

Testing: The critical success factor in the transition to ICD-10

The U.S. adopted the International Classification of Diseases, 9th Edition, Clinical Modification (ICD-9-CM) in 1979. During the subsequent thirty plus years, ICD-9-CM evolved and expanded in response to changes in technology and clinical practice. However, ICD-9-CM is now widely regarded as outdated in the sense that there is little room for further expansion and ICD-9-CM can provide only limited clinical information about health status and underlying disease constructs to support basic business functions such as care management, provider performance evaluation, and billing and reimbursement.

For these reasons, the U.S. is moving to a new standard for coding diagnoses and inpatient procedures based on ICD-10. The World Health Organization (WHO) developed the International Classification of Diseases, 10th Edition (ICD-10) in 1994.¹ This version has been adopted by many countries since then, but only some of these countries utilize this coding system for reimbursement. It should also be noted that the international standard for ICD-10 only applies to diagnoses and provides no methodology for classifying medical treatments. To ensure that the new ICD-10 standard meets the requirements of the U.S. health care industry, the U.S. Department of Health and Human Services revised the basic ICD-10 standard to include clinical modifications that add granularity to diagnostic coding (ICD-10-CM) and a Procedural Coding System (ICD-10-PCS) that specifies codes to be used for surgical procedures performed on inpatient populations.²

The transition to ICD-10-CM/PCS will be especially important for inpatient hospital services that are reimbursed using some form of Diagnosis Related Groups (DRGs). ICD-10-PCS, which will be used primarily to describe procedures performed on an inpatient basis, is especially challenging in that it differs radically from the ICD-9-CM coding paradigm. This stands in contrast to ICD-9-CM and ICD-10-CM diagnosis codes, which differ more in terms of granularity than coding logic.

This paper highlights the significance of the transformation and transition of the U.S. health system from ICD-9 to ICD-10 by October 1, 2015. It also discusses how proven solutions and strategies can be used to expedite and effectively manage this impactful change.

From the delivery of patient care, to the management of claim reimbursement, to the analysis of that information in order to improve health care quality, the ICD-10 migration will touch almost every function, technology, and process of a health plan's business. Consequently, preparing for ICD-10 involves a level of complexity that requires deep knowledge and understanding of the entire health care domain. The transition to ICD-10 will affect areas such as clinical documentation and coding, revenue, payments, productivity, claims adjudication, reporting mechanisms, decision and analytical systems, customer service delivery, care quality, provider networks and government policies.

Health plans need a process that breaks testing into meaningful components and helps them achieve a successful transition to ICD-10. Testing will allow plans to see where there is work to be done — while there is still time to do that work.

In the rule-making process associated with ICD-10, the Department of Health and Human Services indicated that the benefits of ICD-10³ implementation include, but are not limited to:

- Standard coding convention that is flexible and accommodates unique codes for all substantially different health conditions. Specific diagnosis and treatment information can help improve quality measurements, patient safety, and the evaluation of medical processes and outcomes.
- Addressing specific concerns or perceived unmet clinical needs encountered with ICD-9-CM.
- More information and detail within the codes than ICD-9-CM provided. This will facilitate timely electronic processing of claims and expense reduction by reducing or eliminating requests for additional information (e.g., medical records).
- Significant improvements over ICD-9-CM in coding primary care encounters, external causes of injury, mental disorders, neoplasms, and preventive health.
- Descriptions of complex medical procedures, which become increasingly important when assessing and tracking the quality of medical processes and outcomes as well as compiling valuable statistics for research.

The testing process and challenges

The introduction of ICD-10-CM/PCS will require a massive overhaul of the IT infrastructure that supports health care coding, billing and claims management. Health plans may well need to modify every system that holds, transmits or analyzes health data. Business functions, applications and policies that currently rely on ICD-9-CM codes will need to be revised to accommodate ICD-10-CM/PCS, including:

- Contracting and network management
- Claims processing
- Claims editing
- Medical policy
- Care management
- Provider performance
- Payment integrity
- Decision support

It is important for health plans to recognize that ICD-10 has operational and financial implications that go beyond the costs of achieving regulatory compliance. As providers begin to code cases in ICD-10, reimbursement may change for specific cases even in the absence of changes in clinical behavior. Claims edits and medical policies may be applied or interpreted differently. The integrity of data assets developed over time will be compromised by changes in coding and provider-specific differences in responding to ICD-10.

ICD-10 remediation and optimization timeline



Testing will be an integral part of the ICD-10 transition but may prove difficult for health plans due to challenges, including:

- Multiple claim and care management platforms
- The ability to create large enough volumes of data to confidently test all of the business processes affected by the ICD-9 to ICD-10 change
- The extensive and complex data needs of ICD-10 that focus on three areas:
 - Data management will require consistently coded data across all applications within the process flow. Data integrity must be ensured across multiple projects and between segments.
 - Data creation will require a financially focused evaluation of high impact ICD-10 codes. Key business scenarios will need to be validated.
 - Data comparison and processing will require testing automation and the use of comparison tools.
- The need of health plans to expedite test execution, ensure code coverage, perform parallel testing, and create automation opportunities



ICD-10 testing considerations

Testing strategies

A recognized best strategy for developing ICD-10 test data combines two distinct approaches. One uses actual experience as the basis for testing by translating historical claims from ICD-9 to ICD-10. This approach provides insight into how historical billing patterns may present themselves in the future and offers a meaningful view into operational impacts such as auto adjudication, population management, and quality programs such as HEDIS and Stars.

The second approach considers how providers will assign ICD-10 codes from clinical records by building a set of test claims that are coded directly from medical records. By using a mixed strategy that combines translation algorithms applied to historical claims with a limited amount of native ICD-10 coding, organizations develop a testing methodology that reflects their own history while providing insights into the challenges that providers will face with ICD-10.

It is important for health plans to develop test plans that examine all business functions that will be affected by ICD-10. A comprehensive approach to testing is the best strategy for avoiding the adverse effects that could occur as a result of the ICD-10 implementation:

- External discontent (providers, states, CMS, partners, and members)
- Internal rework
- Increased costs

Many lessons can be learned from the HIPAA 5010 transition⁴ where health plans that failed to complete testing before the compliance date experienced a number of undesirable outcomes, including:

- Higher than expected rejections resulting in:
 - Cash flow issues for providers
 - Loss of claim visibility to health plans
- Increased call volumes
- More provider complaints
- Expanded claim backlogs

Ideally, when developing test strategies, one should also account for any automation opportunities within the larger testing picture. As we move from systems testing toward internal end-to-end testing or business partner testing, volumes of test data get larger and validating test data manually results in:

- Higher than expected heads for test validations
- Impacted schedules
- Impacted budgets
- Higher propensity for errors

Hence, using testing accelerators and enablers helps testing teams in bringing greater efficiencies to overall testing efforts.

Automated testing enablers can easily convert an ICD-9 file to ICD-10, compare results and provide a dashboard with which testers or partners can confirm neutralizes successfully.

Additionally, ICD-10 code prioritization solutions, which are risk-based testing solutions, provide an assessment of business risk based on a number and type of important payer-specific codes being tested rather than testing everything.

Testing levels to ensure production readiness

Transactional testing should be conducted across all business functions and enabling technologies. To ensure production readiness, testing should include various levels:

- **System testing** — Integrates partial testing through an iterative process across individual modules of the system (not end-to-end testing of the IT components).
- **Regression testing** — Ensures that code changes have not adversely impacted existing functionality and validates the baseline system performances.
- **Integration testing** — Examines the workflow between system modules and business functions to ensure that they work properly in a cross-functional manner.

ICD-10 cannot be accomplished in an absolutely neutral manner. It is important that ICD-10 transition and remediation efforts do not have unintended consequences — such as disruption in financial and operational systems.

- **End-to-end or user acceptance testing** — Simulates the real production business processes and validates that the proposed system and business processes are according to the expectations.
- **Parallel testing** — Determines if the entire system is performing as expected with both ICD-9 and ICD-10 codes together (e.g., whether both systems are producing similar results, etc.). Parallel testing will be the greatest challenge that organizations face during the transition process from ICD-9 to ICD-10. It is very complicated, but it is absolutely necessary to observe consistency in outcomes of claim payment, member liability, population management and health care analytics.
- **Neutrality testing** — Examines how providers will assign ICD-10 codes from clinical records by coding claims directly from medical records.
- **Partner readiness testing** — Ensures external vendors, partners and clearinghouses are prepared for the transition.
- **Operational readiness testing** — This is a final check just before going “live” to ensure that all systems and claim processors are ready.

The transition to ICD-10 has the potential to increase costs and decrease revenues if not implemented properly. Health plans need to manage transition to ICD-10 in a way that delivers as much predictability as possible to its internal and external stakeholders.

Health plans can succeed and take advantage of the improved information that will be available under the ICD-10 standard by initiating an organized and sustainable effort to deploy ICD-10 across their enterprises and integrate it into core business functions. Effective risk management will require careful planning, appropriate tools, thorough understanding of coding paradigms, and consulting leadership. Early preparation for these changes and frequent measurement can mitigate risks associated with medical costs, clinical integrity, and operational stability.

Effective plans for monitoring, measuring, and mitigating defects can facilitate a successful transition to ICD-10. Testing needs to focus on clinical, financial and operational functions:

- Clinical testing should focus on analytics algorithms, reports, and data. It should also test business functions at every level, with focus on population and care management as well as quality programs such as HEDIS and Stars.
- Financial testing should encompass contracts, pricing rules, pricing software, claim payments, and member liability. It should also focus on business functions at every level, with an emphasis on revenue and payments.
- Operational testing should span all operational areas, quality programs, and business processes to identify and mitigate potential problems during the transition. It should also include implementing strategies aimed at reducing the potential negative impacts to operational Key Performance Indicators (KPIs), budgets, staffing, and service levels.

Organizations will need to develop processes, methods, and tools to cover the broad range of testing required. They should consider:

- Rapid production of large amounts of ICD-10 coded claims with minimal manual involvement resulting in shortened time and increased quality.
- Analytics that provide the requirements for a consistent data set across multiple transactions.
- Ability to quickly add large amounts of additional records for additional test cycles.

Realizing the promises

ICD-10 promises to provide new and more comprehensive health care data that could be used to benefit all stakeholders through enhanced care management, improved treatment outcomes for consumers and reduced administrative costs.

A successful transition to ICD-10 will require careful planning, in-depth execution, and superior coordination with key trading partners and vendors.

Because ICD codes play a vital role in health care's key business processes, inadequate planning, poor coordination, ineffective implementation, and — most importantly — ineffective testing pose an immense risk to health plans and their trading partners. It is essential to carefully plan and execute thorough and in-depth testing. The approach should:

- Recognize the complexity of ICD-10 testing and develop testing plans and requirements now.
- Call for early and frequent testing during the remediation process.
- Ensure robust test data is available.
- Assess the use and effectiveness of using automation and parallel testing tools.
- Develop benchmarks and metrics to monitor outcomes.
- Involve testing experts early in the process to help design and manage your program.

About Optum

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In addition, we have more than 1,500 consultants and actuaries serving stakeholders across all health care markets, who provide us a unique perspective and ability to solve your most critical challenges. We are a data-driven, results-oriented organization that addresses all elements of your ICD-10 compliance requirements.

Sources

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Optum offers ICD-10 remediation services, including:

- Process and procedures
- Coding tools, maps and services
- Configuration
- Change management communication
- Coding and end-user training
- Operational readiness
- System and user acceptance testing
- Automated test data generation
- Automated test outcome comparisons
- Clinically coded test data
- Business partner readiness assessment and testing services
 - Internal end-to-end and business partner readiness testing framework
 - Testing tools and accelerators
 - Test data masking solution
 - Quality management office
 - Consumer portals automation testing framework
- Reporting
- Application interfaces
- Program management
- EASYGroup™ grouping and pricing software
- Coding books
- Training



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