DrFirst MedHx

Driving Accurate Medication Reconciliation through Automation

DrFirst
Unite the Healthiverse™

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Why This First Look?

DrFirst's MedHx solution provides a broad source of medication history data, including local pharmacy data, with the goal of enabling faster, more accurate medication reconciliation that reduces the risk of medication errors and adverse drug events caused by keyboard errors and missing/poor-quality prescription data. This report provides a first look at the experiences of MedHx customers and explores whether the solution's medication history data is driving accessibility, accuracy, and safety.

What Does DrFirst MedHx Do?
(A Customer Explains)

"DrFirst collects all of a patient's medication information from a lot of different pharmacies. That helps us to have a more complete medication history, so if a patient forgets to tell us something or doesn't remember the doses or anything like that, we have that information actually integrated into our EMR. When our pharmacists are doing their medication reconciliation, we have a complete picture of our patients' medication records." —CIO

Bottom Line

Customers report high satisfaction with the vendor's timely support and with MedHx's ease of use and ability to increase a medication history's accessibility and accuracy. Some users mention issues with EMR integration or report that MedHx is not tied to all pharmacies and may therefore not always provide a complete medication history (vendor does not promise a fully accurate list). Many respondents cite their concurrent use of other DrFirst products, specifically the ePrescription products.
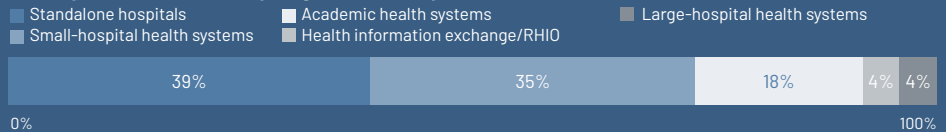
Key Competitors (as reported by DrFirst)

Surescripts (a portion of MedHx data comes from the Surescripts medication history feed, which Surescripts also markets directly)
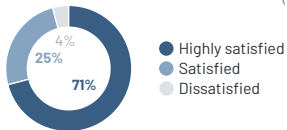
Number of Customers Interviewed by KLAS

28 individuals from 23 unique organizations (out of 148 unique organizations provided to KLAS)
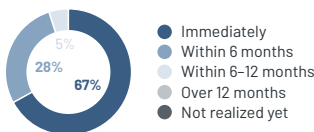
Survey Respondents—by Organization Type (n=18)

- Standalone hospitals
- Small-hospital health systems
- Academic health systems
- Health information exchange/RHIO
- Large-hospital health systems

39%	35%	18%	4%	4%

0%　　　　　　　　　　　　　　　　　　　　　　　　　100%

DrFirst Customer Experience: An Initial Look

Overall Customer Satisfaction (n=28)

- Highly satisfied — 71%
- Satisfied — 25%
- Dissatisfied — 4%

Time to See Outcomes (n=18)

- Immediately — 67%
- Within 6 months — 28%
- Within 6–12 months — 5%
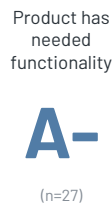- Over 12 months
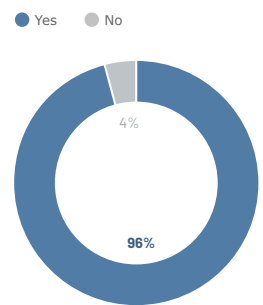- Not realized yet

Outcomes Expected by Customers

- ✓ Achieved
- ✗ Not achieved
- ⧗ Pending
- ★ Unexpected outcome

More accurate and complete medication history ✓

Quick and easy-to-access medication history ✓

Reduced staff time for patient visits ✓

DrFirst—Key Performance Indicators (1–9 scale)

Supports integration goals	Product has needed functionality	Executive involvement	Likely to recommend
A	**A-**	**B+**	**A**
(n=27)	(n=27)	(n=21)	(n=28)

Grading scale

A+ = 8.55–9.0	B+ = 7.65–7.91	C+ = 6.75–7.01	D+ = 5.85–6.11	F = <5.22
A = 8.19–8.54	B = 7.29–7.64	C = 6.39–6.74	D = 5.49–5.84	
A- = 7.92–8.18	B- = 7.02–7.28	C- = 6.12–6.38	D- = 5.22–5.48	

Would you buy again? (n=28)

- Yes — 96%
- No — 4%

Adoption of Key Functionality

Percentage of interviewed customers using functionality

Local pharmacy medication history (DrFirst works with local pharmacies to add local patient data into the medication history feed)
(n=21) 95%

Medication history integrated into EMR (details prepopulated when prescriptions added to charts)
(n=22) 82%

Utilization reports (consulting with DrFirst)
(n=22) 82%

Web version of MedHx application to support EMR medication reconciliation workflows
(n=21) 57%

0%　　　　　　　　　　　　　　　　　　　　　　　100%

Strengths

> "

Generally easy-to-use product ▶ ▶ ▶ *"MedHx is a wonderful tool that provides hit-rate reports and helps us meet the clinical and regulatory components of having the best possible medication histories. The solution is easy for end users to use, and it provides a tool that gives us easy access to medication histories. I would recommend it." —VP*

Seamless workflow integration ▶ ▶ ▶ *"One of the markers of a good vendor is that the doctors don't even know they are using the system. If KLAS were to ask our physicians what they know about MedHx, most of them would say they don't know anything, and yet they are using it continuously. That is just how seamless it is; the doctors don't even think about it." —Director*

Support is usually timely ▶ ▶ ▶ *"We needed some additional functionality, and within a few hours, DrFirst was on the phone with us and provided some considerable additional functionality at no charge and with no delay. Of all the vendors I have worked with, DrFirst stands out as being particularly interested in actually getting things done for us." —CMIO*

Opportunities

> "

Some users note MedHx isn't tied to all pharmacies and therefore doesn't always provide a complete medication history ▶ ▶ ▶ *"If we just rely on MedHx's data, our medication list will not be completely accurate, though the vendor did not promise a completely accurate list. That means the vendor isn't fully delivering on what people think the vendor should deliver. We can't assume all data is there because not all pharmacies are tied to the network." —Director*

Occasional issues with support processes and the timeliness of lower-level support teams ▶ ▶ ▶ *"If the [integration] issue is critical, the vendor very quickly responds. But odd, intermittent issues seem to take a long time. The issues go through too many hands. I understand the logic, but there are difficult pieces. I reached out to my salesperson directly, and they brought in upper-level service people, so things have been getting resolved." —Analyst/coordinator*

Some users experience inconsistent flow of patient data into the EMR—sometimes due to EMR integration/inaccurate EMR patient demographics ▶ ▶ ▶ *"There are some integration issues between MedHx and our EMR. I don't think the issues are on DrFirst's side. I think the issues are more on our EMR vendor's side, but I would say that DrFirst's follow-up on those issues has been a little slow." —Manager*

KLAS' Points to Ponder

The Positives: MedHx is designed to collect patients' most current medication information from medication claims and local pharmacies, improving the accuracy of patients' medication history files. Using an AI solution to fill in missing data from sigs (incoming prescription information) supports accurate dosing alerts and the prevention of adverse drug events. Improving a clinician's ability to review a patient's medication history during transitions of care ultimately improves patient care and safety.

Mike Davis
HCIT market research and analysis expert with 40+ years of experience

Organizations should consider the following:

The Solution's Long-Term Viability in Healthcare

Many organizations need to solidify their ability to capture complete medication histories. MedHx improves the accuracy and completeness of these histories. DrFirst's products are designed to capture a bigger universe of patient medication transactions beyond medication claims and pharmacy benefit manager transactions to include private retail pharmacies and cash transactions. The ability to use AI to generate missing sigs and reconcile National Drug Codes (NDCs) from different drug databases is a clear differentiator. If DrFirst can generate a moderate number of Surescripts replacements, their likelihood of long-term success will be stronger.

Impacts and Trade-Offs of the Underlying Technology

DrFirst uses a private cloud architecture to support ePrescriptions, medication history, pricing transparency, and medication adherence functions. The database and application development environments are routinely used in the industry. Mobile applications can be supported by web browsers or DrFirst's iPrescribe application. Security and encryption functions conform to industry standards. EMR integration, which is a critical necessity for success in the market, is occasionally a challenge for MedHx. Continually improving workflow efficiency in the medication history process will increase clinician adoption rates.

Medication Management Considerations

The medication management environment workflows need to be evaluated frequently to ensure patient safety guidelines and medication compliance regulations are being followed. Any medication history collected to determine what medication patients are taking or have recently taken must interact with clinical decision support systems to determine potential medication conflicts that could result in adverse drug events. The medication history must also support medication profile updates related to transitions of patient care. All these processes are intricately connected, so associated applications in this environment must be highly interoperable.

Relationships with Private Retail Pharmacies

Private retail pharmacies are decreasing across the nation. Large chains such as Costco, CVS, Walgreens, and Walmart have been winning market share or acquiring it. Healthcare organizations should evaluate the market share of private retail pharmacies in their areas. Creating relationships with these pharmacies and sharing medication and pricing information may help healthcare organizations establish care delivery services in these pharmacies for their patient populations. This approach could be a competitive edge with the entry of large chain retail pharmacies into the primary care markets.

DrFirst: Company Profile at a Glance

Founder
James F. Chen

Year founded
2000

Headquarters
Rockville, MD

Number of facilities (not unique customer organizations):
17,652 sites (live and under contract)
- 1,496 hospital sites using MedHx (including MEDITECH clients that did not add SmartSig and those using the standalone MedHx companion)
- 16,156 ambulatory sites and physician practices

Number of employees
400+

Revenue model
Hospitals and health systems pay on a per-bed basis for unlimited users

Target customer
Hospitals, health systems, and IDNs in the US and Canada

Healthcare Executive Interview

G. Cameron Deemer, President

How would your customers describe your solution?
When most clinicians attempt to pull medication history for a patient, they either find nothing or have to sift through a mess of data. The experience is far from the modern process we encounter when shopping on Amazon or doing our taxes with TurboTax, where data is automatically prepopulated. MedHx and the embedded SmartSig AI provide clinicians with high-quality medication history data that appears within the EMR when searched for, helping them avoid manual entry and errors and saving them valuable time.

Is your solution integrated into a core system (such as the EMR) or is it standalone?
MedHx can be integrated, standalone, or both. We offer integration with major EMRs, including Epic, Cerner, Allscripts, and MEDITECH. We also provide the web-based MedHx Companion, allowing users to query a patient's medication history outside their EMR. The medication history is deduplicated, organized, and sortable. We then normalize the data through our AI engine to provide clinicians with usable and actionable medication histories. Along with medication history for individual patients, we can also offer it for populations and integrate it into medication adherence scores. We ensure that the product is integrated into the existing Epic, Cerner, and Allscripts workflows. For Epic, we use the EMR's native medication history interface and provide clean, consistent data within standard Epic workflows. For Cerner and Allscripts, we created a new in-workflow tab that allows more flexibility in controlling the user interface.

What are DrFirst's biggest differentiators?
We provide the broadest source of medication history data available in the industry, including from local pharmacies, and allow faster, more accurate medication reconciliation. The clinically actionable data reduces the risk of medication errors and adverse drug events due to missing and poor-quality prescription fill data and keyboard errors. Also, SmartSig—a patented AI technology used within MedHx—translates, infers, and normalizes prescription instructions into structured and local terminology that can be used by the EMR. Whether integrated within an EMR workflow or used as a web-based solution, MedHx improves medication reconciliation and adherence scores.

Solution Technical Specifications (provided by DrFirst)

Cloud environment
Private cloud for production/DR environments. Uses Equinix and Expedient co-location data centers for physical space, network, and power. Supports hardware, OS, and application services.

Development platform
Java

Database environment
Oracle and MongoDB

Mobile application environment
Solution can be accessed via mobile browser in a standalone fashion or launched from DrFirst's mobile ePrescribing application

Security platform
DrFirst adheres to NIST 800-53 and self-assesses against ISO 27002

Confidentiality
DrFirst signs BAAs with all customers and complies with all HIPAA regulations/guidelines

Data encryption
Encryption managed via HTTPS on F5 load balancers. Requests/responses transmitted through Surescripts encrypted via TLS 1.2 HTTPS with strong cipher suite for Java 1.8. Production data stored only in databases and encrypted via AES-256 with FIPS 140-2 compliant methods and Transparent Data Encryption (TDE)/Keystore (Wallet).

Integration approach
Solution integrated via HL7 2.3, HL7 2.4, NCPDP industry standards, or DrFirst's integration engine

HITRUST certification
No, in process

Report Information

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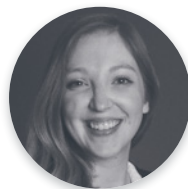
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Improving the world's healthcare through collaboration, insights, and transparency.

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