will provide a safe and secure way for us to serve our patients, across the treatment team, enhancing care coordination.”**

- REACH client

With the passage of the Health Information Technology for Economic and Clinical Health (HITECH) Act, enacted as part of the American Recovery and Reinvestment Act of 2009, the Office of the National Coordinator for Health Information Technology (ONC), part of the Department of Health and Human Services, was charged with building a secure, interoperable nationwide health information system, as well as supporting the widespread meaningful use of health IT. ONC established 62 RECs in early 2010 through a competitive procurement process to assist primary care providers in the adoption and meaningful use of electronic health records (EHRs). RECs worked to optimize the use of EHRs so that clinicians could become meaningful users. The REACH program, with ONC support, later evolved to also engage clients in using technology in new health care transformation and quality initiatives, and participate in payment delivery reform programs, such as Accountable Care Organizations and State Innovation Models.<sup>1</sup>

Through four-year cooperative agreements with ONC, RECs were funded by federal dollars with a 10% match through client participation fees or other non-federal sources of funding. REACH was eligible and elected to participate in ONC’s optional program extension that allowed RECs to continue working with clients through February 2016, two years beyond the original program end date.

## EHR environments in Minnesota and North Dakota

While both Minnesota and North Dakota have substantial rural populations and have health delivery systems that cross their shared border, their demographics and practice environments are different. Approximately 28% of Minnesota’s population was rural, while the rural population was nearly double that (54%) in North Dakota, making primary care practices more widely distributed across less densely populated areas. Minnesota, including many of its rural areas, had a high penetration of integrated delivery networks (IDNs).

Minnesota has been a national leader in pursuing e-health policies and offering governmental funding to accelerate the adoption of health IT, EHRs, and health data standards. The Minnesota e-Health Initiative was established in 2004 as a public-private collaborative to accelerate the adoption and use of health IT, in order to improve health care quality, increase patient safety, reduce health care costs, and improve public health.<sup>2</sup> In 2007, the state legislature passed the 2015 Interoperable Electronic Health Record Mandate and the e-Prescribing Mandate in 2008.<sup>3</sup> Minnesota's IDNs fostered adoption of EHRs across their owned and affiliated hospitals and clinics in each of their networks.

North Dakota has a long history of commitment to the adoption and use of health IT to improve patient outcomes. In 2006, state officials convened a Health Information Technology Summit to examine the health IT landscape and established the HIT Advisory Council to develop North Dakota's health information exchange (HIE) plan. In 2009, the state legislature provided \$5 million for a low-interest revolving loan program through the Bank of North Dakota. These funds were designed to help clinicians and other health care stakeholders purchase, install, and support the use of interoperable electronic health IT systems. The state also allocated \$8 million to provide matching funds for health IT and HIE-related federal grants.<sup>4</sup> As a result of the state matching funds, clients in North Dakota did not have to pay upfront fees to participate in REACH and North Dakota client enrollment soared.

In 2010 when the REC program launched, EHR adoption was widespread across primary care in Minnesota, but rural areas lagged behind. Stratis Health's 2007 statewide health IT survey showed 62% of adult primary care practices had implemented or were engaged in implementing an EHR—yet only 48% of rural primary care providers had implemented an EHR or were in process of doing so. Clinics not part of an integrated delivery system were less likely to have an EHR than clinics belonging to a system, 16% versus 54% respectively. In addition, the fewer the number of physicians, the less likely the clinic was to have an EHR.<sup>5</sup>

North Dakota had a 40% EHR implementation rate at its primary care practice sites in 2010, and just under half of those that had an EHR were not using a CCHIT-certified vendor product. No North Dakota clinics qualified as meaningful users under the definitions at that time. As in Minnesota, the rural and small providers had a much lower EHR adoption rate. The greatest need for assistance was from rural clinicians, small clinics, and solo practices, along with safety net clinics in both rural and metro areas.

## Approach in Minnesota and North Dakota

REACH—the Regional Extension Assistance Center for HIT—formed as an alliance of nonprofit organizations dedicated to helping clinics, small hospitals, and other health care organizations in Minnesota and North Dakota improve care by implementing and effectively using EHR systems. Its programmatic purpose was to assure that each of its clients achieved Stage 1 meaningful use (MU), using certified electronic health record technology (CEHRT). The program focused on meaningful use as a way to improve health and health care, to reduce disparities, and to engage patients and their families. Reflective of the missions of its partner organizations, REACH maintained a focus on supporting rural and underserved hospitals and clinicians, and on using technology to improve quality, safety, and efficiency.

**“Without REACH assistance we would not be able to meet meaningful use by 2015.”**

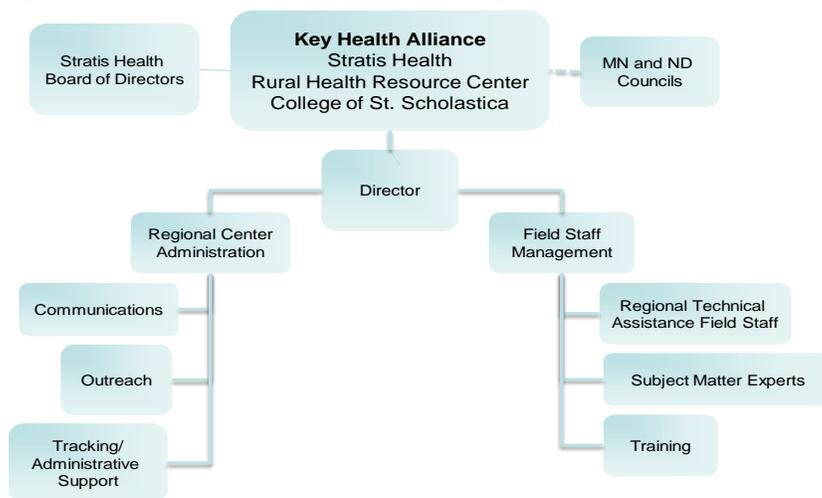
*- REACH client*

REACH was a program of Key Health Alliance, an association of Stratis Health, National Rural Health Resource Center, and The College of St. Scholastica, which coordinated with Quality Health Associates of North Dakota and the University of North Dakota, School of Medicine and Health Sciences, Center for Rural Health. Stratis Health served as the lead organization. Figure 1 shows the structure of the REACH program. State-specific advisory councils were established at the launch of the program to help ensure that REACH provided prompt, responsive, individualized support to clinicians in both Minnesota and North Dakota, and coordinated the various HITECH activities across each state to be as seamless as possible and to leverage knowledge and work. The councils were each comprised of key leaders in each state, including other HITECH funded efforts (i.e., HIE and Medicaid) (Appendix A).

Over its six years, REACH centrally trained 22 technical assistance field staff to use a consistent, structured process to bring hospitals and clinics to meaningful use. This process was based on Stratis Health’s Health Information Technology Toolkits,<sup>6</sup> which are designed to guide organizations from assessment to optimization. REACH provided direction and support through regular field staff calls. Using a singular approach, no matter where the field staff were based or employed across the two states, made REACH unique among the RECs.

Recognizing the shortage of a trained workforce to support health IT, REACH collaborated with the University Partnership for Health Informatics (UPHI) program, one of the HITECH-funded university-based training programs, and Normandale College, one of the HITECH-funded community college consortia. REACH offered health IT mentorships to students from both programs. REACH also engaged or hired students from these programs and The College of St. Scholastica informatics programs.

Figure 1. Minnesota and North Dakota Regional Extension Center Structure



**“It’s invaluable to have an outside consultant with a comprehensive view of the health IT landscape, and to be able to tap into that collective view and guidance.”**

- REACH client

In 2010, at the start of the REACH program, Minnesota had approximately 10,820 active primary care providers (including physicians, nurse practitioners, and physician assistants) and 6,031 priority primary care providers (PPCPs) as defined by ONC, representing nearly 600 practice sites. North Dakota had approximately 884 active primary care providers and 608 PPCPs. PPCPs included both those eligible and ineligible for Meaningful Use Program incentives, including non-physician providers.

Table 1. Primary Care Providers in REACH Service Area (2010)

Geographic area	Active primary care providers	ONC defined priority primary care providers (PPCPs)
Minnesota	10,820	6,031
North Dakota	884	608
<b>REACH region total</b>	<b>11,704</b>	<b>6,639</b>

### REACH Goals

REACH proposed ambitious goals for Minnesota and North Dakota. The REC aimed to assist a large number of providers to meaningful use during the four years of the program, specifically:

- 3,600 PPCPs, including physicians, nurse practitioners, and physician assistants
- 124 small and critical access hospitals

With a goal of 3,600 PPCPs, REACH aimed to serve 54% of all ONC-defined PPCPs in its two-state region. Based on these goals, REACH was eligible for up to \$22 million in federal funding based on client progress on milestones toward meaningful use. RECs had the opportunity to adjust their goals after award, when ONC implemented a cap on federal funding at 10 clinicians per practice, because of the smaller pool of eligible professionals to recruit from. Unlike other RECs in areas with high health system penetration, REACH chose not to lower its goals.<sup>7</sup>

**“Our facility is very grateful for the help we received during our difficult times with meaningful use. REACH was able to educate our facility on meaningful use.”**

*- REACH client*

### **REACH Services**

As a federally designated health IT regional extension center, REACH services were available to Minnesota and North Dakota primary care clinicians and small and rural hospitals, both with and without an EHR. REACH deployed a process consultation approach, focused on providing tools and building clinicians’ skills to facilitate their ability to make their own changes in an informed and sustainable way, rather than REACH doing the work for them. Because technologies change, REACH focused on the critical success factors of organizational change: leadership, culture, process, and workflow redesign. Starting May 2010, clinicians were able to register for REACH services, which were first offered in July 2010.

REACH technical assistance services to clients included:

- Meaningful use consulting
- Privacy and security consulting
- Practice transformation through optimization of health IT and EHR
- Practice workflow redesign
- Optimized use of EHR for care coordination

Having a service area that combined two states with unique differences and a vast geographic span necessitated that REACH creatively leverage resources and partners. Organizations with some health IT infrastructure and staff support—often part of a large IDN—only needed to assess and make small refinements to their systems. For these organizations, REACH often provided specific, detailed assistance, including support during EHR “go lives.” These more focused engagements offset the cost of providing more time intensive service to organizations that needed the full spectrum of assistance selecting and implementing an EHR, as well as offset the additional costs of serving clinicians and hospitals across less densely populated rural areas.

**“I appreciate the leadership REACH provided. Bringing hospital/provider systems together really helped with knowledge transfer, issue identification and resolution, and networking to support MU between our clinicians.”**

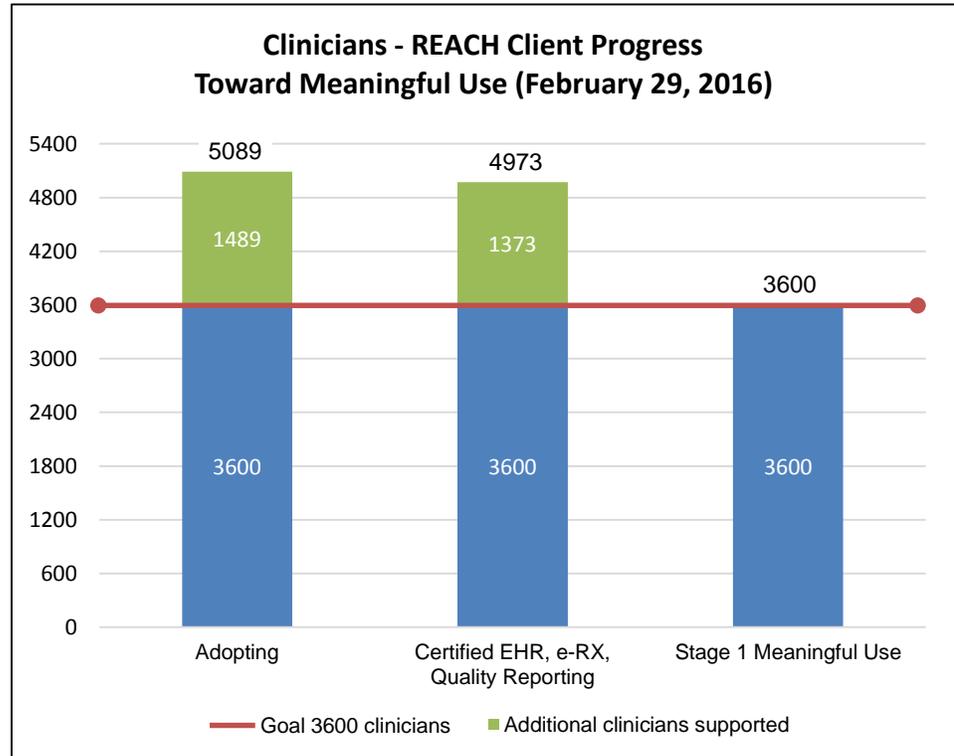
*- REACH client*

Smaller provider organizations generally had a higher level of need due to their limited staff size and expertise and needing to start with selecting and implementing an EHR. To deliver education and guidance in the most efficient and affordable manner, REACH provided as many services as possible through structured peer learning groups, and constructed actionable tools and templates that could be easily used by clients with limited additional assistance. REACH offered many group learning opportunities in the form of lunch time educational webinars; full day in-person educational bootcamps; conference workshops; and intensive seminars on areas of specific needs such as privacy and security (HIPAA Security Risk Assessment), clinical quality measures, and meaningful use. The REC also developed a website and online portals with resources on patient engagement, data analytics, and privacy and security. An electronic newsletter promoted learning and assistance opportunities, client success, and updates about HITECH activities across each state.



In addition to the large number of practices REACH recruited, overachievement of its goal was due in part to ONC’s cap on federal funding for RECs at 10 clinicians per practice. Many practices, especially in Minnesota, had a greater number of clinicians than the ONC cap. Working with a practice to bring all of its clinicians to meaningful use was the right solution for clients and required a relatively small additional effort for REACH field staff to support their progress toward meaningful use.

Figure 3. Clinicians - REACH Client Progress Toward Meaningful Use



**“We’ve made meaningful use a priority within our system. Staff have worked hard, planning for and implementing a new electronic system. We’re now using our EHR to focus on what really matters—improving the care we offer our patients.”**

- REACH client

REACH contributed to Minnesota and North Dakota having among the highest percentages of their office-based physicians demonstrating meaningful use through the Medicare EHR Incentive Program. As of December 2015, Minnesota led the nation with 82% of office-based physicians having demonstrated meaningful use through the Medicare EHR Incentive Program. North Dakota ranked fourth at 68%. Minnesota had the highest rate of EHR adoption by physicians in 2014 (88.6%), compared to the national average of 74.1%.<sup>9</sup>

Nationally in 2014, 32.5% of office-based physicians with a certified EHR system were electronically sharing patient health information with external clinicians. North Dakota ranked highest at 58.8% of these physicians sharing information with external clinicians.<sup>10</sup>

Some of the greatest successes were with small and rural practices because of their limited resources and inability to engage in EHR adoption and the MU

program without external assistance. For the 63 small practices—those with 10 or fewer clinicians—who were REACH clients, 46% of their 231 clinicians achieved meaningful use. REACH also supported 62 federally qualified health centers (FQHCs) and 126 rural health clinics. REACH worked with all of the community health centers, excluding the dental-only clinics. Its underserved clinics were primarily located in urban areas.

REACH engaged 126 of the 140 rural health clinics (RHCs) in the two states. Many critical access hospitals operate RHCs, whose clinicians typically were not eligible for MU incentives. Only clinicians in standalone RHCs were eligible. Because the work of these hospitals and clinics is deeply interconnected, REACH believed they and their patients would be best served by both working to achieve MU despite the lack of incentives for RHCs. REACH assisted 713 clinicians at CAH rural health clinics (64%) achieve MU.

The following table summarizes the distribution of REACH PPCP clients by their setting of practice. Federal dollars supported REACH to serve 3,600 clinicians. This represented 71% of the total 5,089 clinicians supported by the REACH program.

Table 2. Number of REACH Client Clinicians by Clinic Setting of Practice

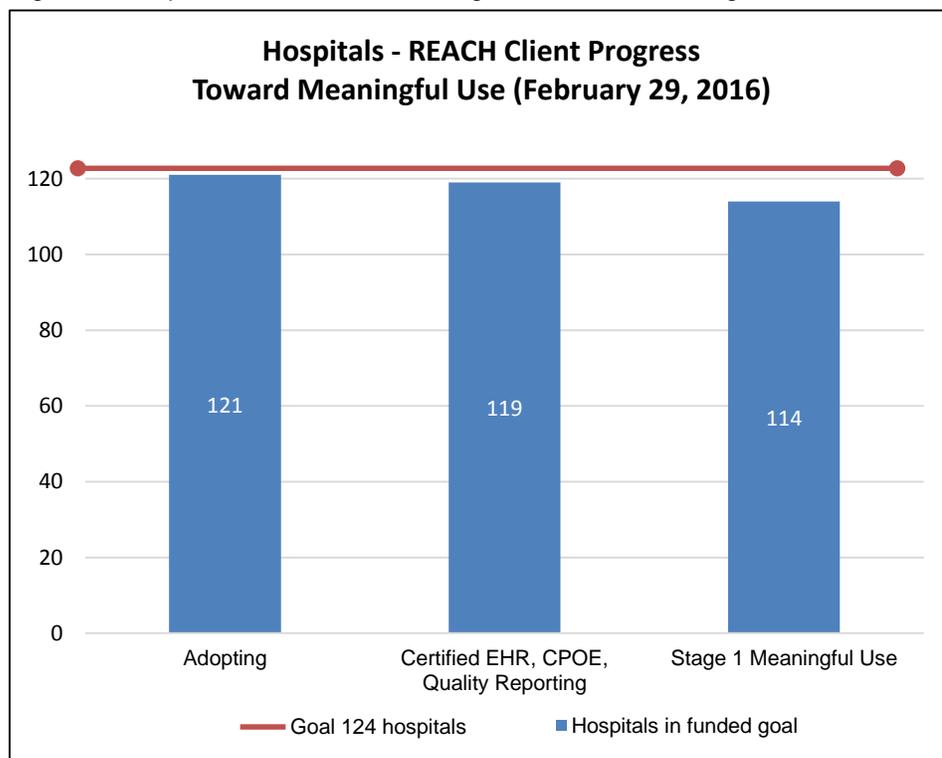
Clinic setting of practice	Number of clinicians REACH received federal funds to support	Total number of clinicians REACH supported
Other Underserved Settings	1,479	2,025
Practice Consortium	695	823
Clinics part of Public Hospitals*	596	806
Clinics part of Critical Access Hospitals*	456	773
Community Health Centers	136	252
Private Practices (10 or fewer clinicians)	110	235
Clinics part of Rural Hospitals*	96	131
Standalone Rural Health Clinics	32	44
<b>Total</b>	<b>3,600</b>	<b>5,089</b>

\* Clinics owned or affiliated with this hospital setting. Public hospitals as defined by ONC.

### Success with Critical Access and Rural Hospitals

Across the two states, REACH worked with 121 critical access and rural hospitals (85 in Minnesota and 36 in North Dakota), nearly meeting its goal of 124 hospitals. Of its client hospitals, nearly all (119 or 98%) were able to implement certified EHRs, computerized physician order entry (CPOE), and quality reporting. And, 114 (94%) achieved meaningful use. Nationally, REACH had the greatest number of hospitals achieve meaningful use.<sup>11</sup>

Figure 4. Hospitals - REACH Client Progress Toward Meaningful Use



REACH clients indicated that the REC services brought value to their organizations, and 98% were satisfied with their experience with REACH.<sup>12</sup>

### Advancing Progress in Minnesota and North Dakota

REACH was key to bringing EHR meaningful use incentive dollars to clinicians and critical access and rural hospitals throughout the two states. From January 2011 to January 2016, combined Medicare and Medicaid payments to all clinicians (not just REACH clients) through the EHR Incentive Programs totaled \$492,285,662 in Minnesota and \$77,988,809 in North Dakota.<sup>13</sup>

In 2008, most North Dakota clinicians indicated that the key barrier to EHR adoption was cost. To help address that barrier, the North Dakota legislature established a low-interest State Health IT Loan Program. By early 2014, the program had provided low interest (1%) loans totaling over \$11 million to support health IT adoption in the state. In addition, to allow as many eligible

providers as possible to take advantage of the technical assistance available through REACH, the North Dakota legislature appropriated funds to cover the 10% required match for REC services.

The information below summarizes REACH client progress toward Stage 1 MU for each state, through the last day of direct technical assistance on February 29, 2016. RECs worked with PPCPs, which included clinicians both eligible and ineligible for the either the Medicare or Medicaid incentive programs. Many PPCPs who treat patients in Minnesota and North Dakota underserved or rural communities are non-physician providers, such as nurse practitioners, certified nurse midwives, and physician assistants. Almost all of these non-physician providers were not eligible for MU incentives and could not attest to meaningful use. Like their physician colleagues who did attest to MU, these clinicians also were using their EHRs effectively but could not be counted as successfully achieving Stage 1 MU.

### Minnesota

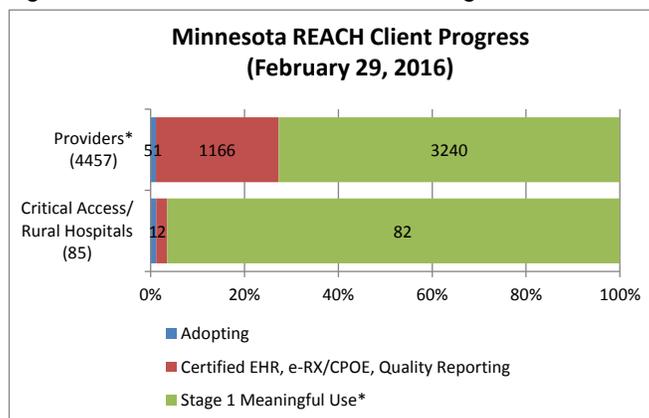
REACH worked with a total of 4,457 PPCP clients in Minnesota. When the REACH program concluded:

- 51 (1%) were working to adopt a certified EHR
- 4,406 (99%) had adopted a certified EHR, and were using it for e-prescribing and quality reporting
- 3,240 (73%) had attested to achieving Stage 1 MU (many PPCPs were ineligible to attest)

REACH worked with a total of 85 critical access and rural hospitals in Minnesota. When the REACH program concluded:

- 1 (1%) was still working to adopt a certified EHR
- 84 (99%) had adopted a certified EHR, and were using it for CPOE and quality reporting
- 82 (96%) had attested to achieving Stage 1 MU

Figure 5. Minnesota REACH Client Progress Toward Meaningful Use



\*Most non-physician providers not eligible to attest.

### North Dakota

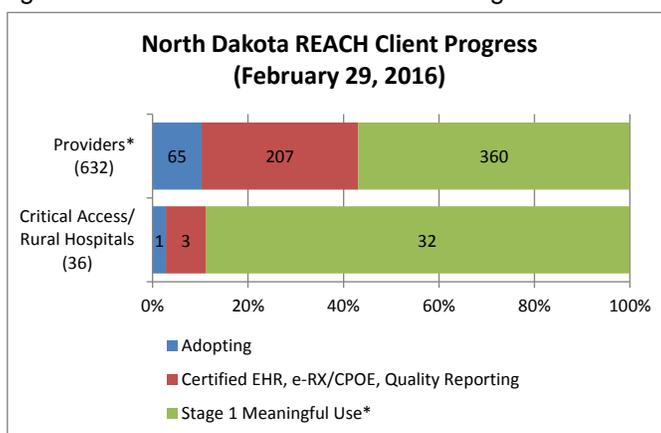
At the conclusion of REACH technical assistance, of the 632 PPCP REACH clients in North Dakota:

- 65 (10%) were working to adopt a certified EHR
- 567 (90%) had adopted a certified EHR, and were using it for e-prescribing and quality reporting
- 360 (57%) had attested to achieving Stage 1 MU (many PPCPs were ineligible to attest)

REACH worked with a total of 36 critical access and rural hospitals in North Dakota. When the REACH program concluded:

- 1 (3%) was still working to adopt a certified EHR
- 35 (97%) had adopted a certified EHR, and were using it for CPOE and quality reporting (95%)
- 32 (89%) had attested to achieving Stage 1 MU

Figure 6. North Dakota REACH Client Progress Toward Meaningful Use



\*Most non-physician providers not eligible to attest.

### Challenges achieving meaningful use

Hospitals and clinics faced numerous challenges that REACH helped to address. Federal and state system issues impeded progress toward meaningful use. The Meaningful Use Program changed requirements twice since its inception, making its targets difficult to predict and plan for. Many of the health care organizations did not have staff who could interpret the MU objectives and clinical quality measures (CQMs). REACH helped organizations interpret the rules as they were released and understand the measure details.

**“It was helpful to have some direction when we weren’t quite sure how to interpret the requirements or how to address the gaps we were facing.”**

- REACH client

Implementing a patient portal was one of the most challenging objectives of the first major MU rule change, in 2014. EHR vendors’ patient portals had great variability in their functionality. Portals also added cost to upgrade the EHR. Some clinics had to purchase and implement a certified patient portal. Although there were allowances to use 2013 CERHT in 2014, if stringent criteria were met, many clinics still had difficulty implementing some of the

new 2014 EHR Incentive Program requirements well into 2015. Portal use was particularly challenging for clinics that were small, rural, or served elderly, non-English speaking, and underserved patients. These populations either had no technology themselves to access patient portals or expressed no interest in using them, which created workflow issues.

The release of the final Modified Stage 2 Rule in October 2015 relaxed some MU objectives. It still required the use of a patient portal and some minimal HIE infrastructure for Stage 1 MU. It added a confusing population health reporting objective with multiple measures, exclusions, and alternate exclusions. Most attesting to Stage 1 MU were unaffected by the 2015 Modified Stage 2 reporting requirements.

In Minnesota, REACH client organizations of all sizes and types, even those whose EHR had the capability for Direct HIE, indicated that the lack of a strong HIE infrastructure often hindered their ability to exchange information. Some clinicians who chose the Stage 1 MU Transition of Care menu item (originally one of 10 options, but now required) were able to create a continuity of care document (CCD) and send it electronically to another setting of care or provider of care, upon referral. But, many had difficulty either finding a valid Direct connection (address) to send electronic data to or determining the receiving providers ability to receive electronic data.

Financial support was needed by small organizations and those with scarce resources to cover the expense of implementing, optimizing, and maintaining EHR systems. Some REACH clients had a high number of clinicians who were ineligible for Medicare incentives, largely due to care and services being provided by non-physician providers. This was especially true for rural hospitals, rural health centers, practice consortiums, and clinics with large underserved populations owned by IDNs or large multi-group clinics in Minnesota, which all rely on nurse practitioners and physician assistants for care delivery. Minnesota's delay in launching the Medicaid incentive program impacted the very small clinics that purchased EHR technology based on expectations that the Medicaid program would be running in 2011. Without the incentive payments, clinics were unable to pay their EHR vendors. REACH coordinated with the Minnesota Medicaid staff to prepare clinicians to attest to meaningful use as soon as the Minnesota EHR Incentive Program (MEIP) was in place, in October 2012.

Vendor issues were common across care settings. Some vendors were slow to get their products certified or re-certified as required by the Centers for Medicare & Medicaid Services (CMS). This delayed go-live schedules and compressed the time available for clinicians to meet MU deadlines. For critical access/rural hospitals in Minnesota and North Dakota, much of their software was supplied by one vendor that had challenges in adapting their products to offer the MU objective functionality. All clients struggled with

the high costs of EHR systems. Clinics faced an overwhelming number of EHR vendor choices, although the market offered few affordable options for small practices.

MU required organizations to conduct and regularly update a security risk assessment, and to mitigate the risks identified. Many clinic practices were inconsistent or the organization lacked the in-house resources and expertise to fully address security issues. REACH was able to assist clinics with improving their security risk assessment processes to make them more timely and repeatable for the clinics.

**“Most places do not have an onsite IT person at all. If they have one, they are missing a clinical information support person, who is key to knowing how the software works from an end user perspective.”**

*- REACH client*

The smaller organizations lacked technical staff to support EHR implementation, provide ongoing support, and administer the MU program. They also faced change management issues. Small and medium clinics often lacked project management knowledge. They frequently had no timelines, and had not identified tasks or staff roles needed to meet MU objectives. The REACH program provided a structured framework and tools to guide organizations from assessment to optimization. Many clients struggled to manage the workflow changes required to meet specific MU objectives and optimize efficiency and effectiveness. Workflows needed to be redesigned, often to capture data for clinical summaries and quality measures. REACH clarified MU measure requirements and helped organizations evaluate and redesign their workflows.

Clinicians with already full workloads were pressed to help modify workflows and learn new systems. Clinics that abstracted charts to load the EHR with patient historical data seemed better prepared to change from paper to electronic charts. Clinicians found it time consuming to enter or verify historical data. Also, some clinicians were reluctant to change, particularly physicians who had concerns about the clinical usefulness of the EHR and MU measures. They felt using the EHR impeded their patient interactions. Several older physicians retired or closed their practices rather than try to meet the EHR and MU requirements. REACH clients identified clinician optimization or physician engagement as the top barrier or challenge their organizations may still face to fully utilize or optimize its current EHR system—46% reported this as a barrier in 2013.<sup>14</sup>

## Recommendations

Participants in the REACH program worked to achieve Stage 1 meaningful use which focused on data capture and sharing. Assistance through the REACH program helped health care organizations develop technological capabilities and companion change management skills that will allow them to progress to meet federal requirements in Stage 2 meaningful use to advance clinical processes and Stage 3 to improve outcomes.<sup>15</sup>

In the final month of the REC program, REACH met with 39 client groups, representing 58 hospitals and 370 clinic sites in Minnesota and North Dakota

to understand ongoing e-health needs, identify opportunities to further improve care, and assess work still needed to meet Stage 3 requirements. These organizations were surveyed about key areas impacted by the changes they made to achieve meaningful use. The following summarizes these impacts and makes recommendations for next steps related to using e-health to transform care and help clinicians and health care organizations succeed in alternative payment models.

### Data Security

Health care organizations have been meeting the requirements of the HIPAA Privacy Rule since April 2003, a nationwide framework aimed at protecting and enhancing the rights of consumers by providing them access to their health information and controlling inappropriate use of that information. Data security is the processes and practices that protect patient information from unauthorized access or use. It minimizes risk to individuals by ensuring that health care organizations have appropriately designed and protected their electronic patient information systems.

**85% of REACH clients agreed that their patient information is more secure as a result of completing the security risk assessment and taking follow-up action**

Prior to REACH assistance, many small practices lacked a systematic approach, expertise, and staff capacity to perform a risk assessment and plan for risk mitigation. A large majority of REACH clients surveyed (85%) agreed that their patient information is more secure as a result of completing the security risk assessment and taking follow-up action. The 15% that didn't agree already had robust security practices in place.

Going forward, small providers will need to sustain their newly developed risk assessment practices. At a minimum, they will need to conduct an annual risk assessment and mitigation plan review, and be able to act on the results of the assessments. When a task is completed this infrequently, organizations may have difficulty maintaining a strong skill set and may benefit from external assistance. The marketplace needs to have resources and experts, available at a feasible cost to small practices, which can assist with facilitating ongoing security requirements.

### Patient Experience and Engagement

Patients who are engaged and activated can play an essential role in their own care. Research indicates that engaged people have better health care outcomes and incur lower costs.<sup>16</sup> Nearly three quarters (72%) of REACH clients surveyed agreed or strongly agreed that they believe their patients are more engaged in their care as a result of having access to an electronic patient portal and/or receiving clinical summaries. A quarter of clients (26%) neither agreed nor disagreed.

**Nearly 72% believe their patients are more engaged in their care as a result of having access to an electronic patient portal and/or receiving clinical summaries.**

Many patients have been pleased to have ready access to their information about their health through electronic portals, while others are reluctant or are not equipped to use this new tool. To aid the patient engagement, health care providers need to continue to improve their clinical summaries in terms of

ease of use, health literacy and alignment with patient preferences and values. As consumers grow accustomed to this new level of information, they will begin to expect greater integration between their various care providers across different health care organizations. Continued exploration is needed to assess the most effective way integrating patients' health information from their various providers, as well as with the health information available from personal wearable devices and tools, so patients and their care teams have a unified view of their health. Personal health records which are not associated with a specific EHR (i.e., untethered PHRs) are one means to accomplish this.

**69% believe their organizations have better patient safety as a result of the changes they've made to achieve meaningful use**

### **Patient Safety**

The EHR can be a valuable tool to flag possible safety issues such as medication allergies and drug-drug contraindications. Within organizations, ongoing monitoring of EHR alert overrides is needed to assess alert relevance and fatigue. Of REACH clients surveyed, 69% believed that their organizations have better patient safety as a result of the changes they've made to achieve meaningful use. The others neither agreed nor disagreed.

The next greatest opportunity for improving patient safety through EHRs is to enhance electronic information exchange between care settings during transitions of care. The most significant aspects of this opportunity are in the areas of medication reconciliation and continuity of care plans. Medication reconciliation processes during transitions between care settings needs to be mapped for all participating organizations, to be done in a timely and proactive way, and to include both prescription and over-the-counter medications. Workflow processes need to ensure that medication reconciliation takes place prior to patients transitioning to their next care setting. To further enhance safety, continuity of care documentation should have standardized patient assessment content to ensure information most critical to patient safety is easily identified.

### **Health Information Exchange**

North Dakota's single statewide health information organization (HIO) has accelerated its clinicians' ability to exchange information with each other. In 2014, North Dakota had the highest percentage of office-based physicians with a certified EHR system who shared patient health information electronically with external providers or unaffiliated hospitals.<sup>17</sup> A contributing factor to the HIO's success was the state Medicaid office requirement to use Direct, a national encryption standard, for electronic claim submittals. In Minnesota, the market-driven approach through HIOs and health data intermediaries (HDIs) still struggles to enable a comprehensive and viable health information exchange environment. The foundation of an enabling IT platform with interoperable EHRs has been set, yet there remains significant work to do to realize the potential of health information exchange in Minnesota.

**Two thirds believe their organizations are better prepared to support care coordination by sharing electronic data**

While nearly two thirds (64%) of the REACH clients surveyed believe their organizations are better prepared to support care coordination by sharing electronic data with other provider organizations as a result of changes the made to achieve meaningful use, while 15% do not believe their organizations are better prepared.

On an individual patient level, a growing number of people have complex health conditions, and their health care and health supporting services are delivered by numerous different organizations. These patients are most at risk for hospital readmissions and lapses in care. Integrating care and extending care coordination into the community will be key to efficiently and effectively support them. The community needs to aim for communication and hand-offs across settings to appear seamless and be highly coordinated by a care team integrated with community resources.

This will require health care organizations to develop meaningful collaborations and partnerships with long term and post-acute care, public health, mental and behavioral health, and social service organizations, and for all of these organizations to efficiently and securely share information through electronic means. These organizations, not eligible for meaningful use incentives, need to begin adopting and using information technology that supports their integration with health care. Acute and primary care providers need to actively engage and support them as part of a patient-centered care approach.

**54% believe their organizations are better able to manage the overall health of their patient populations**

**Population Health**

Of REACH clients surveyed, only 54% believe their organizations are better able to manage the overall health of their patient populations as a result of the change they've made to achieve meaningful use. Clinics and hospitals are using the data in their EHRs to understand patient health markers, such as smoking status and BMI, to prioritize interventions and offer patient education classes and materials. Clinical data registries are being used to manage their panels of patients who share a disease or condition, as well as to see what treatments are available and how patients with different characteristics respond to various treatments for conditions, procedures, and medical device performance.

For some time, health plans and large health systems have been evaluating their data to understand population health and use data to drive decisions at the patient and population levels, understand their outcomes, and plan for resource utilization. These organizations will need to expand their understanding of patients to include their social determinants of health (socioeconomic and cultural) as care needs to drive deeper into broader community supports to focus on the health and wellbeing of populations.

Smaller health care organizations generally lack the analytic staff and resources to support complex population health analysis and planning.

Ongoing education is needed to support these organizations with how to optimize use of their EHRs to understand their populations and guide service development.

**64% believe their organizations are better prepared to participate in quality incentive payment programs**

### **Incentive Programs**

The services offered through REACH and the MU program helped deliver the strong message and impetus that EHRs are needed to provide timely, accurate electronic clinical data to support high quality, safe, and efficient care. As the REACH program launched, EHRs were becoming foundational to clinical care. They served as a building block for later stages of the MU program and a necessity for success under new payment and care delivery models. Of REACH clients, 64% believe that their organizations are better prepared to participate in quality incentive payment programs, like the Value Modifier Program and Merit-Based Incentive Payment System (MIPS), as a result of the changes they've made to achieve meaningful use. A full 13% disagreed that they were better prepared.

CMS continues to evolve away from fee-for-service reimbursement and toward Congress's legislative requirement to implement value-based payment. Beginning in 2015, CMS has three quality incentive programs concurrently impacting all physician offices—Medicare EHR Incentive Program, Physician Quality Reporting System (PQRS), and the Value Modifier Program. By January 1, 2019, they will sunset as individual programs and be harmonized into the Merit-Based Incentive Payment System (MIPS), and steps toward these changes have already begun through the Medicare Physician Fee Schedule.

Being engaged and participating fully in these programs now is one of the most important steps physicians, other eligible professionals, and their organizations can do to avoid penalties and receive positive payment adjustments in the future, and most importantly, to deliver high quality, high value, and patient-centered care.

CAHs and rural health clinics are excluded from many quality incentive programs and care coordination payments linked to current fee-for-service structures, because they are paid under cost-based reimbursement models aimed at stabilizing and financing safety net care. However, value-based reimbursement models nearly all include incentives related to reducing overall costs by improving care coordination and reducing hospitalizations and emergency department utilization—which relies on strong use of data from EHRs.

To understand and actively participate in the incentive programs, health care organizations should have a multi-disciplinary quality team, as the programs are complex and change over time. The quality team needs solid representation from information systems staff as EHRs and clinical data systems are critical to providing needed insight for planning and decision

making. Also, everyone involved in patient care needs to have at least a basic understanding of value-based care delivery and how their own work impacts value.

### Change Management Skills

**77% believe their organization has developed stronger organizational change management skills which will prepare them in transforming care delivery**

In a rapidly changing health care environment, health care professionals need to have strong organizational change skills, supported by the use of quality improvement science and methods. The majority of REACH clients (77%) agree that their organization has developed stronger organizational change management skills which will prepare them in transforming care delivery, as a result of the changes they've made to achieve meaningful use. Only 5% did not believe they had stronger skills.

Organizations need to develop a culture of continuous improvement that enables small and large scale change in response to the rapidly evolving health care market, which aims to improve health status and reduce cost. These change management skills will make staff more flexible to adapt practices needed to work under alternative payment models, such as accountable care organizations and shared risk contracts.

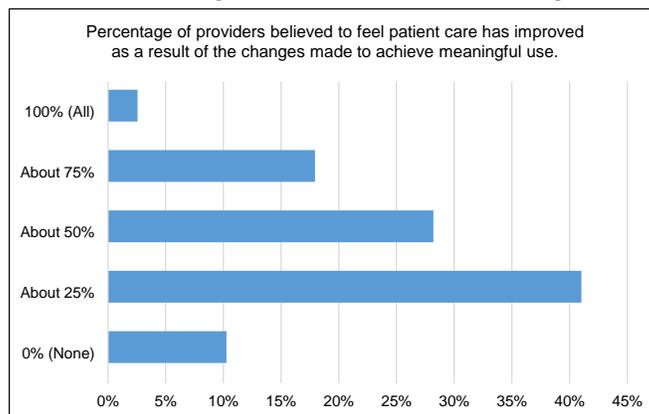
### Clinician Experience

**46% of REACH clients indicated physician engagement continues to be a challenge**

EHR optimization or physician engagement continues to be a challenge for organizations to fully utilize or optimize their current EHR systems for clinician effectiveness. In December 2013, 46% of REACH clients indicated this was a challenge.<sup>18</sup> While many clinicians near the end of their careers opted to retire rather than adapt to care delivery reliant on e-health during the transition to meaningful use, those new in the profession are natives to EHRs and championed their use.

Much work is still needed for physicians and other clinicians to understand and experience the value of EHRs. The majority of REACH clients believed at least a 25% or more of their clinicians—including physicians, nurse practitioners, and physician assistants—feel that patient care has improved as a result of the changes their organizations have made to achieve meaningful use. A full 10% indicated that none of their clinicians felt that patient care improved.

Figure 7. Percentage of providers believed to feel patient care has improved as a result of the changes made to achieve meaningful use.



**“Our EHR will be a plus in our care for patients. Technology is the new way of life for the future generation.”**

- REACH client

As EHRs evolve, vendors need to ensure their products are user friendly for clinicians and that data can be extracted in easy and actionable ways. While the EHR systems should assist with providing one-on-one patient care, clinicians need to understand how their use of EHRs goes beyond direct patient encounters. Payers and health systems must to continue physician education and engagement on changing models of health care. They need to show clinicians how their extra clicks and time translate into data collected in the EHR that is used to build greater value for patients, in population health initiatives and quality improvement.

### Summary

The REACH program focused on meaningful use as a way to improve health and health care, to reduce disparities and to engage patients and their families. As part of a national plan, REACH had a critical role in successfully advancing use of health IT in Minnesota and North Dakota in support of better patient care. The program exceeded its ambitious goals, and served as a leader in the REC community and with ONC.

**“I really valued the help REACH gave me. It would have been much more challenging for me to do this by myself.”**

- REACH client

Meaningful use of EHRs among physicians and hospitals in Minnesota and North Dakota is among the best in the nation. The REACH team is proud to have played a part in their journey to effectively use health IT.

More work is needed to continue enhancing quality improvement and care delivery through the use of health IT in hospitals and clinics, and to accelerate similar changes with other settings that provide care in support of individual health. The next gap to close in serving patients effectively is bringing health care organizations from across the continuum of care to have and use EHRs and exchange health information. Challenges and opportunities exist in continuing to evolve EHR use by physicians and hospitals, now turning their attention to how their EHRs can support success in new care delivery and payment models.

## Contributors

Julie Carlson, Stratis Health  
Barb Groutt, Quality Health Associates of North Dakota  
Jennifer Lundblad, Stratis Health  
Deb McKinley, Stratis Health  
Sue Severson, Stratis Health

REACH was a project federally funded through the Office of the National Coordinator, Department of Health and Human Services (grant number 90RC0021/01).

© 2016 Stratis Health. All rights reserved.

## References

- <sup>1</sup> Regional Extension Centers, HealthIT.gov, <https://www.healthit.gov/providers-professionals/rec-history>, viewed 3/2/16.
- <sup>2</sup> Minnesota e-Health Brief, Minnesota Department of Health, November 2015, <http://www.health.state.mn.us/e-health/ehealthdocs/briefehealth.pdf>, viewed 3/2/16.
- <sup>3</sup> Minnesota's Electronic Prescribing Success through Policy Levers and Financial Incentives. ONC, [https://www.healthit.gov/sites/default/files/mn\\_erp\\_implementation-brief\\_updated\\_061420121.pdf](https://www.healthit.gov/sites/default/files/mn_erp_implementation-brief_updated_061420121.pdf), viewed 3/2/16.
- <sup>4</sup> North Dakota's Electronic Prescribing Success through State Support and Stakeholder Outreach, ONC, [https://www.healthit.gov/sites/default/files/nd\\_erp\\_implementation-brief\\_updated\\_061420121.pdf](https://www.healthit.gov/sites/default/files/nd_erp_implementation-brief_updated_061420121.pdf), viewed 3/2/16.
- <sup>5</sup> Electronic Health Record Landscape Assessment: Minnesota's Primary Care Clinics, August 2007, [www.stratishealth.org/documents/ClinicEHRLandscapeAssessment0807.pdf](http://www.stratishealth.org/documents/ClinicEHRLandscapeAssessment0807.pdf), viewed 3/15/16.
- <sup>6</sup> Health Information Technology Toolkits, Stratis Health, <http://www.stratishealth.org/expertise/healthit/index.html>.
- <sup>7</sup> Evaluation of the Regional Extension Center Program, April 2016, [https://www.healthit.gov/sites/default/files/Evaluation\\_of\\_the\\_Regional\\_Extension\\_Center\\_Program\\_Final\\_Report\\_4\\_4\\_16.pdf](https://www.healthit.gov/sites/default/files/Evaluation_of_the_Regional_Extension_Center_Program_Final_Report_4_4_16.pdf), viewed 4/13/16
- <sup>8</sup> Data from ONC CRM platform, viewed 3/15/16.
- <sup>9</sup> HealthIT.gov Dashboard, Minnesota, <http://dashboard.healthit.gov/dashboards/physicians-medicare-meaningful-use.php>, viewed 3/18/16.
- <sup>10</sup> Adoption of Certified Electronic Health Record Systems and Electronic Information Sharing in Physician Offices: United States, 2013 and 2014, <http://www.cdc.gov/nchs/data/databriefs/db236.htm>, viewed 3/18/16.
- <sup>11</sup> Data from ONC CRM platform, viewed 3/15/16.
- <sup>12</sup> REACH Client Satisfaction Survey Summary, December 2013.
- <sup>13</sup> REC Highlights, HealthIT.gov, <https://www.healthit.gov/providers-professionals/rec-highlights>, viewed 3/21/16.
- <sup>14</sup> REACH Client Satisfaction Survey Summary, December 2013.
- <sup>15</sup> How to Attain Meaningful Use, HealthIT.gov, <https://www.healthit.gov/providers-professionals/how-attain-meaningful-use>, viewed 3/21/16.
- <sup>16</sup> Judith H. Hibbard, Jessica Greene and Valeria Overton: Health Affairs, February 2013.
- <sup>17</sup> Adoption of Certified Electronic Health Record Systems and Electronic Information Sharing in Physician Offices: United States, 2013 and 2014, <http://www.cdc.gov/nchs/data/databriefs/db236.htm>, viewed 3/18/16.
- <sup>18</sup> REACH Client Satisfaction Survey Summary, December 2013.

## **Appendix A – REACH Council Members**

### **Minnesota Council**

Minnesota Academy of Family Physicians, Virginia Barzan, succeeded by Maria Huntley

Minnesota Department of Health, Martin LaVenture

Minnesota Department of Human Services, Dean Ewald

Minnesota Hospital Association, Mark Sonneborn

Minnesota Medical Association, Becky Schierman, succeeded by Janet Silversmith

University of Minnesota Physicians - Phalen Village Clinic, Kevin Peterson

### **North Dakota Council**

North Dakota Department of Human Services, Tory Brabandt

North Dakota Department of Human Services, Information Technology Services, Doug McCrory

Quality Health Associates of North Dakota, Barbara Groutt

State of North Dakota, Health Information Technology Office, Sheldon Wolf

University of North Dakota, School of Medicine and Health Sciences, Lynette Dickson