Case Study

Wise Hospice Options Simplifies Medication Workflows and Prevents Errors With Clinical-Grade AI

Exchanging Accurate Medical Data for Safe, High-Quality End-of-Life Care

WISE HOSPICE OPTIONS

- 21+ years providing integrated pharmacy and medication management solutions
- Dedicated to helping hospice organizations reduce costs, lower barriers to care, and improve patient outcomes
- Streamlines hospice operations with connected technology

Hospice organizations provide essential support to patients and families navigating the challenges of end-of-life care. Many hospice patients have endured numerous specialist visits, hospitalizations, complex medication routines, and escalating pain that demands careful management. To provide compassionate care and prevent harm, hospice doctors and nurses need to ensure new prescriptions won't cause drug interactions by conflicting with existing medications or a patient's allergies.

Wise Hospice Options embraces the latest technology solutions to help hospice organizations deliver high-quality care quickly and efficiently, while reducing costs and minimizing delays. For 11 years, it has offered hospice care providers the DrFirst e-prescribing solution, which integrates with electronic health record (EHR) systems and ensures compliance with regulations regarding electronic prescribing for controlled substances. One of the solution's strengths is its ability to provide medication history and alerts for allergies, duplicate medications, and drug interactions.

The Challenge

While government mandates and industry standards have made it possible to exchange medical records between connected systems, variations in terminology still prevent receiving systems from consuming the information and making it immediately usable by clinicians. Systems interoperability challenges are compounded for hospice patients because they often have a lifetime of records that span primary, specialty, and acute care providers across geographic locations.

Lack of standardization results in many problems, including the following:

- Duplicate and unmatched drug names cause extra work for nurses and physicians who must manually re-enter this data.
- Inconsistency in prescription instructions such as medication dose, route, and frequency (known as "sigs") results in one prescription using the word "orally," while another might use "by mouth," causing import and mapping issues that clinicians needed to manually resolve in each patient record.
- Sig information frequently arrives as a block of text, rather than as data points in discrete fields, preventing the e-prescribing system from using the information to trigger safety alerts for drug interactions and allergies, and increasing the risk of errors when data is keyed in manually.
- When allergy data arrives as free text rather than populated into distinct fields, providers could unknowingly place orders for medications that might cause an adverse event for a patient.

"Prescribing requires the details to be right," says Andrea Jackson, CIO at Wise Hospice Options. "We have 15 different EHR interfaces, but most send clinical data in free-text form. It's crucial for us to make that information clinically actionable by getting all the information—like dose and frequency—into the proper fields."

"Expert, compassionate care is essential for everyone, but perhaps even more so for those approaching the end of their lives. Our clients depend on us for medication management solutions to improve cost efficiencies, reduce barriers to care, improve patient outcomes, and provide an excellent provider experience. Our new AI solution from DrFirst is saving time for doctors, nurses, and pharmacists and preventing medication errors that could harm patients."

Grant Faubion
CEO
Wise Hospice Options

When data doesn't sync correctly, the DrFirst e-prescribing solution flags it with a pill icon in the medication reconciliation workflow. This requires clinicians to stop and manually search and select allergies, then input drugs by name, strength, and form, and enter sigs such as dose, route, and frequency. That critical step enables the system to check for potential safety issues, but in hospice situations, where patients need immediate relief, delays or mistakes caused by manual processes can be especially frustrating and harmful.

"Hospice prescribers rely on drug-to-drug and drug-to-allergy interaction alerts as a last line of defense against patient harm," said Elizabeth Kraske, E-Prescribing Product Specialist at Wise Hospice Options. "Ensuring the medication and allergies are valid in the e-prescribing system confirms they have the complete picture and are alerted of critical interactions that could otherwise occur."

The Solution

Based on client satisfaction with DrFirst e-prescribing, Wise Hospice Options partnered with the company to solve these challenges. The DrFirst patented, clinical-grade AI technology helps bridge the gap between incompatible systems by deciphering incomplete or mismatched data, translating and safely inferring missing details in real time. For instance, if a prescription like Quetiapine 150mg has a patient instruction such as, "tk 1xD," the AI understands this as "take one tablet by mouth daily" and fills in the fields a clinician would previously enter manually for dose, unit, route, and frequency using the EHR's preferred terminology. This eases the clinician burden from transcription to simple verification. If there is any doubt, the AI requires a manual review to ensure safety.

The AI safely infers clinical meaning and improves its performance over time by learning to translate, structure, and codify medication data with greater speed and efficiency. With this important information readily available in the EHR, the need to manually translate and enter prescriptions in the patient chart is greatly reduced, as is the potential for errors. This allows clinical staff to focus more of their cognitive effort on value-added care rather than tedious transcription.

The Results

Before the AI integration, prescribers spent an average of 15 seconds matching each flagged drug and 20 seconds per drug entering missing sig details. With the AI handling this automatically, the time spent on these tasks has reduced dramatically to 2 to 3 seconds per drug. Now, fewer medications are being flagged for manual review by pill icons.

"Before implementing the new DrFirst solution, we expected the AI to codify about 92% of drugs, 80% of sigs, and 95% of allergies," said Jake Massey, SVP of Technology at Wise Hospice Options. "Now that we are live, our performance reports indicate that the AI is beating those estimates, **codifying over 99% of drugs, 85% of sigs, and 96% of allergies.** Clinicians still review medication information for accuracy and may make adjustments based on discussions with the patient, but the number of clicks and keystrokes is significantly reduced, helping them make quicker, more informed decisions."

Wise Hospice Options is the first hospice vendor to implement this AI technology to standardize data from different systems into a seamless workflow that allows clinicians to see complete information before ordering prescriptions, helping avoid delays and reduce errors.

DrFirst
Unite the Healthiverse™