CASE STUDY

SmartRenewal™

Gundersen Health System Improves Prescription Renewal Process by Importing 84% of Data Automatically

AI Safely Fills Data Gaps, Saving Clinicians and Staff 100 Hours on Manual Data Entry Over 3 Months

GUNDERSEN HEALTH SYSTEM®

La Crosse, Wisconsin

8 Hospitals

33 Regional Clinics

9 Behavioral Health Locations

EHR: Epic

Gundersen Health System is a non-profit, fully integrated healthcare network that includes a teaching hospital and six critical access hospitals, primary care and multi-specialty practices, behavioral health services, and regional clinics. Its flagship hospital has twice earned Healthgrades recognition as one of America's 50 best hospitals and consistently ranks among the country's top hospitals for quality and patient satisfaction.

The Challenge

When patients request a prescription refill through their pharmacy, the pharmacy system sends an electronic request to the provider for a renewal if no refills are available. The provider's electronic health record (EHR) system receives the renewal request with specific prescription instructions, such as medication dosage, route, and frequency, known as "sigs." Frequently, the sigs don't match the required configuration in the EHR or may contain "free text," which requires manual transcription into discrete fields in the provider's EHR.

This manual data entry by clinicians or staff—with back-and-forth comparison of the sigs to ensure an error hasn't been made while filling in details—can take one to three seconds per field and up to a minute per medication. To address this issue, some EHR systems enable creation of a mapping table, which allows sigs that have a perfect match in the table to be imported automatically. Unfortunately, keeping that table up to date is a time-intensive, manual process for the IT department.

Gundersen receives hundreds of renewal requests per day, requiring clinicians and staff to collectively spend hours translating sigs into the health system's nomenclature (for example, "by mouth" versus "oral") and entering that information into their EHR. Despite the IT team's significant time and effort maintaining a sig-mapping table, the health system had only 27% of prescription renewals with sigs fully translated and structured in the EHR, leaving 73% with incomplete sigs requiring at least partial manual entry.

This manual process has many negative ramifications, including time spent on redundant tasks instead of patient care, risk of errors when data is keyed in manually, and clinician burnout. A report by independent research firm KLAS found that clinicians who are very dissatisfied with their organization's EHR are nearly three times as likely to leave compared to clinicians who are very satisfied.[1] Gundersen's clinical leadership recognized this as an opportunity for improvement by reducing tedious tasks for staff, improving satisfaction and avoiding burnout, and giving clinicians more time to care for patients with less chance of errors that could cause adverse drug events and patient harm.

"One of the most redundant tasks in the electronic medical record for our staff, including clinicians, nurses, and medical assistants, is completing medication renewals," says Rajiv Naik, M.D., FAAP, Medical Director of Informatics. "It is particularly frustrating for staff when the sig does not pull into discrete data fields as the medication crosses interfaces from the pharmacy to our medical record, even though the information seems as if it should be there. The extra typing and clicking contributes to the challenging problem of clinician and staff burnout."

[1] March 2022 KLAS Report. https://www.beckershospitalreview.com/ehrs/5-key-stats-on-clinicians-ehr-burnout.html

The Solution

In May 2022, Gundersen deployed a new artificial intelligence (AI) solution from DrFirst to automatically transcribe incoming renewal requests within their existing Epic workflows. SmartRenewal™ uses DrFirst's patented AI technology to significantly cut down on the manual clicks and keystrokes that can lead to medication errors and contribute to clinician burnout. The AI transcribes sigs directly into the EHR, eliminating the need to create and maintain a sig-mapping table and removing the requirement for a perfect sig match. The AI infers clinical meaning and improves its performance over time by learning to translate, structure, and codify medication data with greater speed and efficiency.

"Before partnering with DrFirst, only one-quarter of our prescription renewals had complete medication details, which meant most electronic renewal requests required staff to enter data with keystrokes and clicks," says Dr. Naik. "Now we're importing complete sig details for over 80% of our patients' medication renewals. That's a big time-saver for our staff and clinicians for this redundant task in the electronic medical record."

SmartRenewal's AI translates sigs and imports information into discrete fields, so clinicians and staff at Gundersen now review renewals for accuracy and completeness and approve requests with minimal or no manual entry. With this important information readily available in their EHR, the need to translate and enter prescriptions in the patient chart is greatly reduced, as is the potential for errors.

"We are excited about the opportunity to relieve some of the burden on our staff by using the **SmartRenewal solution to safely and accurately complete the sig in our medication renewals.**"

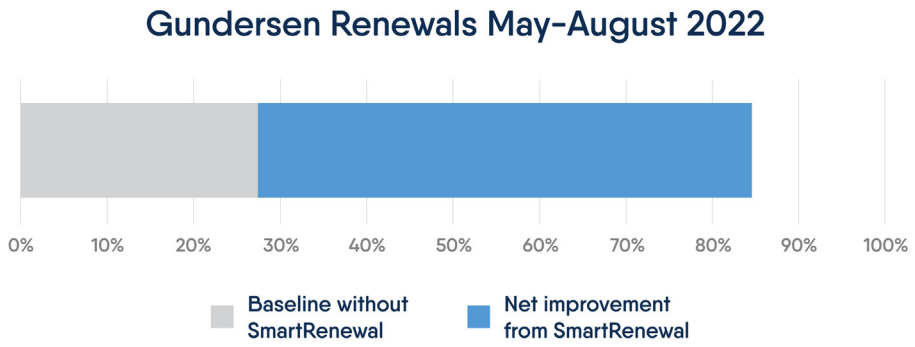
— Rajiv Naik, M.D., FAAP, Medical Director of Informatics, Gundersen Health System

The Results

After implementing SmartRenewal, Gundersen saw a 202% improvement in the number of clean sigs imported, resulting in 84% of incoming prescription renewal data either partially or fully populated in the EHR. Using an estimate of three seconds of manual entry per renewal field, the health system's clinicians have saved approximately 100 hours in their first three months of using the new process.

This allows clinical staff to focus more of their cognitive effort on value-added care rather than tedious transcription. Going forward, the Gundersen team will continue to monitor clinician productivity with SmartRenewal and track improvement in medication safety.

The IT team has also benefited from significant time savings by eliminating the need to continually update thousands of unique sigs manually. This permits technical and pharmacy staff to focus their efforts on other quality initiatives.



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