

Northeastern Vermont Regional Hospital – Saint Johnsbury, Vermont

Electronic Health Record Sharing with Federally Qualified Health Centers

Overview: Northeastern Vermont Regional Hospital (NVRH), a not-for-profit, acute care, critical access hospital, is located in Vermont’s historic Northeast Kingdom. NVRH provides primary and preventive care; surgical and specialty services; inpatient and outpatient care; and 24-hour, physician-staffed emergency services. Northern Counties Health Care, Inc. (NCHC), operates four federally qualified health centers (FQHCs) in the NVRH service area. Two of the FQHCs are located near the hospital in Saint Johnsbury, VT, and the two others are located about 10 miles to the east and west in adjacent towns.

The hospital and NCHC have had a long-standing relationship of coordination and cooperation (both organizations were formed in the 1970s). Leadership from both organizations often has representation on each other’s board of directors and/or board committees. Physicians employed by NCHC are members of the hospital’s active medical staff and have been key decision makers on important policy issues such as meeting CMS standards, and operational issues such as creation of the hospitalist program, which features physicians from NCHC as well as NVRH-employed physicians. Prior to the implementation of electronic health records (EHRs), the hospital and FQHCs, and the other local medical offices, as well as the tertiary centers, endured the limitations inherent in paper medical charts—delays or inaccessibility of clinical information sharing.

In the mid-1990s, EHR technology opened the door for information sharing between the two organizations. NVRH CEO Paul Bengtson and NCHC then-CEO David Reynolds understood the technology’s potential to streamline communication and thereby improve patient care and reduce clinician workload. They led the decision making during the planning stage of the initiative. Implementation decisions were handled by the Information Services leaders in both organizations.

The first level of sharing was simply allowing remote access to each others’ systems. NVRH’s information system is Meditech; the FQHCs use Practice Partners for their EHR. NVRH allowed NCHC providers to have access in their offices and homes via dial-up when the system first went live in 1997 (Meditech does not charge extra for allowing that access; the physician client software is free). In the early 2000s, NVRH added access via the Internet by secure software virtual private network (VPN), thus improving the speed and reliability of the connection. Finally, NVRH installed fiber-optic cable and hardware VPN between the hospital, the nearby administrative offices of NCHC, and the two NCHC practices located nearby “on the hill.” Speed and reliability now nearly equal that within the hospital walls.

Reciprocal access to the Practice Partners EHR was provided by NCHC in the early 2000s. Initially it was available in three locations within the hospital: the emergency department, medical/surgical unit, and surgical care unit. Over time, client software was added in the hospitalists’ office and in the Community Care Team office. This limited access is a result of Practice Partners charging by number of concurrent users. NVRH paid NCHC for the estimated additional use.

The next level of sharing was a true interface between the systems. The first request was for a real-time HL7 interface for lab and microbiology results. NVRH contracted with Meditech and

NCHC paid for Practice Partners. As a temporary solution, NVRH's CIO/VP Information Services wrote a "batch" interface in HL7 format that delivered the results to the NCHC side of the interface several times a day. Meditech's side of the interface was finally ready two years later.

Impact: Access to valuable health information is immediate and timely. Phone calls between physicians and between nursing care units and physicians are reduced.

Challenges/success factors: Making information available where and when it is needed throughout the continuum of care is a stated strategic goal of NVRH and NCHC. The commitment of both organizations to "our patients" has helped reduce barriers and turf issues often seen between other organizations. Close professional relationships between individuals from both organizations cannot be underestimated, and are the hallmark of the organizations' success.

With the interface, the biggest problem is identifying which provider(s) should receive a report. NVRH has providers who work in multiple practices, as well as multiple locations within the hospital. The provider name is used as the selection filter, so a clinician may order a test in his/her role as an ED provider, but the report is instead routed to the EHR in the practice. This challenge is being worked on with the vendor.

Another issue is that each provider has different criteria for what reports he/she wants to have routed to the EHR. In addition, these criteria are subject to change. NVRH leaders continue to work on perfecting the routing of these reports.

Future direction/sustainability: Hospital leaders expect to purchase a two-way Continuity of Care Document (CCD) interface so that FQHC records can be included in the hospital EHR. The CCD will also allow the hospital to export records to the state registry without requiring data transformation en route. Hospital leaders would like to include provider-specific criteria and patient-location criteria in the routing.

NVRH has long supported electronic information exchange. NVRH's CIO/VP Information Services Andrea Lott was part of a team of state leaders who worked to develop Vermont Information Technology Leaders, a not-for-profit organization that operates Vermont's statewide health information exchange network. NVRH was an enthusiastic pilot for both VITL and the Blueprint for Health, long before the payor surcharge funding was voted in and the subsequent idea of a "legislative mandate" to participate was formulated. NVRH leaders are interested to see how current and future mandates will be funded. They expect to march steadfastly ahead to meet the ARRA requirements for the benefit of all their patients and will greatly appreciate funding.

Advice to others: Develop common goals between organizations, always keeping the patient in mind. Keep lines of communication open at all levels of the organization. And be flexible and creative in your problem solving.

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