A Collaborative Framework for Disease Diagnosis and Treatment

Since 1900, regulators of the U.S. health care system have endeavored to give care providers a systematic way to classify diseases so that care processes could be standardized and appropriate payments made. Like many of the world’s developed health care systems, the United States follows the World Health Organization’s (WHO) International Statistical Classification of Diseases and Related Health Problems (ICD) code. The ICD is used internationally to classify morbidity and mortality data for vital health statistics tracking and in the U.S. for health insurance claim reimbursement. The ICD has gone through numerous iterations since its inception.

In 2011, per the mandate of Senate Bill 628, the United States will move from the ICD-9 system to ICD-10, a much more complex scheme of classifying diseases that reflects recent advances in disease detection and treatment via biomedical informatics, genetic research and international data-sharing.

The health of populations supersedes country borders, so it is logical that knowledge about these diseases, their causes and cures, should be an international pursuit void of political boundaries and bias. ICD-10 is, in many ways, a highway for international collaboration – a common language already spoken by ten countries.

It is essential that information systems used by U.S. health plans, physicians and hospitals, ambulatory providers and allied health professionals also become ICD-10 compliant. This process, however, is not an inconsequential task; it will require careful planning and effective implementation. This paper from the Deloitte Center for Health Solutions (the “Center”), part of Deloitte & Touche USA LLP, describes the impact of the proposed move to ICD-10 on U.S. health plans and providers and discusses the need to prepare for this change now to turn regulatory compliance into strategic advantage.

Health care is a powerful global force. The collaboration of leading health systems to share knowledge and encourage innovation in the diagnosis and treatment of disease provides a solid framework for medical diplomacy. The implementation of ICD-10 is, therefore, more than an exercise in compliance; it is a key step in the continued maturation of the global health care system.

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U.S. Health Care: Evolution or Revolution?

Dramatic market changes, spiraling costs and increasing regulatory challenges are making the evolution of the U.S. health care industry feel more like a revolution. Over the past three decades, stakeholders have wrestled with managed care, HIPAA, the rise of consumerism, and the introduction of comprehensive, integrated clinical and practice management technology solutions. Today, industry visibility is at an all-time high among both the public and private sectors. Coverage for the uninsured, quality and price transparency, and the high cost of insurance premiums (and health care costs in general) are platform issues for virtually every politician and policy maker, including the 2008 Presidential candidates. The stage is set for a transformation of the U.S. health care system – a revolution that will require massive investment in new technologies and care processes.

IT Investments Essential to Keep Pace

As early as the 1930s, U.S. employers recognized that the costs of delivering health care were becoming too burdensome for individuals to shoulder alone. Health plans, or payors, emerged as the mechanism that could bear these costs. Originally, health plans were established as not-for-profit entities designed to spread the costs of health care delivery across a broad employer group that guaranteed "health care for life" for all loyal employees. Over time, however, a payor shift to for-profit organizations and the advent of managed care in the 1990s as the primary method for delivering health insurance dramatically altered the health care landscape – particularly the way that physicians and hospitals interact with patients and health insurance companies. Providers’ ability to consistently and accurately communicate transactional data and clinical information about each health care encounter, or claim, to the appropriate payor has become critical to managing the provider-payor relationship, generating a steady stream of reimbursement revenue, and sustaining patient loyalty. The importance of producing accurate and timely claims data has, in turn, created a complex and costly technology infrastructure that is now integral to most providers’ operations.

On the next page, Figure 1 illustrates the waves of information technology (IT) investment that have been required to keep pace with changes in the U.S. health care industry. It also looks ahead to a new IT investment challenge: the mandated 2011 move to ICD-10.
As illustrated above, managed care initiated a major wave of IT investment for payors, with many considering consolidation to scale their operating and technology models. Simultaneously, providers were installing and attempting to integrate myriad package applications across their front and back offices and ancillary service areas. Compliance with the 1996 Health Information Portability and Accountability Act (HIPAA) and measures to address Year 2000 (Y2K) concerns initiated the second wave of IT investment, forcing health plans to standardize their interactions with outside constituents and remediate their large legacy applications to accommodate a 4-digit-year field. While providers were dealing with similar concerns, this period also saw an aggressive move toward implementation of electronic medical records (EMRs), which had finally matured to a point where viable solutions existed which had both state-of-the-art functionality and a reasonable price tag. These first two waves of investment were major contributors to the massive complexity and associated operating costs of today’s IT systems.
Emerging health care consumerism came hard on the heels of wave two, and it affected (and continues to affect) payor and provider alike. Health care costs and purchasing responsibility are shifting from employers to employees. At the same time, physicians and hospitals must address consumer demands for a streamlined and more transparent health care delivery model. Whether this means delivery of a single bill for all services rendered, easier access to facilities and services across an Integrated Delivery Network (IDN), or personal access to their health information over the Internet, providers have been challenged to deliver more patient-centric solutions. Health plans, in turn, are being charged with developing new insurance products that appeal to changing consumer needs. All health entities are wrestling with the associated IT costs to address this market shift.

Enter the ICD-10 Challenge

As if existing IT investments weren’t a large enough strain on provider and payor budgets, the U.S. health care industry is facing a new challenge: ICD-10 implementation. The ICD-10 bill (Senate Bill 628) is predicted to become a requirement for all U.S. health entities as early as 2011. Industry analysts such as the Robert E. Nolan Company characterize ICD-10 as exceeding Y2K with respect to cost and impact. U.S. ICD-10 adoption has the potential to revolutionize the nation’s health care system and produce another huge wave of IT spending. This paper describes the impact of the proposed move from ICD-9 to ICD-10 on payors and providers and the need to prepare for this change.

What is ICD-10?

When a physician evaluates a patient, the physician collects subjective and objective data (the “history and physical”) to diagnose the patient’s condition and develop a plan for treatment. The most widely used diagnostic taxonomy in health care is the World Health Organization’s International Statistical Classification of Diseases and Related Health Problems (ICD). The ICD is a coding of diseases and signs, symptoms, abnormal findings, complaints, social circumstances and external causes of injury or diseases that is used internationally to classify morbidity and mortality data for vital health statistics tracking and in the U.S. for health insurance claim reimbursement. Currently, the ICD code is in its tenth edition, ICD-10, which was developed in 1992. As of 2007, the United States is the only country in the industrialized world still using older ICD-9 codes for administration and health care delivery (Figure 2, next page). The ICD-9 system was developed in the 1970s and contained structure/space limitations that constrained its ability to accommodate advances in medical knowledge and technology. ICD-10 codes address these issues and also help in morbidity and mortality reporting.

Because the United States continues to use version ICD-9, it has difficulty comparing its health service utilization to other countries. Also, ICD-9’s age makes its content no longer clinically accurate with current medical science, and U.S.-adopted national/state ICD-10 mortality data cannot be compared to ICD-9. Numerous sources are concerned that the U.S. will continue to lag ICD-10 implementation, despite the Critical Access to Health Information Technology Act of 2007’s (Senate Bill 628) mandate for ICD-10 implementation by October 1, 2011.

1 Senate Bill 628, February 15, 2007, page 10
4 Ibid
ICD-10 Could Eclipse Y2K in Scope and Complexity

U.S. adoption of ICD-10 will undoubtedly require a massive overhaul of the nation’s medical coding system because the current ICD-9 codes are deeply imbedded as part of the coding, reporting and reimbursement analysis performed today. Indeed, in our opinion, ICD-10 implementation has the potential to overtake Y2K in terms of impact and cost. It will require a massive wave of system reviews, new medical coding or extensive updates to existing software, and changes to many system interfaces. Because of the complex structure of ICD-10 codes, implementing and testing the changes in EMRs, billing systems, reporting packages, decision and analytical systems will require more effort than simply testing data fields – it will involve installing new code sets, training coders, re-mapping interfaces and recreating reports/extracts used by all constituents who access diagnosis codes. In short, ICD-10 implementation has the potential to be so invasive that it could touch nearly all operational systems and procedures of the core payor administration process and the provider revenue cycle.

Clearly, U.S. health care organizations have much to consider before deciding how to address ICD-10 compliance. The Deloitte Center for Health Solutions encourages those payors and providers who are seeking long-term viability to consider ICD-10’s impact to their overall strategic plan before choosing an adoption strategy. While ICD-10 might at first appear to be solely a tactical remediation effort, we view ICD-10 as a potential platform for future strategic innovation.
Where Does U.S. ICD-10 Implementation Stand Today?

As of late 2007, the Centers for Medicare and Medicaid Services (CMS) had begun its assessment of ICD-10’s impact to its internal systems and to the overall U.S. health care system, but had not yet published its requirements for ICD-10 (also known as the “Final Rule”). Similarly, the Bush administration is expected to request nearly $40 million in funds to begin overhauling CMS systems in 2009. Because the Senate’s ICD-10 bill has not yet been passed into law, an accompanying air of uncertainty presents a significant challenge for health care stakeholders. However, using CMS compliance mandates for earlier legislation such as HIPAA, Medicare Part D, and National Provider Identifiers (NPI) as a guide, the industry should assume that, at a minimum, CMS will require that health care entities perform electronic transactions (EDI) using ICD-10 code nomenclature. This will require a conversion from today’s standard 4010 version of HIPAA messages to the expanded 5010 version, which is required to handle the new ICD-10 coding formats. Taking things a step farther, it is likely that CMS will develop a new Medicare fee schedule which, in turn, will require payors and providers to remediate their systems to bill and submit claims against this new schedule. These changes alone could create a ripple effect that impacts nearly all core provider revenue cycle and payor claims adjudication processes and systems, as illustrated in Figures 3 and 4.

Figure 3: Potential ICD-10 Impact on Payor Claims Process

Legend: ICD-10 Impact
- Training
- Provider Process
- Payor Process
- Process & Systems

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6 http://www.ahima.org/press/CMScontract.asp
8 Ibid
Figure 4: Potential ICD-10 Impact to the Provider Revenue Cycle

Legend: ICD–10 Impact
- Medium Impact to Process/Systems
- Large Impact to Process/Systems
- Medium Training Requirement
- Large Training Requirement

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Three Strategic Responses to Consider

If history serves as a guide, we expect that health care organizations will fall into three potential camps when preparing for and adopting the ICD-10 standards: pragmatists, collaborators, and innovators (Figure 5).

Figure 5: ICD-10 Adoption Maturity Model

<table>
<thead>
<tr>
<th>Integration Level</th>
<th>Pragmatists Achieve “Basic Compliance” ~ 60% of Health Entities</th>
<th>Collaborators Achieve “Successful Compliance” ~ 20 - 25% of Health Entities</th>
<th>Innovators Achieve “Strategic Value” ~ 15 - 20% of Health Entities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic Value</td>
<td>Negative ROI</td>
<td>Break – Even</td>
<td>Competitive Advantage</td>
</tr>
<tr>
<td>CMS-Mandated Changes</td>
<td>• Basic Coding, EDI Transactions, Government Reporting</td>
<td>• Core Administrative Processes, Revenue Cycle Processes</td>
<td>• Remediation of Internal Reporting, Advanced Analytics, Payment Monitoring</td>
</tr>
<tr>
<td></td>
<td>• Remediation of Internal Reporting</td>
<td>• Advanced Analytics, Payment Monitoring</td>
<td>• Transformed HCM, Contracting, Business Acquisition, Advanced Training, Outcomes Mgmt, &amp; Physician Score Cards</td>
</tr>
</tbody>
</table>

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Pragmatists

We expect that nearly 60 percent of all health care entities will achieve basic ICD-10 compliance – the bare minimum required by law. This means they will be investing only in infrastructure to fulfill core CMS mandates: claims adjudication, referral processing and related communication of health transactions for payors; and basic coding and core revenue cycle processing using the ICD-10 code set for providers. We expect that organizations which choose this approach will look to leverage “wrap-around” solutions such as EDI crosswalks and similar technologies that attempt to shield core processes and systems from the invasive nature of the ICD-10 mandate. However, lessons learned from HIPAA and NPI have shown that organizations often underestimate the complexity of these solutions, which ultimately bear very large costs but yield very little strategic value.

Because of their lack of investment in advanced capabilities, payors that choose this path will not be able to:

- Improved claims adjudication and provider reimbursement rates, in spite of having better-quality data due to improve medical-coding accuracy and granularity;
- Make efficient use of granular drug data to improve patient care and safety by observing usage trends and analysis of harmful side effects;
- Make efficient use of data granularity for diagnosis, procedure and case mix groups (CMGs) to profile a patient’s condition, or track length of stay related to improving utilization management.

Similarly, providers choosing basic ICD-10 compliance will not be able to:

- Realize cost savings through effective infrastructure planning (Cost savings can be realized by accurately predicting resource utilization, appropriate site of service, and improve care delivery team communication.);
- Use higher specificity of coded clinical data in payor contracting to obtain accurate and appropriate reimbursement, improved outcome management and monitor key indicators of revenue cycle effectiveness (re-admission rates, medical necessity screenings, etc.);
- Minimize adverse impact to revenue cycle performance without advanced training and preparations for ICD-10 Health Information Management (HIM) coder training and delivery team documentation requirements.

We expect that health care entities that choose this path will likely have negative ROI on their ICD-10 remediation investments and will not gain operational and strategic advantage in the marketplace.
Collaborators

We anticipate 20 to 25 percent of all health care entities to strive to exceed basic compliance and to drive ICD-10 into all core administrative and clinical functions. This more strategic approach, termed successful compliance, means preparing for compliant transaction sets and extending ICD-10 utilization to claim processing, care tracking and reporting for payors, as well as advanced analytics and payment monitoring for providers. Due to the extensive cost of a complete system overhaul, we expect numerous organizations to seek partnerships and collaborative opportunities to achieve successful compliance. For example, we expect some mid-sized health plans to collaborate with other plans to share the ICD-10 upgrade cost. The trend of collaboration is already prevalent among regional payors, especially as it relates to providing technology services. We expect this trend to spike as awareness of the coming costs of ICD-10 clash with the need to further reduce administrative costs and improve service. Similarly, while providers may look to their package vendors to provide much of the ICD-10 solution, those who look to maintain market position will take a more aggressive approach outside of their core operation.

Collaboration around ICD-10 implementation can benefit a health care entity as a way to share costs and as a mechanism to add value through data aggregation and analytics. Access to the more granular data available via the ICD-10 code set creates an opportunity to develop deeper and richer analyses for both providers and payors. The ability to aggregate data across multiple organizations would be a likely outgrowth of a collaborative model.

We expect to see many benefits from ICD-10 collaboration across the health care information value chain. Examples include:

- Improved claims adjudication and reimbursement rates between provider and health plans due to more accurate payments for new procedures, and fewer miscoded and rejected claims due to greater specificity in ICD-10 codes;

- Improved patient safety and care from sharing ICD-10 granular data on drug side effects and usage among health plans, providers and life sciences companies;

- Improved utilization management through the efficient use of ICD-10 diagnosis and procedure codes by payors and providers and the exchange of patients’ profile information, variations in treatments across the care process, and hospital resource management;

- Improved clinical documentation and coding accuracy to enhance assessing and monitoring of patient safety and quality indicators, and compliance with third-party payor coding and billing rules and regulations.

As a strategy, we anticipate that successful compliance will maintain an organization's market position and competitive advantage. However, it will not improve market position nor will it generate a positive return on investment. We encourage health care entities, at a minimum, to adopt this strategy to position themselves for future strategic growth.

Innovators

While we expect that a majority of health care organizations will adopt programs that just meet or moderately exceed the ICD-10 mandates, we also anticipate that a small, elite percentage of 10 to 1 percent will use ICD-10 compliance as a way to further their market agendas, business models and clinical capabilities. By making use of the new code set, these innovators will seek to derive strategic value from the remediation effort. As was the case with previous compliance efforts around HIPAA and NPI, we believe that these innovators will approach ICD-10 compliance as a strategic initiative and, as a result, could increase patient satisfaction and quality of care, while moving their business and clinical model into new markets.

ICD-10 offers potential benefits not seen in earlier regulatory compliance initiatives. Although the considerable investment required may dissuade many organizations from tackling such a complex remediation effort, those that do will have an opportunity to develop new business partnerships, create new care procedures, and change their business models to grow overall revenue streams. Health care organizations looking for these new business opportunities can employ ICD-10 as a catalyst to anchor a more competitive market position. Potential opportunities for these market innovators include:

- Merger & Acquisition (M&A) Opportunities – We expect that ICD-10 compliance could trigger a trend similar to the wave of consolidations experienced in the 1980s during the growth of managed care. Some organizations may simply “opt out” of ICD-10 remediation due to the massive investment required. A portion of these could become merger candidates for those organizations who are aggressively moving forward.

- Shared Service Opportunities – Some health care entities will be looking for outsourced solutions for their ICD-10 technology remediation, while wanting to retain their core business and clinical processes. As with the M&A opportunities, organizations who are moving forward aggressively with ICD-10 will have the opportunity to offer their services to these entities.
• Information and Data Opportunities – Health care entities that are early adopters of ICD-10 will be in a position to partner with their peers and constituents to improve data capture, cleansing and analytics. This could lead to the development of advanced analytical capabilities such as physician score cards, insightful drug and pharmaceutical research, and improved disease and medical management support programs, all of which create a competitive advantage.

• Personal Health Records Opportunities – Using ICD-10 codes, innovative health care entities will have access to information at a level of detail never before available, making regional and personal health records (PHRs) more achievable for the provider and member communities. Organizations that align themselves appropriately can provide a service that will differentiate them in the marketplace.

• Clinical Documentation Excellence Program – Developing and implementing a Clinical Documentation Excellence (CDE) program is a critical component of organizational preparedness to respond to future regulatory changes. Hospitals need to understand the financial impact that ICD-10 will have on their bottom line and begin the operational readiness assessments, gap analyses and process improvement plans to facilitate accurate and appropriate reimbursement.

• Opportunities to Leverage Non-Traditional Staffing Models – Providers have experienced stress from the national shortage of professional certified coders for many years. Coding changes such as CMS’ Medical Severity Diagnosis Related Groups (MS-DRGs) are exacerbating this shortage by reducing inpatient coding productivity. Most providers are augmenting coding staff to mitigate increased receivables during the learning curve. Providers that opt to pursue non-traditional staffing models for professional coders, such as home-coding programs, will be better positioned to respond to the continued coding shortages – including ICD-10 – and not be limited by geography.

While the potential benefits of being an ICD-10 innovator are great, it is clear that achieving them will require significant capital and personnel investments. Those organizations that are genuinely interested in leveraging ICD-10 for competitive advantage should align their ICD-10 remediation strategy, approach and roadmap with other key long-term corporate initiatives. A program of this magnitude runs the risk of wavering support and sponsorship if it encounters implementation difficulties; however, securing up-front executive alignment can help to mitigate these challenges.

Conclusion

While the ICD-10 regulation is not yet finalized, HIPAA and Y2K proved that health care regulatory remediation programs can take years of planning to achieve successful implementation. The window of opportunity for ICD-10 is closing very quickly on a number of fronts. Therefore, we suggest that all health care entities immediately undertake the following steps:

Step 1: Identify your organization’s position along the ICD-10 remediation spectrum – Every health care organization should proactively decide how it will deal with ICD-10. Do you want to be a pragmatist, a collaborator, or an innovator? Each of these positions carries trade-offs with respect to cost, solution quality and market position. This decision requires a thoughtful review of your corporate strategy and whether ICD-10 can be leveraged to support other corporate goals.

Step 2: Begin assessing impacts – Despite the current lack of specific CMS guidelines, your organization can and should make a high-level impact assessment to determine the potential size and scope of basic remediation. Determining how much the current ICD-9 code set is ingrained in your organization’s operations and technology infrastructure will be a key indication of how invasive the transformation could be. Similarly, if your organization wants to be an innovator, it is important to begin identifying and planning for the significant changes that will be required to support new business models and the associated technical and organizational adaptations.

Step 3 (optional): Identify collaborators – If your organization deems itself a collaborator or innovator, it is prudent to understand how collaboration might be achieved, and to identify potential targets in the marketplace. Because partnering arrangements between organizations often require lengthy negotiation and legal proceedings, it is important to begin this process early to meet important goals and milestones.

The road to ICD-10 compliance will be neither easy nor quick. However, with foresight and planning, health care providers and payors can transform a regulatory necessity into a competitive advantage.
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