



Medcurio Whitepaper

Seven Tips for Integrating EHR Data into Your CRM

EXECUTIVE SUMMARY

Customer relationship management (CRM) is central to every business competing on customer experience because of how a real-time 360° view of customers can translate into trusted, personal, and connected interactions.

We are now seeing this transition in healthcare. CRMs are rapidly becoming the essential complement to EHRs. Together, they make it possible to consistently deliver highly personalized experiences enriched by an unprecedented volume of data that is unique to healthcare and that is required for a 360° view of the patient.

The opportunities for expanding the reach of episodic care and offering a diversity of support services are open-ended when CRMs can combine real-time EHR data with historical patient experience data. Everything from scheduling clinic visits to managing care gaps to supporting a patient and family through a care plan journey.

Accessing EHR data in real-time, though, comes with a host of data integration pitfalls that can delay, limit, or completely derail CRM service opportunities.

If you are involved in implementing and integrating your CRM and EHR, here are 7 tips to help mitigate data integration pitfalls to get the most value from your CRM.

According to [Definitive Healthcare's Hospitals & IDNs database](#), a total of 5,626 hospitals reported using a healthcare CRM within their facility



1. The Importance of a Real-Time CRM-EHR Connection

CRMs make it possible to bring together the right EHR data with all previously documented experience information, organizing it around the patient instead of around encounters, and making it easy for anyone interacting with the patient to pick up where the last person left off.

But to effectively provide a real-time 360° view, CRMs need real-time access to the right EHR data at each point of contact with a patient. When CRM reps - such as agents, managers, and nurses - do not have all of the data they need in the moment, they must “hack” their way to personalization. They are forced to ask the patient for information that is already in the EHR, ask the patient to wait as they look for information, or call the patient back once they found the needed data.

Every second of inefficiency, every additional set of clicks, every moment re-asking the same question adds up - leading to more costly services, worse outcomes, and less satisfying experiences.

Don't let data integration challenges force your CRM agents to spend more time searching for data and less time learning about and serving patient needs that directly impact the patient experience.

2. What to Know about Real-Time EHR Data Access Methods

CRMs can access healthcare data for real-time use through: HL7, EHR Vendor APIs, FHIR APIs, and Custom APIs. Each method varies in the EHR data that can be accessed, the technical support required to get into production, and the maintenance required to keep things working.

HL7® is the tried-and-true way to communicate data and uses an event-driven framework. It has been around for decades, and most health systems can “talk” HL7; albeit, using their customized version based on how they chose to implement standards. Of course, HL7 was created before the internet was ubiquitous, so it comes with a lot of baggage.

- You get data when they become available (push) versus when you need them (pull) and are at the mercy of queuing errors that happen about 20% of the time.
- You cannot always get the data you want (gaps) unless you customize, which is costly, requires IT staff time, and adds to IT management burden.
- You often get more data than you need (bloat) meaning more processing.
- You must store all the data you get.

APIs: Healthcare is moving to APIs, a software intermediary that allows two applications to talk to each other. A modern communication approach designed for the internet, APIs power most of modern software development and allow you to request data on-demand. In healthcare, there are three options.

EHR Vendor APIs: If you want to use APIs, EHR Vendor APIs is the place to start. Most EHR vendors provide a suite of hundreds of pre-built APIs that are ready for use. EHR Vendor APIs are built and organized based on the vendor's view of what data are useful. It is unlikely that the available APIs will be sufficient to fulfill all of your real-time data needs. If an API does not adequately address your needs, you can ask the EHR vendor to modify it. The downside is that changes will cost you in time or money.

FHIR® APIs: If you cannot get the real-time data you need from EHR Vendor APIs, the next option is FHIR. FHIR has [117 non-foundational resources](#), two of which are categorized as [normative](#) and “locked down” in terms of development.

FHIR is a hot topic, but the excitement is still ahead of what is available. Like EHR Vendor APIs, you will have gaps between the data you need and what data can be accessed via FHIR. For example, FHIR provides access to ~3,000 patient-level data fields of the ~85K active fields in a popular EHR. If FHIR does not have the data you need, you can use the FHIR extension model, which while not often

used today, is expected to grow along with FHIR adoption.

Custom APIs: When EHR Vendor and FHIR APIs do not meet all your real-time data needs, the next option is Custom APIs. They are the most flexible option but often lack scalability and the sophistication required for complex workflows. The skills required for this type of coding are not common in healthcare; a few systems have a team, some systems have a few staff, and many systems have no one. If you are lucky enough to have this type of technical talent, then Custom APIs will get you exactly what you want. The problem, of course, is getting the time and attention of that technical talent. And because Custom APIs are expensive to build and modify, many IT departments limit their use because it adds to their maintenance burden.

Make sure you understand the pros and cons for each data access method, including the cost and time required to get started and to maintain what you have.

3. Be Prepared for Data Gaps

In the world of healthcare data interoperability, the problem of data gaps is rarely mentioned. But, when you are on the ground trying to get EHR data in real-time with EHR Vendor and FHIR APIs, it turns out that data gaps are the norm.

A data gap is the difference between the data you need in real-time to deliver a personal and

relevant patient experience versus the data that your CRM can get on time. Data gaps can be as small as one field missing from an available API or not having an API available at all for the data you want.

Example: When using your CRM to reach out to patients for any type of engagement, you will want to use the patient's preferred contact method (e.g., phone, email, text). This is stored in the EHR but there are no APIs to access *preferred contact method*. This can lead to patient frustration when they are not contacted in their preferred way.

Example: When using your CRM to help manage care gaps (e.g., uncontrolled hypertension, serum lipids, A1c) for population health management, you must create and keep current the list of eligible patients who need to be contacted. There are no ready-made APIs to identify patients with one or more of these care gaps. The CRM agent will have to rely on easily outdated reports to identify eligible patients.

The data gap problem will only grow as you expand support services using your CRM. The general rule of thumb is that the more EHR data you need for a CRM service, the more likely it is that you will have data gaps. And whether it is one field or 40 fields, the missing data can make all the difference in using a CRM to deliver on patient experience.

Make sure you understand what combination of data access options work best to get the data you need. Be sure to work with CRM agents to develop workarounds for data gaps.

4. Be Aware of Keying Issues

Like data gaps, keying is another one of those topics that you do not hear much about. But, if you use EHR Vendor or FHIR APIs for anything beyond simple patient lookups, you will quickly learn how keying issues get in the way of accessing EHR data in the way you need them.

APIs work by taking specific inputs and giving you specific and predictable outputs. Consider the Google Maps API that requires an address as an input. What is returned is the address's latitude / longitude coordinates.

An API will give you an error if the input is not precisely what is expected. In the Google Maps example, if you tried using your name instead of an address as an input, it will not work. The Google Maps API is designed to take the input as an address and then translate that into geographic coordinates. The API only works with very specific input data.

The specific input data are also known as keys, and each EHR Vendor API and FHIR API has a specific key it expects to return the data it is designed to access. If you do not have the required key, you will need to find another way to get those data to be able to use the pre-existing API.

Consider a healthcare specific scenario. CRMs are used to manage billing issues with patients and the patient's prior balance is information a CRM agent might want to know as they talk to a patient about an outstanding bill. An existing EHR Vendor API for *patient prior balance* could be used to access the information, but the API is

keyed by guarantor ID. If you do not have guarantor ID, then you cannot use this EHR Vendor API to get the prior balance information you need.

You could build a Custom API to retrieve guarantor ID and feed it into the existing Patient Prior Balance API (requiring API chaining and orchestration described in tip #6). Alternatively, you could rely on the CRM agent to type the guarantor ID into the CRM to trigger the *patient prior balance* API. However, it is unlikely that either the CRM agent or the patient will know the guarantor ID.

Make sure you understand how the EHR Vendor and FHIR APIs that you plan to use are keyed. You may need to find other ways to access the data you need to feed into these pre-built APIs.

5. The Need for More Data is the Norm

You might think you are all set once you have implemented APIs to get the data you need for your CRM support services. But you can be certain that as agents use the CRM, they will quickly learn how to improve the support service. Feedback from agents, patients, and supervisors translate into changes to, or more often, expansion of the EHR data they need to improve patient engagement

That means you need to modify your existing APIs or put new APIs into production. No matter which type of APIs you are using - EHR Vendor, FHIR, or Custom - you must get back in line and

wait your turn to update and test the changes you want to make. You also must go back through the path to production, which can add 4-6 weeks to your schedule.

And CRM users and patients are forced to wait for the improvements.

Make sure to account for the time and cost needed for multiple iterations to your APIs as the CRM users and business leads evolve the requirements for each support service using the CRM.

6. Multiple Data Access Methods Require Orchestration

No matter how you plan to use your CRM, it is very likely that you will be using two or more methods to access EHR data in real time.

Whether to address issues such as data gaps and keying issues or to include event-driven HL7 triggers into your data flow, the reality is that for the foreseeable future, you will need to use multiple data access methods to achieve your objectives.

The benefit is that you can leverage your technical know-how and investments into current data access methods. But the result is a patchwork of HL7, EHR Vendor APIs, FHIR APIs, and Custom APIs that need to be orchestrated. You will need an orchestration service or technology (e.g., enterprise service bus, interface engine technology, point-to-point) to put the data flow together in a coherent manner

that gets to the data you ultimately want for the action you want to take.

When planning your CRM-EHR integration projects, make sure you understand how many data access methods will be required and how you will orchestrate them. Be aware that the more methods and technologies you use, the more complicated and fragile your orchestration will be.

When developing the support plan for your CRM-EHR integration, make sure to include time and costs required to fix malfunctions due to inevitable data changes.

7. Data Changes Will Happen

It is well known that EHR data can change during electronic health record upgrades. Changes like physical location changes of data fields or changes in data attributes.

The good news is that changes to EHR data are only a problem if the changes are to data that are called by an API that you are using with your CRM. When this does happen, though, the API is likely to malfunction. And you will likely first learn about the malfunction when your CRM agents tell you something is not working.

Managing data changes requires technical staff to confirm that the malfunction was due to a data change and then to determine what the data changes were. Once known, the API(s) that are affected need to be updated, tested, and put back into production.

The same time and cost challenges occur here as in other scenarios, including a 4 to 6-week delay to go back through the path to production.

Why Medcurio

Integrating EHR data with your CRM can require a considerable amount of planning, resources, time, and know-how. We at [Medcurio](#) lived with these challenges during our decades working in health systems and decided to change how things can be done.

We invented the [VennU platform](#), a highly secure and easy way of creating and managing APIs to get secure access to any EHR data you need. Making it easy means that you do not need scarce technical talent, do not need to wait in line, and do not need to continually go through a time-demanding path-to-production. VennU eliminates 85% of the cost, time, and effort required to use EHR data in real-time.

We understand all the ins and outs of accessing and orchestrating EHR data in real time and have designed VennU to solve these problems for all data integration needs. Used alone or in combination with HL7, EHR Vendor, FHIR or Custom APIs, VennU makes it easy and secure for CRMs, like Salesforce™, to access all the data required in the moment to address any support service need.

Medcurio makes it possible to completely align the vision that leaders have in transforming care with CRMs with the most effective ways to use their data in real-time at a fraction of today's cost.

Choose Medcurio VennU to eliminate the CRM-EHR data integration pitfalls.

[CONTACT US TODAY](#)



300 Frank H Ogawa Plaza, Suite 248
Oakland, CA 94612
Telephone: 510-210-9750
info@medcurio.com
medcurio.com