



Improve Legacy EHR Data and Quality of Patient Records with AI

SmartProcessorSM Provides Consistent, Clinically Actionable Medication Data From Enterprise Migrations to Connected External Sources



The Challenges of Consolidating Data From Separate Systems

In the United States, hospitals and other healthcare facilities are regularly consolidated into a single Integrated Delivery Network (IDN) to streamline care. After a merger or acquisition, data from separate systems is migrated onto one enterprise platform, usually by importing continuity of care documents (CCDs). This is where data quality is often lost: varying sig terminology, disparities in formulary service vendors (FSVs), a lack of EHR standards, and obsolete national drug codes (NDCs) all work against a perfect import, so a large portion of information is left blank, leaving clinicians with the burden of manually entering any missing information.

DrFirst has been using AI to safely translate and infer medication history data from multiple sources since 2015. Our expertise in AI and improving the quality of medication history data uniquely positions us to process and normalize medications from CCDs to deliver consistent medication history—in batches from legacy systems, as well as in real-time when CCDs are passed between providers. Using our patented AI technology, SmartProcessor cleans and structures medication data using clinical and statistical context to normalize inconsistencies and to process a patient's medication history into discrete codified elements.

By processing CCDs from legacy EHRs, we improve data migrations for hospitals and health systems while saving clinicians time, reducing errors that come with manual entry, and ultimately

improving patient safety. Reducing human intervention and manual data entry means fewer opportunities for transcription errors, a leading cause of adverse drug events (ADEs).

SmartProcessor in Action

WellSpan Health, a large, not-for-profit integrated health system in Pennsylvania, leveraged SmartProcessor in late 2020 to normalize medication data across three legacy systems (NextGen, MEDENT, and MEDITECH) as it transitioned multiple facilities to one Epic system. WellSpan's legacy medication data was inconsistent and mostly unusable in Epic, which meant clinicians would have wasted valuable time parsing and manually entering medications from legacy CCDs into Epic, potentially impacting patient safety and medication reconciliation outcomes.

After implementing SmartProcessor, more than 270,000 patient records were processed, and 5.5 million medication records were normalized. This process:

- Optimized and consumed 88.6% of medications and sigs into the Epic EHR
- Deduplicated overlapping records from different legacy systems
- Reduced up to 13 clicks per medication
- Saved five to seven minutes per patient

To learn more, visit drfirst.com.



“To **save time and improve quality of medication history data** when consolidating three EHRs into a network-wide implementation of Epic, we developed a data conversion process using DrFirst's SmartProcessor AI engine that **cleans and structures data beyond standard neuro-linguistic programming (NLP)** using clinical and statistical context. This normalized the medication data to be used in our Epic system while **addressing discrepancies and variations from the old EHRs, inferring missing data** with context from medication histories to prevent blank fields while **avoiding labor-intensive manual entry**.”

—Robert Lackey, M.D., FAAFP, Chief Medical Information Officer, WellSpan Health

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