CASE STUDY:
Improving Patient Health Through Real-Time ADT Integration

Client: South County Health Alliance

With the Joint Commission's finding that most adverse events and serious medical errors occur when patients move between providers and care settings[1], transitions of care programs have emerged as top priorities for health plans.

For the case managers at South Country Health Alliance, a county-based health plan serving 12 Minnesota counties, locating members in transition was proving to be a stumbling block to facilitating care during transitions. Although hospitals were supposed to be notifying the health plan within 24 hours of a hospital admission, South Country data revealed they were not receiving notifications for as many as 20 percent of their members. Further, notifications they did receive often came through after the member was discharged—much too late for case managers to provide proactive care.

Aiming for 100 percent throughput on admissions notifications, South Country leveraged the most innovative technology platforms to set up real-time, automated Admission, Discharge and Transfer (ADT) alerts. The ADT alert system not only moved South Country toward its 100 percent goal, but it also streamlined a tedious workflow and helped case managers consistently locate members in real time to fundamentally change their approach to transitions of care management.

Based on their experiences, the following road map will guide you to improve care for your members through real-time ADT integration.

Key Results

▶ 100% notification on member admissions, transfers and discharges

▶ Data-input time savings equal to one-third of a full-time employee

▶ Access to member data in real time, as it's generated

▶ Ability to locate members for proactive intervention

Background

South Country Health Alliance was founded as a grassroots effort by a group of counties that shared a common vision: that rural communities benefit when healthcare is locally governed, organized and delivered.

As a Minnesota Medicaid Managed Care Organization, which also administers two Medicare Advantage Special Needs plans, South Country exclusively serves public program enrollees in rural counties. Its 40,000 members often have complex medical, mental health and social needs. They are individuals with considerable variation in health and functional levels who often require health and social support available from their local county public agencies. Because South Country's governing body is a Joint Powers Board made up of county commissioners elected and accountable to the citizens of their county, the plan is integrated with the

counties and their services at the highest level.

Significantly, South Country's 12 counties are served by multiple healthcare systems, as well as many independent providers. Maintaining consistency within this very non-integrated network has proven to be challenging.

In building the ADT alert system, South Country leveraged two critical technology platforms: its **DiamondView Health Information Exchange** and the **Casenet® TruCare** integrated care management platform.

The DiamondView HIE is South Country's secure, standardized electronic network, which allows all the disparate systems in rural Minnesota to exchange patient information. Minnesota does not have a state HIE, so South Country has developed its own, and it served as the hub of the ADT implementation. Each of South Country's affiliated counties has its own version of the HIE with functionalities customized to meet each individual county's goals.

TruCare® is the platform South Country selected when it brought its case management services in-house in 2016. TruCare's numerous integration interfaces and configuration options made it an important choice in anticipation of South Country's ambitious integration goals.

The Process

As with any technology implementation, success depends upon putting a process in place and engaging the appropriate stakeholders. Within each county, local providers and care managers were invited to evaluate the current state of care transitions—often a labor-intensive manual process of faxing and phone calls—and plan for the improvements that could be achieved with technology integrations.

South Country followed a three-part approach that can be replicated in your health network:

1. Identify the data.

Implementation teams first determined both the users of the data as well as the contributors of the data. When you're looking at ADT integrations, you're identifying the hospitals that will be generating the admissions and discharge data and then the care team members who would need to receive that data. Participation agreements are signed in this phase.

2. Make the connection.

South Country's ADT alert system leveraged the industry-standard Health Level Seven (HL7) protocol, which provides a common language to exchange data between computer systems. Information on admissions, discharges and transfers is generated as an HL7 data feed from the provider side—the EMR systems of the hospitals and clinics. The data then moves into the DiamondView HIE system.

As the data moves from the source system to the HIE, patient consent is factored in, and the data is mapped to fit the parameters of the new system. One health system, for example, utilized 23 different values that could be assigned as labels in an encounter category. The HIE supported three. The implementation team not only mapped and reconciled the data, but it also documented the translation so it could be easily understood by the end user.

The data becomes immediately actionable when it's routed from the HIE out to the case managers on the TruCare platform. The TruCare Linx® module translates and manages the data from South Country's HIE and pulls it into the TruCare care management platform. South Country opted for the TruCare Linx basic ADT integration, which converts ADT messages into member data presented in the notes section of the TruCare member record, as well as generates tasks to drive the necessary follow-up based on the type of ADT message and the client's needs. An advanced module is also available, which uses the ADT messages to automatically create and update inpatient authorization requests within the TruCare Utilization Management module.

The HIE platform hub is not actually required for the ADT integration; TruCare Linx could pull the data directly from the EMR or a state HIE platform. However, South Country needed to be able to leverage its HIE software to send ADT email alerts directly out to non TruCare users in its disparate healthcare community.

The data feed is ongoing, meaning that the DiamondView HIE and TruCare are receiving a constant stream of data in real time, populating fields as the data becomes available. As the doctor is logging a diagnosis, or as a patient is updating her insurance or contact information, the data is flowing straight through to the care managers.

3. Testing and configuring.

Analyzing, mapping and testing of the data actually happens at all stages of the process, and it requires effort outside the technology itself. Subject matter experts are critical to the integration to ensure first that the most meaningful data is collected in the HL7 alert and then that it's mapped and imported in a form that's actionable to the care team.

For example, patient phone numbers are critical data for South Country care managers who often struggle to track down their transient Medicaid members. Understanding this end-user goal enabled the implementation team to prioritize collecting patient phone numbers in the ADT HL7 feed generated by the hospital EMRs. More information was needed, too, to distinguish types of discharges. Initial tests of the ADT feed didn't indicate if an inpatient stay was due to labor and delivery or chemical dependency—both looked the same initially on the TruCare Structured Note.

On the technical side, within the HL7 schema, a patient's name has 14 different components. Data reviewers were needed to identify which components corresponded with the fields in the TruCare member record. EMR data also often contained coding that was meaningful to the health system but not easily interpreted by the case managers. Reviewers were able to translate the coding into usable data for the care team.

Live testing via conference calls ultimately proved to be most effective in ensuring both the successful transmission and usability of the data. With all the stakeholders on the phone, the health system would send through an ADT message, the DiamondView HIE vendor and then the TruCare Linx team confirmed that the message hit their systems, then finally an end user validated that the task was visible in the queue and relayed what the TruCare Structured Note contained. Through this process, the implementation team was able to modify the data transmitted to the TruCare Structured Note until it contained the most relevant information in the most usable format.

Early Results

In 2016, before the ADT alert system was implemented, South Country's case managers received approximately 9,000 admission and discharge notices that required follow-up actions of some kind. (And, recall, they were receiving only 80 percent of the notifications that were due, so the actual number of notices should have been closer to 11,000.) Follow-up included everything from simply checking to ensure patients were able to get needed medications and equipment to extensive coordination with group homes or assisted-living facilities.

The old manual notification process was something of a relay system: The hospital notified a third-party Utilization Management administrator, who notified a South Country central coordinator, who assigned the information out to the appropriate case manager who would then follow up with the member. It took approximately four minutes for the central coordinator to review the information, enter it into the system and send it out for follow-up—this equated to 12 hours per week, or nearly one-third of a full-time employee, just to manage ADT inputs.

The new system automated the process, generating tasks for the care team in real time as the provider enters data into their own EMR systems. Tasks are initially claimed by UM specialists and then reassigned to the members' case managers.

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Not only has input time been reduced far below four minutes, but now South Country's initial challenge of locating members has also been solved. John Whitington, CIO, provided this example: One morning, a reinsurance event alerted a case manager that a member was experiencing utilization issues, but the case manager was unable to locate the member to provide assistance. Later that afternoon, an ADT alert popped up to show the member had been admitted to a hospital in the Twin Cities—nearly 100 miles from where the member was presumed to be.

"It really is real time," Whitington says. "It helps us locate that person to try to intervene and do what we can to support that member. It helps us create those efficiencies to be more proactive rather than reactive."

As South Country continues to roll the ADT integration out, connecting all the health systems and providers within its alliance, they are on track toward the goal of receiving 100 percent of ADT notifications on its members.

¹https://www.jointcommission.org/assets/1/18/Hot_Topics_Transitions_of_Care.pdf

ADT Integration: Tips for Success

▶ **Align the IT and Business Teams**—Before the project begins, ensure that both the IT and business teams share the same vision for the integration's end result. The IT team must understand exactly what data the business team needs to move, as well as how the end users intend to use the data.

▶ **Focus on the Patient-Care Results**—In getting buy-in from the key stakeholders, stress not only the technology goals but also the ultimate patient-care goals. A successful ADT integration will enable case managers to spend more time on direct patient care, to be proactive versus reactive in delivering interventions, and to be present in real time to assist with transitions of care. All this will lead to reduced readmissions, better patient care, and higher member satisfaction.

▶ **Engage Subject Matter Experts**—Moving data from one system to another will require mapping and some degree of translation to ensure that what comes out of the transfer appears in a format that is accurate and meaningful to the end user. At all stages of the integration process, subject matter experts will need to review data to ensure its integrity and usability on the other end.

▶ **Set Notification Boundaries**—While the ADT feed is ongoing in real time, South Country limited task routing to once per day. Scheduled routing prevents case managers from alert fatigue and avoids distractions caused by constant notification pop-ups.

▶ **Expand to Include the CCD**—With the ADT integration in place, considerably more information can be attained by integrating the Continuity of Care Document via TruCare Linx CCD Import and Export. Consider adding this functionality, which allows case managers and providers to view a patient's most complete history in one place.