



# Open Transaction Interoperability

*Critical considerations for practices implementing PMS & clearinghouse capabilities*

## Executive Summary

- While the development of standards and accreditation has helped, proprietary technology and financial disincentives continue to create impediments to open transaction interoperability.
- While interoperable systems are common, not all practice management systems freely support connectivity. For providers evaluating systems, discerning interoperability limitations is essential.
- Flexibility in transaction interoperability allows providers to evaluate new delivery models, as retail clinics, concierge care and telemedicine become more consequential competitors.
- Given the multitude of forces influencing healthcare administration including government regulation, market pressure, vendor consolidation, and new service offerings providers will be well served to select a position that maintains a level of flexibility and does not restrict adaptability.

## Definitions

**Interoperability:** *The ability of disparate systems such as practice management software, electronic medical records, revenue cycle management services, health information exchanges (e.g. clearinghouses), pharmacies, labs, and financial institutions to transfer information in and out of their respective systems in an automated fashion using common standards (e.g. HIPAA compliant transactions or HL7). Interoperable solutions eliminate complex handoffs and optimize workflow by presenting standard application interfaces and data formats. With open interoperability, providers have broader flexibility and greater choices among rapidly evolving services and software.*

**Transactions:** *The scope of electronic healthcare transactions includes eligibility (HIPAA transaction sets 270 & 271), referrals and preauthorization (278 & 275), primary and secondary claims submission (837), claims acknowledgement and check (997, 276 & 277), and remittance advice (835), as illustrated in Figure 1. Beyond the immediate transactions, related transaction value-added services might include claims error detection and editing, performance and management reporting, as well as allied tasks such as patient statement management.*

**Figure 1: HIPAA Transaction Sets**



## ***Provider Actions to Maximize Transaction Interoperability***

In the coming months a significant number of practices will face the need to re-evaluate their healthcare information systems as well as their practice and revenue cycle management processes. Many practice management systems (PMS) currently employed by providers do not adequately support the full breadth of HIPAA transactions. To improve administrative efficiency, providers must incorporate both systems and processes that maximize technology's ability to highly automate transactions, from eligibility through payment.

Often lost within a healthcare information system review is a thorough understanding of the impact transaction interoperability decisions can make on many facets of a provider's business operation.

Interviews with providers demonstrate open and fully automated transaction interoperability:

- Facilitates accurate insurance eligibility validation at pre-registration and registration to reduce fraud, misinformation or misrepresentation
- Supports the reduction of clerical or data entry errors at the point of occurrence

- Speeds referrals and authorizations leading to reductions in lost revenue
- Expedites claims processing and claims resubmission supporting efforts to reduce accounts receivable days
- Automates claim status checking, more effectively utilizing staff and easing human resource demands
- Allows for rapid responses to denials reducing write-offs
- Improves payment reconciliation through electronic remittance advices and accelerates cash posting via electronic fund transfers
- Eases identification of payment variances and enables providers to verify payor's compliance with contract payment terms
- Allows better reporting, administrative management, and utilization of enhanced business intelligence

The scope of transaction interoperability can range from total absence of interoperability, to non-standard messaging protocols, to custom-built interfaces facilitating import and export of data, or ideally, automated data and workflow integration giving providers complete open communications.

Barriers to open transaction interoperability can come in the form of incompatible or proprietary technology interfaces or as a result of financial disincentives. Technology induced barriers hinder, limit or totally prevent interoperability.

On the other hand, financial barriers may result from unreasonable build or add-on fees to provide connectivity to an affiliated application module or a non-preferred electronic data interchange service (EDI) service vendor. Alternatively, a practice management system vendor may charge the practice an ongoing service fee to provide connectivity to a non-preferred EDI vendor.

When evaluating a new or replacement set of applications and services, providers can generally select one of two approaches to best meet their specific needs – an integrated applications and services approach from a single vendor or a best-of-breed approach utilizing multiple applications and/or service vendors.

In terms of transaction interoperability, Table 1 outlines the technical and financial barriers providers may face when utilizing either of these approaches.

**Table 1 – Integrated applications and service approach versus a best-of-breed approach**

	<b>Integrated</b>	<b>Best-of-Breed</b>
<b>Technical Barriers</b>	<ul style="list-style-type: none"> <li>• Technical barriers within the integrated system are minimized.</li> <li>• However, interoperability with outside applications or services may be absent or may take significant programming and system-build efforts. The practice may be unable to take advantage of new or more complete revenue cycle applications, or other applications designed to meet evolving programs such as pay-for-performance.</li> </ul>	<ul style="list-style-type: none"> <li>• An ala carte approach allows providers to hand select best application and service providers.</li> <li>• However, providers must closely evaluate the promised interoperability functionality to assure it meets their needs.</li> </ul>
<b>Financial Barriers</b>	<ul style="list-style-type: none"> <li>• If a provider stays within the integrated applications and service offering, costs may be reduced.</li> <li>• However, in some cases certain service fees may be higher than market norms and connection to outside applications or services may necessitate build fees or additional ongoing service fees.</li> </ul>	<ul style="list-style-type: none"> <li>• Vendors of open applications and services may require minimal programming or connectivity service fees.</li> <li>• However, the overall cost of a best-of-breed approach could be higher than an integrated approach.</li> </ul>
<b>Common Practical Issues</b>	<ul style="list-style-type: none"> <li>• The vendor agreement may contain hidden non-market fees.</li> <li>• Some functionality may be missing or the vendor may be slow to add desired functionality.</li> <li>• Because the practice is locked-in to an integrated solution, some services levels may not meet expectations</li> </ul>	<ul style="list-style-type: none"> <li>• Vendors may blame each other for interoperability failures.</li> <li>• Some functionality may be duplicative because of the use of multiple vendors.</li> <li>• Service levels may vary between vendors</li> </ul>
<b>Additional Considerations</b>	<ul style="list-style-type: none"> <li>• Integrated solution vendors will often remove financial barriers to other select applications or services if negotiated at the time of contracting.</li> <li>• Avoid contracted exclusivity or lockouts in integrated models.</li> </ul>	<ul style="list-style-type: none"> <li>• Vendors of best-of-breed solutions should include generous service levels to ensure applications and services properly co-exist and leverage intended benefits.</li> </ul>

Our research indicates providers will find the framework below to be useful as part of a readiness assessment of current software and systems or as part of a risk assessment evaluation of new applications (e.g. practice management systems, revenue cycle management programs,

related software) and services (e.g. electronic data interchange services, business process outsourcing services). Table 2 will help providers evaluate functionality and cost risks of their transaction interoperability choices as these factors warrant careful consideration.

Providers should find open transaction interoperability minimizes complexities, supports higher revenue opportunities, reduces administrative costs and provides additional secondary gains.

**Table 2 – Readiness Assessment/Risk Analysis of Transaction Interoperability**

<b>Assessment of Transaction Interoperability Impact Within Practice Management Systems and Services</b>
<b>Will the transaction interoperability functionality of our software and services be impacted by any of the following:</b>
<ul style="list-style-type: none"> <li>• Does the selected software and services provide the full set of HIPAA transactions?</li> </ul>
<ul style="list-style-type: none"> <li>• Does the selected software or service limit our transactional interoperability with value-added applications or services now or in the future?</li> </ul>
<ul style="list-style-type: none"> <li>• If the PMS vendor offers a service, will there be a financial penalty (e.g. setup or ongoing service fees) for selecting an alternative vendor’s service over the PMS vendor’s service?</li> </ul>
<ul style="list-style-type: none"> <li>• Could our transaction interoperability inappropriately increase costs in any of the following:               <ul style="list-style-type: none"> <li>○ Capital outlays or overall costs of the IT system</li> <li>○ Configuration</li> <li>○ Implementation</li> <li>○ Maintenance</li> <li>○ Consulting services</li> <li>○ Staffing expenses</li> <li>○ Training</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• Will our transaction interoperability choices facilitate or eliminate workflow restrictions?</li> </ul>
<ul style="list-style-type: none"> <li>• Do our transaction interoperability choices generally enhance, have a neutral impact or limit our practice’s administration?</li> </ul>
<ul style="list-style-type: none"> <li>• Will the future flexibility of transaction interoperability be compromised?</li> </ul>

## Why Providers' Choice is Important

For the physician, hospital, or health system, financial management has never been more pivotal. While pockets of advancement exist, operational efficiency remains elusive. If the inertia to fully adopt financial transformation persists, inefficiencies will be sustained and new consumerism models may be threatened.

The dollar value of transactions between healthcare payors and providers has been estimated upwards of \$1.3 trillion.<sup>1</sup> Yet despite extensive technology and standards development, Figure 2 shows less than 50 percent of provider/payor transactions are completed electronically. Inertia hindering adoption of interoperable electronic transactions can stem from the use of legacy systems

lacking the necessary functionality, providers not recognizing the long-term value proposition, or the fear of negative staff reactions to the implementation of new technology and process redesign.

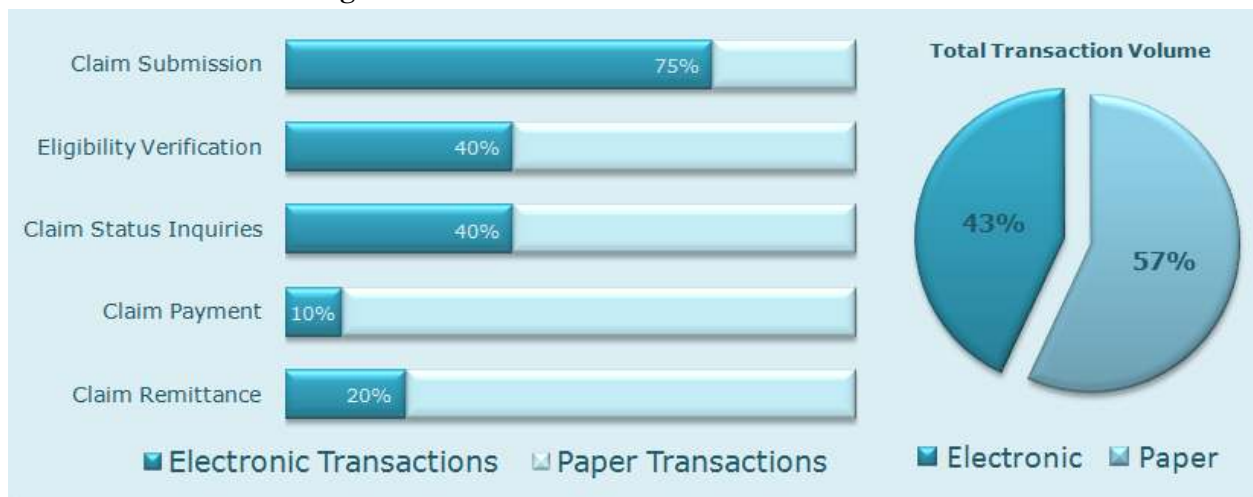
While the development of standards and accreditation has helped, proprietary technology and financial disincentives continue to create impediments. For true interoperability, next generation solutions must create an unrestricted, seamless flow that facilitates a highly automated and secure exchange of healthcare transaction information.

With providers spending \$100 billion or more managing claims and payors spending an

additional \$150 billion<sup>2</sup>, unrestricted transaction interoperability is now even more critical. A practice dependent on paper and telephone for insurance administration transactions could realize, depending on the complexity, a cost savings of 50 to 90 percent per transaction as a result of implementing electronic processing.<sup>3</sup>

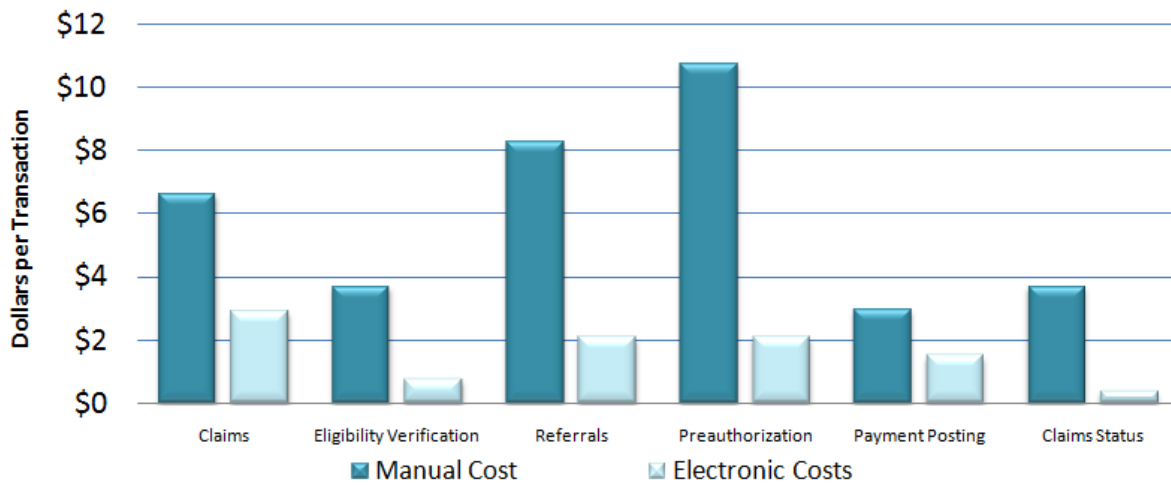
Claims and payment postings deliver significant total savings as the volume of those transactions within a practice is largest, while savings on referrals and preauthorizations on a per transaction basis is the greatest (see Figure 3). Savings from the utilization of electronic transactions can go straight to the practice's bottom line.

**Figure 2: Providers' use of Electronic Transactions**



Source: U.S. Healthcare Index ([www.ushealthcareindex.com](http://www.ushealthcareindex.com)), March 2009

**Figure 3: Manual vs. Electronic per Transaction Costs**



Source: Electronic Transaction Savings Opportunities for Physician Practices, Milliman, January 2006

Today consumer directed healthcare (CDHC) is the single greatest force impacting providers. Because of its complexity, CDHC has the potential to drive up administrative costs rather than helping to streamline the payment system. As employers have sought to reduce the growth of their healthcare expenditures, a greater responsibility and complexity has fallen on providers to properly sort out who is financially responsible for the delivery of their services.

Outgrowths of CDHC include the need for patient out-of-pocket estimates during preregistration and registration

as well as collection of patient payments at the point-of-service. This necessitates collection of more complex eligibility information as well as the development of real-time claims administration. For providers to ascertain patient responsibility and the patient's ability to pay, information from disparate sources such as the patient's payment history with the practice or hospital, plus third-party data from credit bureaus or banks must be amassed in a process as highly automated as possible. These new approaches to information flow and management are not possible without effective transaction interoperability.

As consumerism evolves, providers' business environment is changing. Flexibility in transaction interoperability will allow providers to evaluate new delivery models as competition from retail clinics, concierge care and telemedicine become more consequential.

Additionally, providers face an emerging movement toward integration of clinical and transactional data. With the adoption of electronic claim attachment documentation and the coming incorporation of ICD-10 codes, requiring increased specificity and complexity, unencumbered transaction interoperability will be a critical functionality.

### ***What is the Future of Transaction Interoperability***

The expanded adoption of consumer directed healthcare will be a driving change agent, hastening the adoption of real-

time adjudication and expanded implementation of pre-service out-of-pocket expense estimates. Also, CDHC will

drive more health plans and third-party administrators (TPAs) to adopt electronic transactions. Practices, hospitals

and other providers will increasingly rely on electronic transaction data interchange to aid them in their efforts to be more patient friendly and improve patient collections.

The burgeoning adoption of electronic health records – especially amongst smaller practices – will accelerate interoperability. To support the health information technology expansion, the 2009 American Recovery and Reinvestment Act provides stimulus for further development of standards for the use and exchange of electronic health data (\$2 billion), encourages doctors, hospitals and other providers to implement electronic health records (\$17 billion), and

strengthens privacy laws to protect health information. As the value proposition solidifies for EHR adoption, providers will examine their administrative efficiency more closely, from EHRs through interconnected practice management systems to EDI compatibility.

Banks as “infomediaries” are transforming the healthcare infrastructure.<sup>4</sup> In the effort to create a new ecosystem to improve healthcare administrative efficiency, banks are having a tremendous impact on how the boundaries of transactions are re-scoped. In order to match electronic funds transfer (EFT) transactions with payor remittances and to facilitate key payment analysis

for discovering trends and patterns, open interoperability is critical.

Given the multitude of forces influencing transaction administration, system capabilities will continue to evolve. Providers must not lock themselves into a position restricting adaptability. Providers should seek a position that facilitates an ability to incorporate emerging technology and allow for continued improvement of transaction efficiencies. With an evolving interpretation of what best facilitates these efficiencies, providers must build-in flexibility to avoid a future position where they must start over again.

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<sup>1</sup> The McKinsey Quarterly, *Overhauling the US health care payment system*, June 2007

<sup>2</sup> *ibid*

<sup>3</sup> *Electronic Transaction Savings Opportunities For Physician Practices*, Milliman Inc., January 2006

<sup>4</sup> Healthcare Financial Management, *The rise of the bank infomediary in health care*, John Casillas, August 2008



RealMed is in the vanguard of a new era in health care administration that uses the power of the internet to automate health care transactions and information exchange between providers, payers and patients.

By connecting providers, payers and patients directly online, the advantages of realtime transaction capability can be brought to bear. This capability, together with more powerful reporting and workflow enhancing features can dramatically enhance administrative efficiency and time to payment performance levels for providers.

RealMed serves a large number of professional providers ranging from one doctor practices to large academic medical centers and specialty providers on all aspects of their revenue cycle management needs.