

# PERSPECTIVE

## Neutrality and Partner Testing

*Two Strategic Moves for Successful ICD-10 Adoption*



Organizations may overlook the criticality of their ICD-10 testing effort owing to the extended compliance deadline (October 1, 2014). But ICD-10 testing is not a typical IT project that can be tested in a short duration. Being part of a larger business transformation, the transition to ICD-10 will require a comprehensive testing effort that factors two business-critical outcomes — revenue impact and business continuity. These outcomes will depend on approaching ICD-10 neutrality and partner testing with a comprehensive strategy.

## 5 Myths About ICD-10 Testing

### 1. **Myth: One more year to compliance – my ICD-10 testing can wait.**

While logical, waiting until later will result in a thin and aggressive testing timeline, especially the lead time to conduct exhaustive testing and avoid compliance risk. A few pragmatic organizations, mostly large commercial and Blue Cross Blue Shield Plans, have already started planning their ICD-10 testing. Their approach will help initiate full-blown testing in the next two months and complete it well in advance of the compliance deadline (October 1, 2014)

### 2. **Myth: ICD-10 testing is all about validating outputs.**

ICD-10 compliance is an initiative in business process transformation. It is also a risk-mitigation focused program. So the focus should be on validating outcomes such as neutrality and business continuity risks, not outputs.

### 3. **Myth: My in-house QA team takes care of other testing projects – why not this one?**

ICD-10 testing will require coordination across the value stream and business functions.

Any disruption in the orchestration, if undetected, will affect business, productivity, and revenue outcomes – putting the overall compliance at risk. In addition, the timelines for technical and business remediation will vary for internal (across an organization's functional areas) and external entities. To ensure fail-safe compliance, organizations need phased planning and strategy to undertake comprehensive testing at multiple levels, and along iterative cycles (project-, release- and program-level).

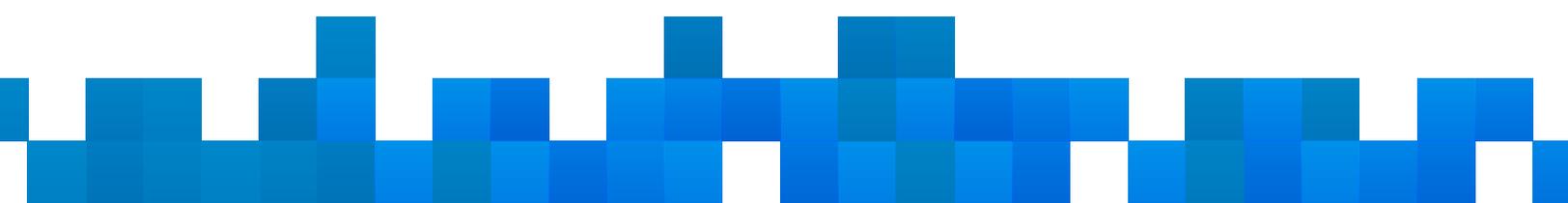
### 4. **Myth: ICD-10 adoption is only about my internal system and process compliance.**

The ICD-10 mandate has touchpoints and dependencies that span the healthcare value chain and extend beyond the boundary of an organization. No organization can endorse its ICD-10 compliance without adequately involving external entities in testing. During testing, it will not be enough for an organization to ascertain whether it can transmit and receive ICD-10 codes with partners. Rather, it should solicit cooperation to check

partner readiness, remediation strategies, and timelines. This will ensure partners are aligned with the organization's test cycles, both within domain and cross-domain.

### 5. **Myth: I can take a big bang 'all-at-one-go' approach to ICD-10 testing.**

It is obvious that the ICD-10 transition will have significant IT impact. However, organizations should also be aware that the transition will lead to many changes in their business processes — adding more layers of complexity to the testing program. ICD-10 requires a significant amount of business engagement when compared to typical testing projects. The traditional testing model – with an IT-centric view – will prove inadequate in meeting ICD-10 changes and requirements that are important in validating the migration.



## Testing for Neutrality

An effective ICD-10 testing program should ensure that every diagnosis and procedure code is processed accurately at each step of the business operation (whether automated or manual). This will make sure critical compliance risks – such as financial, clinical and operational outcomes – are maintained neutrally.

Significant risks accompany an implementation of this magnitude and complexity, with the most important being the risk of adverse revenue impact.

A few examples:

- The claim payouts based on ICD-10 exceed the acceptable variance (from what is being paid today on the basis of ICD-9 code set)
- A disproportionate shift in cost share occurs because of newly configured member benefits
- A compromised clinical equivalence in the code mapping process leads to a high curve out service rate / cost, an increased rate of claim denial, or large volumes of customer enquiry calls

To counter the impact of such occurrences, organizations should set up mechanisms for necessary checks and balances. These mechanisms will ensure the inherent effects of ICD-10 transition are analyzed, neutralized and validated in a satisfactory manner.

Rather than slowing down ICD-10 transition efforts, organizations should make use of the extended timeline to quickly define a neutrality testing approach. Such an approach will help validate variances across neutrality hot spots (clinical, financial and operational), while minimizing the impact of the ICD-10 transition on the organization, its members, and business partners.

## ICD-10 Neutrality

### Testing Approach

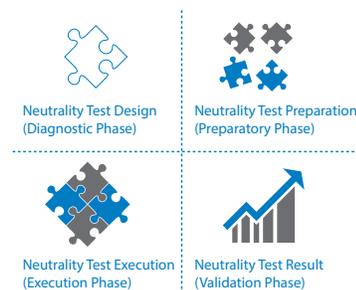
As an enterprise-wide transformation initiative, the transition to ICD-10 will affect numerous financial, clinical, and business performance metrics. Hence, it is critical to evaluate and validate outcomes on the basis of reliable data. This will benefit organizations in two ways:

- Help identify how business rules and processes are performing across affected entities
- Aid business continuity by ensuring changes are implemented before the 'go-live' of the program

Therefore, organizations should lay out a neutrality testing approach that

- Helps indicate rightly characterized test data
- Provides adequate coverage of scenarios to satisfy the identified neutrality requirements
- Shows all possible combinations of business outcomes in line with threshold margins set for determining the success of key performance indicators (KPIs); such KPIs include impact on claims reimbursement, member liabilities, variation in auto-adjudication rates, shift in service utilization pattern, alteration in case mix indexes, and changes in the work volume of customer services

### Test ICD-10 neutrality in four phases



## Neutrality Test Design (Diagnostic Phase)

There are numerous risks around outcomes across multiple systems and business processes that adopt ICD-10, and a majority of these risks will be related to neutrality. Therefore, it is essential that organizations adopt a risk-based approach to optimize neutrality testing. Neutrality test design, a diagnostic phase, consists of rich analytics activities, which will help discover neutrality touchpoints. It will also define the scope and articulation of test requirements relating to various dimensions of neutrality.

Some examples of these analytics activities include:

- Analyzing processes and sub-processes that drive financial decisions in each domain and across domains (from claims adjudication, authorization / referral processing, and utilization management activities, to medical policy reviews, fraud and abuse monitoring, and statistical reporting)
- Identifying abstractions and grouping layers that connect plans and benefits to ICD codes (diagnosis / procedure)
- Determining linkage of high-risk codes to benefit types, restrictions, accumulators, and specific configurations (e.g. gender, mandated)
- Evaluating contract terms with the partner in relation to specific codes, complex service types, high-dollar and high-volume diagnostic-related groupings (DRGs)

## Neutrality Test Preparation (Preparatory Phase)

In this phase, organizations should formulate test scenarios and test cases by leveraging the analytic, requirement reports generated in the neutrality test design phase.

Some examples of the neutrality design phase output that will be used to formulate test scenario and test cases: the list of neutrality-focused business rules within and across domains, prioritized data elements, and high-risk ICD/DRG codes across clinical condition categories (with respect to volume, frequency of occurrence and dollar), benefits, service types, clinical policies, provider partners, contract types, etc.

The phase ends with identifying the volume- and system-specific data required to execute the identified neutrality test cases, and consists of four activities.

#### Test scenario preparation

- Identify and build neutrality test scenarios by referring to test requirements and priority list recognized in the neutrality test design phase
- Evaluate and relate the neutrality aspects (clinical, financial, operational) that must be tested across domains
- Define the business attributes / categories that need to be associated with the scenarios (e.g. plan type, member type, provider type, benefit category, clinical rules)
- Review and baseline test scenarios with the neutrality governance team
- Define acceptable outcome thresholds to be monitored for scenario executions

#### Test scenario prioritization

- Prioritize and organize the baselined neutrality scenarios into different test execution cycles
- Attribute scenarios with process parameters such as critical processes, changed processes, remediation period / release schedules, and partner-



dependent processes

- Identify risk and complexity factors – such as codes and their clinical-concept changes, mapping complexity, inter-functional dependencies – to assign appropriate scenarios for execution across processes and systems

#### Test case development

- Break down each scenario into several test cases pertaining to identified testing cycles
- Statistically categorize or group test cases specific to the execution path — starting with essential, business-critical scenarios; provide an optimal number of test cases to ensure comprehensive test coverage
- Define expected test results and success criteria at each test case with regard to agreed limits and acceptable thresholds defined (in such scenarios, payer organizations can opt to send the actuals from the test to the actuarial

team to validate against their existing modeling tool results)

#### Test data identification

- Define the test data need and volume required for execution of the neutrality test cases, e.g. prioritized data about members, provider profiles, benefit rules as well as high-risk codes and service categories
- Address the limitation and risk associated with usage of home-grown data by collaborating with trading partners and obtaining specific test data that can help execute the test cases focused on critical neutrality, e.g. to validate neutrality risk associated with provider coding behavior, obtain certain high-risk ICD-10 codes that were created natively / through computer-assisted coding systems (based on clinical documentations generated from upgraded EMR systems and codes used to create test claims)



## Neutrality Test Execution (Execution Phase)

In this phase, organizations should carry out test scheduling in line with internal project timelines, partner readiness, test data and environment setup. They should also identify test execution and defect tracking techniques that ensure the test coverage meets the planned value. The various testing types that can be applied for neutrality validation are:

- Regression and parallel testing to demonstrate cost-of-care predictability and comparing ICD-9 to ICD-10 claims simultaneously within each system
- End-to-end testing, which goes beyond the standard release validation process

to validate business continuity with respect to ICD-10 across multiple platforms

- Performance / time-and-motion testing to validate operational efficiencies

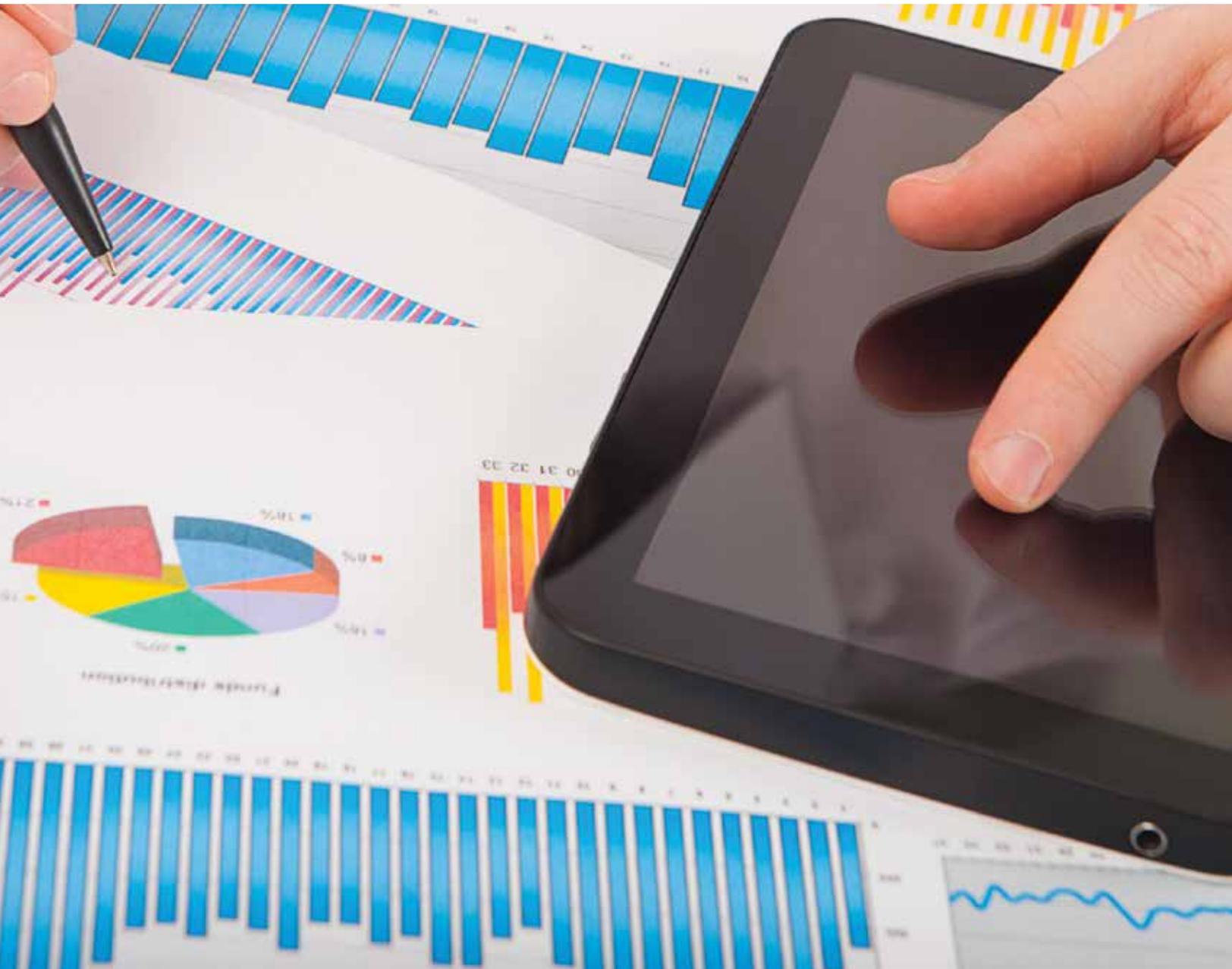
**These test cycles are dependent on the priority decided in the previous phase, and the readiness of the specific system to undergo testing.**

## Neutrality Test Result (Validation Phase)

In this phase, neutrality test results should be tracked to specified tolerance limits. Where results lie outside acceptable limits, organizations should identify the root cause for variances, and modify test cases to accommodate necessary changes to

certain levers (e.g. effecting changes to mapping or configurations of business rules).

Organizations should perform iterative cycles of testing until the results are within acceptable tolerance limits. This phase ends with validating and achieving acceptable neutrality – across various dimensions – both at the functional and enterprise level.



## Testing for Partner Alignment

ICD-10 transition involves a significant number of workflows and processes that are dependent on external organizations such as trading partners, software vendors, and content providers. The involvement of partners is crucial, given their role in ensuring organization's business continuity.

Partner testing for ICD-10 compliance carries greater significance than in 5010 testing programs because ICD-10 must encompass content testing. Further, it must ensure that results of partner transactions received and processed with the new codes (e.g. provider claims) meet expected results (e.g. adjudicated with accurate reimbursement). In contrast, the focus in 5010 partner testing was on transaction formatting, not on content or validating outcomes. ICD-10 therefore demands that organizations should develop a dedicated strategy toward managing the size and complexity of end-to-end test cycles, which are required to be conducted with a large number and different types of partners in that is timely and cost-efficient manner.

Organizations should consider adopting a four-step approach to partner testing.

**Step 1: Prioritize partners for testing** – This step involves analyzing and prioritizing partners based on dimensions such as readiness timelines, intake strategy for ICD-10 data, implementation strategy, history of working and extent of involvement with core and impacted business areas, complexity involved in opting to change the partner, and volume of transactions and data exchange carried

out in day-to-day operations. The activities in this step will serve as important inputs to layout the test requirements, gauge the nature of risk, and define the scope of their involvement in the test cycles and validation phases.

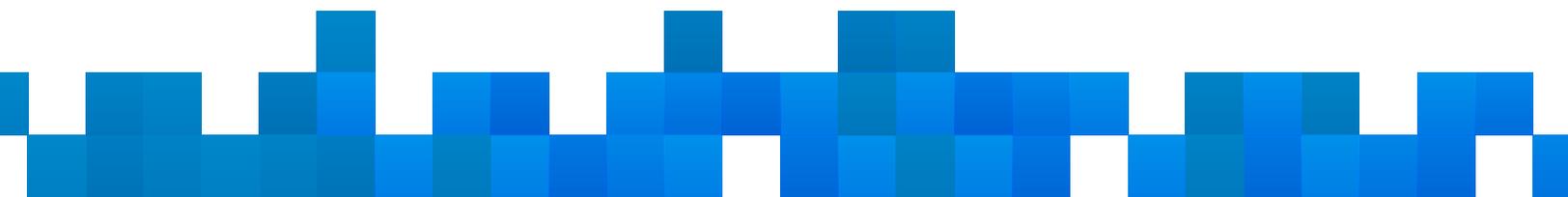
**Step 2: Align partners with the core testing cycle** – In this phase, the organization's testing teams should focus on engaging trading partners in the testing project lifecycle. They should establish a close collaboration with the partner's business and development teams. This will help communicate the organization's readiness and testing intent, setup of the common environment, agreeable testing schedule, and go-live plan.

Organizations should develop a synergic test plan with their partners based on factors such as type of testing, test environment readiness, test data setup and phases of testing (project level vs. program level testing). The plan should also identify appropriate test duration coverage, and appropriate escalation mechanisms. The test environment setup for partner testing is critical. It should be designed to support integration, end-to-end, and user acceptance testing. Manual intervention will be required in cases where full automation doesn't exist to push, pull and/or load test files. Also, adequate system support will be essential to ensure such manual intervention happens on time.

**Step 3: Execute partner testing based on key testing considerations** – Organizations should focus on coordinating the types of testing to be carried out at identified partners. Interface

testing will help in verifying the seamless integration of partner interfaces (with respect to the extract and accuracy of data load). It will ensure accurate data transfer and acceptance among applications. Interface testing will also help validate desired outcomes for the new coded data that is processed across all external interfaces and applications. However, it is a prerequisite to test the readiness of the organization's system interface before sending data files and extracts to partners for acceptance and processing. Furthermore, owing to varying levels of integration and system complexity, not all systems will require the same level of test effort. Hence, the test strategies for partner systems should be defined by keeping in mind the individuality of each system. This strategy can be determined after assessing each system, including its integration levels. Factors that will influence the strategy include: the number of data connections relative to the organization's core systems (direct or indirect feed that will determine data flow connectivity), complexity, priority, risk, and the extent of compartmentalization (division into categories) of partner systems.

As soon as core integration testing is accomplished, end-to-end testing should be initiated. The use-case-driven approach that is most optimal is one that defines an end-to-end workflow for service through care delivery, management, claims content receipt, reimbursement, denial, and data reporting. This will ensure effective partner alignment in ICD-10 compliance. The focus of user acceptance testing should be on verifying the contracts with partners so



that business logic is not impacted by the shift to ICD-10. User acceptance testing should also ensure the extracts or data files received from the partners provide the same expected processing with ICD-10 as with ICD-9.

**Step 4: Establish partner test governance** – Organizations should establish a centralized test body that will arrange the different elements in

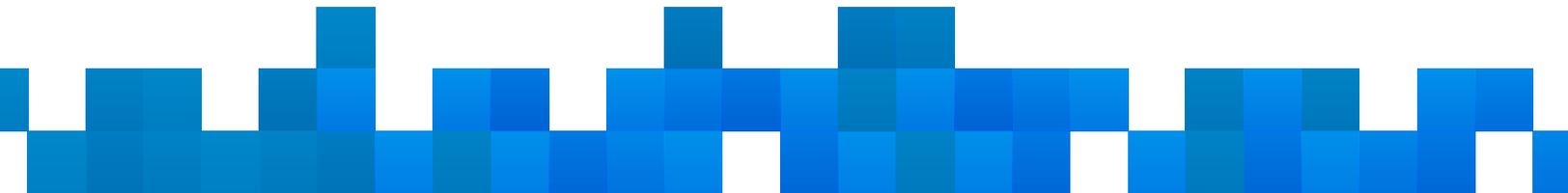
testing program and coordinate the entire partner testing program to produce the desired effect. Test governance will provide overall testing direction — all the way from internal resource awareness for partner alignment, to adopting standard testing processes. The team should create agreements to set the agreed parameters for the testing outcomes, in addition to consolidating testing status, defect

monitoring, testing issues, and defect management. Effective test governance will also resolve escalations and ensure continuous improvement.

### The Winning Game Plan

To ensure effective ICD-10 neutrality and partner testing, we recommend strategic moves that help achieve success without exhausting resources and risking unpredictable results.

	Financial Neutrality Testing	Partner Alignment Testing
 People	Gather inputs from business / IT subject matter experts (SMEs) to determine considerations that will impact testing and neutrality outcomes	Educate resources about how partners are critical to the organization’s business continuity, and the effect of using partner products and services during compliance
 Process	Outline and prioritize business processes and risk areas impacted by different aspects of neutrality	Identify processes across lines of business (LOBs) and systems that are heavily dependent on partners
 Technology	Involve the right technology for analytics to help discover neutrality hot spots and develop critical neutrality test scenarios	Define a common infrastructure and model office to coordinate the testing effort
 Governance	Establish a taskforce that helps define the acceptable-tolerance thresholds for each type of neutrality testing  The taskforce should also recommend approval of risk boundaries	Establish a partner engagement model to proactively manage partner relationships and escalation processes  Solicit cooperation of partners and align them with the organization’s testing schedule and strategy
 Key moves to ensure success	Adopt a risk-based approach to prioritize and optimize testing  Shift from traditional output-focused testing to outcome-based testing	Create partner groups and prioritize certain partners to ensure timely engagement in the testing schedule  Ensure continued communication and transparency



## The Way Forward

Postponing neutrality and partner testing will be counterproductive to the objective of the ICD-10 transition — achieving risk-free and successful compliance. While the industry understands the criticality of the transition, the need of the hour is more education, awareness and proactiveness to integrate strategic test planning with the overall ICD-10 transition strategy. The approaches outlined in this point of view will serve as a starting point for effective neutrality and partner testing, in addition to helping streamline the larger ICD-10 transition program.

## Author Profile



**Dr. Suman De**  
Healthcare Consultant and Head –  
ICD-10, Infosys Public Services

Dr. Suman De is a registered clinician with a degree in medicine and a master's degree in business administration in healthcare. He has significant experience in the healthcare domain, and specializes in the development and implementation of IT-enabled business solutions for health insurance, hospitals, and managed care organizations.

Dr. De currently leads the Infosys iTransform™ product development, and has been largely involved in strategic consulting projects with various large payers and providers to help implement ICD-10. He has been recognized as a subject matter expert (SME) in ICD-10 for his contribution to the industry through thought leadership, points of view, articles, workshops, and speaking sessions, among others.

Dr. De is also an avid blogger and regularly features on Infosys blogs, apart from other blogs in the healthcare blogosphere. His writing focuses on themes that are relevant to the US healthcare reform initiatives.

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For more information, contact [askus@infosyspublicservices.com](mailto:askus@infosyspublicservices.com)

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