Seamless Data Exchange: The Case for Interoperable and Extensible EHR Platforms

PointClickCare®

Executive Summary

Healthcare providers have long sought a richer, more complete view of a patient's history so they can make well-informed decisions about where, when, and how best to treat them. The desire to serve patients holistically and access patient information in real time lies at the heart of industry and legislative efforts to simplify data sharing while respecting patient privacy. Extensible electronic health record (EHR) platforms seek to balance the two by making data exchange between EHRs and other healthcare technology applications and platforms seamless and secure through interoperable systems so relevant data flows effortlessly between patients, providers, payers, and even devices.

That type of seamless data exchange offers immense potential for person-centered care, workflow efficiency, lower costs, and better care coordination. It is of particular importance to skilled nursing facilities (SNFs) and senior living communities, whose residents often have complex healthcare needs requiring coordination across the continuum of care, from hospitals and ambulatory care clinics to pharmacies and laboratories. Robust patient data that can be shared effortlessly with network partners streamlines care transitions between SNFs and other healthcare settings, and it enables staff to deliver more personalized care to residents. Having the right EHR and applications focused on senior care also leads to better staff and resident experiences — and a healthier financial position.

In this white paper, we'll look at the current state of electronic data exchange within the healthcare industry, with attention to challenges, solutions, and the future. We'll also discuss the role third-party integrations play in giving SNFs, senior living communities, and other providers and payers access to the tools and software they need to leverage their EHRs in ways that enable them to address their specific needs and requirements.

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Interoperability: Where the Healthcare Industry Stands Today

Interoperability is the cornerstone of effective data exchange. The Healthcare Information and Management Systems Society (HIMMS) defines interoperability as "the ability of different systems, devices, and applications to access, exchange, integrate, and cooperatively use data in a coordinated manner."[1] Think about the impact interoperability could have given the volume of information gathered from each site of care throughout a patient's lifetime. The possibilities extend beyond the individual to population health data that informs large-scale efforts to solve medical challenges.

Though it holds immense promise, adoption of healthcare interoperability is varied. Until fairly recently, patient records were stored on shelves full of color-coded file folders, with data sharing limited to email and fax. Even as technology and standards have advanced, many senior care providers do not have the means (financial, expertise, or bandwidth) to invest in the implementation of an interoperable EHR platform. Although adoption has been sluggish in some areas, regulatory requirements, value-based care (VBC) initiatives, and federal funding are driving significant progress.

Determined to improve healthcare and encouraged by legislation such as the 21st Century Cures Act,[2] two agencies are at the forefront: the Centers for Medicare and Medicaid Services (CMS) and the Office of the National Coordinator of Health Information Technology (ONC). The growing adoption of interoperable systems is largely driven by the CMS mandate requiring providers to implement an ONC-certified EHR to participate in VBC initiatives. Participation in VBC initiatives has been low among SNFs and senior living communities until recently. With PointClickCare's ONC certification, approximately 80% of the SNF market now has access to an interoperable EHR platform, a big step toward gaining greater adoption of VBC in senior care.

The ONC aims to address the challenge of secure data exchange by facilitating the retrieval of real-time, accurate clinical data to optimize individual and population health.[3] Their efforts are centered on establishing standards for data terminology, content, transport, privacy, and security. These standards are grounded in four levels of interoperability that, taken together, will support secure, seamless, and timely data flow:

Foundational
Establishes interconnectivity standards

Structural
Defines data exchange format, syntax, and organization

Semantic
Establishes common models and data codification for shared understanding

Organizational
Enables shared consent, trust, and integrated end-user processes and workflows

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The State of Interoperability Among Hospitals[4]

There is still much to be done to make interoperability the de facto state of healthcare IT, but a quick look at the progress hospitals have made to date is reassuring. In the past decade-plus, hospitals have increased their use of EHRs by 68%, with 96% using a certified EHR since 2014. They are also increasingly investing in all aspects of robust data exchange to facilitate care collaboration.[5]

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hospitals upgraded their EHR to the most recent certified EHR technology

This improvement brings information from ambulatory care and laboratories for a more comprehensive view of a patient's history, contributing to better outcomes

62%
of hospitals electronically send, receive, find, and integrate summary of care records and query health information, up from 41% in 2017

Enabling hosptials to pull data from SNFs to view a patient's chronic condition can help reduce the rate of readmission

71%
of hospitals use electronic health information from outside sources at the point of care[1]

50%
of small and rural hospitals have information electronically available at the point of care

75%
of hospitals participate in health information exchanges (HIEs); 35% also participate in national networks

The ability to access a patient's medial history from across the care continuum enables providers to make better informed decisions, and often leads to better outcomes

Skilled nursing facilities using ONC certified EHRs like PointClickCare have out of the box interoperability with networks that include hospitals and health information exchanges. Adoption in senior living environments remains slow-paced due to the private pay nature of the market, which offers limited incentives for coordinated care. Nonetheless, this environment is expected to evolve as resident acuity rises and regulators focus on senior living centers to provide quality and cost-efficient care for our aging population. Solutions such as total wellness coordination services and integrating ambient assisted living technologies present opportunities to enhance interoperability in these settings.

The Value of Extensible Platforms

The potential for integration and interoperability is a hallmark of extensible EHR platforms. Interoperability enables the ability to exchange key information such as CCDs. When more is needed, they provide tools and application programming interfaces (APIs) to facilitate. Extensible EHR platforms provide tools and APIs to facilitate integration with third-party applications. This offers countless possibilities, from adding features and functionalities to addressing unique administrative needs or specific clinical workflows. The plug-and-play features of various modules and software components enable health systems to select specific functionalities that suit their needs without big overhauls. Extensible platforms provide a polished user experience, balancing customization with manageable support options, making it easy to achieve flexibility and additional functionality. PointClickCare's EHR, for example, provides a comprehensive set of APIs that allow customers to integrate third-party solutions via Marketplace to extend the functionality of PointClickCare's EHR.

Extensibility

The ability to extend systems to include additional data models and embedded workflows or functionality delivered by third parties.

Extensible Platforms in Healthcare

Extensible EHR platforms may be the best choice for an industry overseen, in part, by the ONC. Established in 2004, the ONC is tasked with coordinating efforts to implement advanced technologies in service of the seamless exchange of health information.

Initially, Health Level 7 (HL7®), offered developers a common standard for the exchange of clinical information between systems within a healthcare organization, even if applications, devices, equipment, etc., "spoke" differently.[6] That initial standard has since evolved to include the HL7 Fast Healthcare Interoperability Resource (FHIR®), a forward-looking standard for APIs.[7] FHIR offers a contemporary, flexible, and interoperable framework for health data exchange.

HL7® FHIR®

A set of standards that enable the secure exchange of health data among providers, patients, and other stakeholders in the care continuum

The rules by which people can access data stored in an EHR are still precisely structured and closely governed to ensure that patient data is protected in a highly regulated environment, and with patient consent, shared in ways that promote efficient, well-informed care. Software-defined healthcare APIs enable data to be exchanged easily between systems, applications, devices, and platforms without them having to understand each other's framework or access information that is off-limits. Most healthcare APIs also use state-of-the-art authentication and authorization security protocols to further protect patient data from human error or deliberate malfeasance.

The PointClickCare extensible platform is architected to expose, through FHIR and proprietary APIs, certain aspects of the EHR to developers and customers for integration, interoperability, and customization. While the platform does not allow customers to define the extensibility of the data model, third-party applications can be integrated, enabling users to utilize tools and ways of doing work that fit their processes.

Leveraging an Extensible EHR at Scale

What would the world look like if extensible EHR platforms were leveraged at scale? True interoperability and the seamless data exchange it enables could have myriad benefits, including:

- **Improved continuity of care** as data becomes easy for providers and patients to share

- **Better patient care** and proactive care management through personalized treatments and real-time monitoring

- **Rapid innovation** as developers and healthcare experts collaborate on new tools and apps

- **Patient empowerment** with record access that enables them to make well-informed decisions about their care

- **Faster advancements** as researchers access rich data sources and collaborate on treatments and public health initiatives

- **Transparent data handling** practices that lead to stronger regulatory compliance and better accountability

- **Better business processes** as time-consuming manual tasks are eliminated and reporting requirements are automated

- **Lower operational costs** as reliance on proprietary systems wanes and vendor competition accelerates

- **Ability to leverage data** exchange standards reduces level of investment required by third parties because they're able to build a solution that conforms to those standards and integrates with multiple platforms

The data exchange enabled by extensible EHRs also makes VBC possible. Championed by payers, providers, and government agencies such as CMS, VBC focuses on the quality of care, not the quantity of services. The feasibility of VBC rests on the ability of those encountering patients to share and gain timely access to complete health records where and when they need them. **Access to a lifetime of health data - and real-time data when it matters most - closes information gaps, eliminiates duplication of services, increases proactive interventions, improves the quality and timeliness of diagnoses and treatment, and more.**

What to Consider When Evaluating an EHR

Extensibility

To what extent can it be integrated with other systems to suit my needs, processes, and workflows?

Interoperability

How will planned or existing systems be enhanced with greater access to patient data?

Scalability

Will the platform continue to accommodate my needs as the organization grows and evolves?

Availability

What is the uptime promise for service and APIs?

Performance

Will it meet service-level agreements (SLAs) for speed and responsiveness?

Security

What protocols are in place to secure and recover patient, partner, and organization data?

Privacy

Does the platform meet all electronic protected health information (ePHI), personally identifiable information (PII), and data privacy regulations?

ONC Certification

Is the platform certified by the ONC, ensuring it meets the rigorous standards required for organizations focused on health IT capabilities?

Why Aren't Interoperability and Extensibility Features More Widely Adopted?

With seamless health data exchange, SNFs, senior living communities, and other providers can improve care coordination and resident outcomes. Healthcare professionals can make fast, well-informed decisions about the most appropriate treatment. Healthcare app developers can create new software and systems that fix vexing challenges.

While many view interoperability and extensibility as the way forward, concerns linger as the healthcare industry grapples with legacy technologies, disparate systems, misaligned workflows, conflicting protocols, and stringent data privacy laws. Two often mentioned concerns are:

Security

Data security and privacy concerns top the list for many industries, healthcare included. To implement and maintain a robust security posture that's not only airtight but compliant — especially in an industry as personal and highly regulated as healthcare — it's essential to utilize extensible platforms that adhere to established standards and incorporate robust privacy and security protocols. These measures are critical for achieving HITRUST certification and HIPAA compliance.

Integration Complexity

When an organization has proprietary tools and systems in place, or when its IT infrastructure is already complex, lack of interoperability can hinder product choice, onboarding efficiency, or desired functionality. Technical expertise is required for selection, configuration, installation, and ongoing management — a cost that can be high if technically proficient staff has to be outsourced. Furthermore, a tangle of integrations can be expensive to maintain in a system not holistically designed from the outset.

ONC "information blocking" rules impose penalties for preventing or discouraging the access, exchange, and use of EHI.[8,9] These rules pertain to a much broader sweep of EHI, not just the limited subset of data classes and elements that had been required by the U.S. Core Data for Interoperability (USCDI).[10]

Organizations — especially those operating across state lines — may prefer to err on the side of caution. This is where a certified EHR technology (CEHRT) vendor comes in, offering the tools that make it easier to comply with various regulations. This approach reduces the risk of running afoul of HIPAA laws and supports the march toward health data exchange.

The Solution: An Interoperable, Extensible EHR Platform and the PointClickCare Marketplace

Greater interoperability gives providers across the spectrum of care a more complete view of patient health. As the leading EHR platform designed for long-term and post-acute care, **PointClickCare is a driving force of interoperability,** making it an attractive partner for app developers with innovative ideas for the healthcare industry. Provider organizations can be assured that the platform will enable them to adapt as the market evolves by facilitating third-party integration.

PointClickCare Marketplace brings together the largest ecosystem of partner solutions in senior care, which makes optimizing an existing technology investment efficient and scalable. Marketplace opens the door to cost-effective solutions that improve staff satisfaction, reduce risk, and eliminate inefficiencies so SNFs and senior living communities can spend more time focused on resident care.

With more than 400 Marketplace partners across 20+ categories, EHR-integrated third-party solutions are easy to find. Integration categories include devices, claims, resident and family engagement solutions, and more. All partners have been thoroughly assessed by PointClickCare to ensure they integrate seamlessly with the PointClickCare platform.

Marketplace manages the heavy lifting of integration upkeep to limit the maintenance required by provider organizations.

400+
Marketplace Partners

20+
Categories
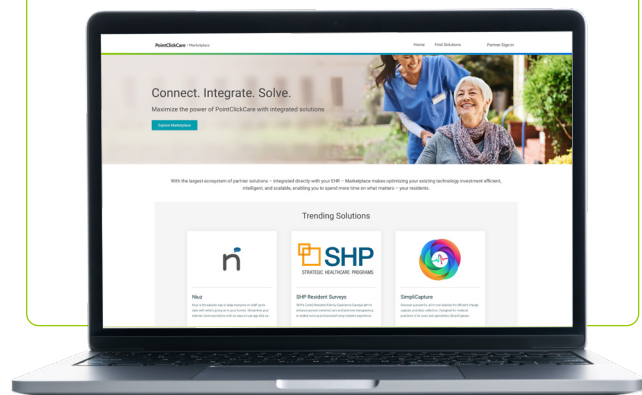
Parker Health Group, Inc.

Parker is a nonprofit organization offering inclusive aging services, assisted living, and long-term care residences to seniors in New Jersey.

Challenge

Parker staff had to manually enter data from biometric equipment into its EHR, a time-consuming process that also came with the risk of late entries, transcription errors, lost documentation, and repeat work.

Solution

Parker used Marketplace to integrate CareConnection vitals monitors into its SNF and long-term care community workflows.

Results

62%
reduction in the time it takes to chart resident vital signs

96%
faster alerts to vitals outside of client-determined thresholds

Automated entry for greater accuracy and peace of mind

Real-time data for remote monitoring and diagnosis by off-site physicians and infectious disease specialists

Immediate access to vital signs for fast, data-driven decisions

12
Total Number of Integrations

Using Marketplace to identify vendors and partners whose products integrate with their EHR solutions, Parker optimizes their technology and reclaims valuable time for resident care community workflows.

" Marketplace aids us in so many ways. First, it helps us find partners without wasting time in the process. Second, it allows us to quickly integrate without manual implementation — activation takes us on average two days! Finally, I don't have to worry about maintenance and updates when it comes to maintaining the integration.

Carol Garcia, Director of IT Services, Parker Health Group

EmpRes Healthcare Management

EmpRes is a healthcare management organization operated by Evergreen Healthcare Group offering assisted living, skilled nursing, independent living, and rehabilitation care in 58 locations.

Challenge

EmpRes needed a way to enhance its communications between staff, residents, and family members.

Solution

EmpRes utilized Marketplace to integrate a family communication tool across 12 of its communities.

Results

55	**99%**	**$30,000**
fewer hours spent on phone calls and progress notes per building per month	reduction in time spent on communication tasks	saved in labor costs per community over six months

" The biggest impact of integrating a communication tool with our EHR for us is the time savings. Saving money is always nice, but giving labor hours back to staff is critical, especially during the staffing crisis.

Emily Brown, Director of Communications and Social Media, EmpRes Healthcare Management

Ready To Refine Your EHR Platform Capabilities?

The healthcare industry is on the verge of a breakthrough. Patient data and insights are more accessible than ever, and legislation continues to nudge progress forward. With further advancements in the standards that make interoperability and extensibility possible, the technology that streamlines data exchange between hundreds of touchpoints will fall into place. Coordinated, data-driven care throughout a patient's lifetime is on the cusp of becoming reality.

PointClickCare's interoperable and extensible EHR and its Marketplace put SNFs and senior living communities at the forefront of the revolution. Interoperability and a breadth of third-party and proprietary PointClickCare solutions — all consolidated on a single platform — give you the data, tools, and insights to improve health outcomes and strengthen your financial stance for long-term success. Learn more about PointClickCare Marketplace at marketplace.pointclickcare.com.

Get Started

PointClickCare®

North America's Most Comprehensive Care Collaboration Network

Learn More

PointClickCare is a leading healthcare technology platform enabling meaningful care collaboration and real-time patient insights.

For more information, please visit www.pointclickcare.com

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