Magnolia Regional Health Center Reduces 30-Day Readmission Rates for CHF Patients From 24% to 15%

Prescription Fill Data Empowers Nurse Navigators to Prioritize Patients for Intervention

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Cardiovascular disease is the leading cause of death worldwide and congestive heart failure (CHF) is one of the most frequent—and costliest[1]—causes of hospitalization in the United States.

While CHF can be successfully treated with a complex medication regimen, many patients find it hard to stick to long term. In fact, about 50% of patients with heart failure don't take their medications as prescribed despite the therapeutic benefits.[2] Unfortunately, low adherence to medications adversely influences clinical outcomes and results in worse heart failure, poor physical function, and greater risk for hospitalizations and mortality.[3]

In 2022, the American Heart Association updated treatment guidelines for CHF after evidence suggested impressive cardio-protective effects of sodium-glucose cotransporter-2 (SGLT2) inhibitors. As a result, the guideline-directed medical therapy (GDMT) standards were changed to add these medications.[4]

Unfortunately, adoption of the updated standards has been slow and significant gaps in both prescribing and adherence remain. With readmission rates for CHF patients as high as 29% nationwide,[5] health systems are eager to develop more effective follow-up and medication management after hospital discharge.

The Solution

For Magnolia Regional Health Center, an acute care community hospital in Mississippi, the answer was a data-driven, patient-centered way of leveraging digital tools to monitor and manage the health of its CHF patient population.

The health system partnered with DrFirst to use its population health management solution to measure gaps in adherence at the population level with easy access to prescription fill history for CHF patients in near-real time. Efficient access to this data was essential to the success of the program. Typically, gathering up-to-date medication history between visits involves countless phone calls and in the worst-case scenario can take hours for a single patient.

Now, a Nurse Navigator program ensures that patients and their families receive counseling at discharge and between clinic visits to help them cope with this complex, long-term illness. With access to clinically actionable medication history data, nurses used structured, multi-touchpoint interventions to close gaps in GDMT adherence and reduce readmissions.

How the program works:

Step 1: In-hospital identification and enrollment. Following enrollment of eligible patients, Nurse Navigators reviewed patients' medication lists, identified gaps in GDMT, discussed barriers to compliance, and documented follow-up plans.

Step 2: Post-discharge follow-up (72 hours). A nurse called the patient three days post-discharge to review documentation, refresh medication history via a population health management tool, and schedule the next appointment. GDMT adherence, physician check-ins, and patient care plans were documented.

Step 3: Long-term follow-up (30–60 days post-discharge). Nurse Navigators made up to three attempts to contact patients within 30 to 60 days, reviewing medication adherence data and updating care notes.

The program also incorporated social workers and case managers to assist with financial burdens and address barriers such as transportation and medication affordability.

"Our local efforts to better manage the CHF population involved developing a Nurse Navigator program that sought to make our care more patient-centered and more equitable. Through our partnership with DrFirst, we've been able to go beyond that in ways that I never imagined possible at the outset. I believe that because of this collaboration, our care for this population is safer, more equitable, more effective, more efficient—really all the ways that we measure quality in healthcare."

Ben Long, M.D.

Director of Hospital Medicine

Magnolia Regional
Health Center

The Results

The Nurse Navigator program yielded measurable improvements in both medication adherence and hospital readmissions. Over 10 months, 501 patients were enrolled, and 171 were analyzed for adherence—with improvements in both prescribing and fill rates.

GDMT prescribing rates increased across all categories:	
SGLT2 inhibitors	+11.4%
ARNI/ACEI/ARB	+5.2%
Beta blockers	+41.5%
MRAs	+12.1%

First-fill rates improved significantly:	
Overall	+23.9%
SGLT2 inhibitors	+52.9%
ARNI/ACEI/ARB	+6.5%
Beta blockers	+8.0%
MRAs	+81.6%

The impact of multiple touchpoints was also notable. Patients with one in-patient consultation saw a 10% improvement in adherence and patients with four or more follow-up calls experienced a 38% improvement. Adding to the good news, 30-day readmission rates for CHF patients decreased from 24% to 15%.

With Nurse Navigator interventions directly linked to improvements in both prescribing practices and first-fill rates, Magnolia Regional plans to expand the program and integrate it with a chronic care management (CCM) program.

Additional touchpoints were also credited for significantly raising adherence rates, indicating that continuous patient engagement is critical, so the Nurse Navigator program will also:

- Expand to support patients with other chronic conditions such as diabetes and chronic obstructive pulmonary disease (COPD).
- Further streamline post-discharge support to align with trends in shorter hospital stays.
- Submit program findings for peer review to validate the impact and encourage adoption by other health systems.

"I know patients want to improve their health and well-being, but they don't understand why medication compliance is so vital to their health," said Brooke Brown, R.N., Magnolia Regional. "The Nurse Navigator program, in partnership with DrFirst, has been a great strategy for connecting with this patient population to help them understand the 'why' behind what we do."

Conclusion

The Nurse Navigator program demonstrated that structured, multi-touchpoint interventions can significantly improve GDMT adherence, reduce readmissions, and enhance outcomes and quality of life for CHF patients. These encouraging results highlight the program's potential to be scaled across other chronic conditions, amplifying its positive impact on patient care and overall healthcare costs.

Sources:

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