Testing & Trading Partner Implementation for HIPAA

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Professionals in Health Care EDI, Privacy & Security

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Course HC-205a

Topics

- Testing for
  - Software vendors
  - The enterprise integrating an EDI management system
  - User of a commercial application system
- Trading Partner Implementation
  - What needs to be done
  - Who does it
  - How to keep on doing it

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Software Testing

- Basic purpose
  - To detect faults in the application before deployment
  - Never possible to guarantee application defect free
    - Can only show existence of bugs, not their absence
- Important for customer acceptance
- Requires discipline, experience, patience, and . . .
  - A detailed testing project plan
  - Appropriate subject matter (end user) expertise

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Software Testing

- Consists of a finite set of test cases
  - In controlled conditions including
    - Normal & abnormal situations
  - Documented in a test plan
- Test plan should describe
  - Testing steps
  - Commands and actions
  - Input data
  - Expected behaviors and outcomes for each test scenario

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Software Testing Levels

- Unit testing
  - To verify a single program or a section of a single program
- Integration testing
  - To verify the interaction between system components
    - Prerequisite: unit testing completed on all programs which compose the system
- System testing
  - To verify and validate behaviors of entire system against original system objectives
  - Attempts to uncover problems by executing programs in a real setting
  - Also focuses on testing non-functional requirements, e.g.
    - Performance, recovery, volume, security, reliability, etc.

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Software Testing

- Challenge for software testing
  - Balancing the **cost** to detect & fix defects <u>before deployment</u> versus fixing defects <u>after deployment</u>

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EDI System Integration

- Similar to . . . but not software testing
- Testing will focus on
  - EDI maps
  - Interface with internal application system
    - Ensuring that data from inbound EDI transaction is input to application system correctly
    - Ensuring that application data appears correctly in output from EDI system
  - Throughput performance
  - Impact to network
  - Hardware compatibility
  - Interface to communications modules
  - Detecting and reporting errors
  - Enforcement of your company's business rules

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EDI System Integration

- What you shouldn't have to test/verify
  - If you licensed a commercial EDI management system
    - Its knowledge and ability to apply the X12 rules
    - Its HIPAA toolkit
    - Its mapping tools

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EDI System Integration

- If you wrote your own EDI management system
  - **You Must Test Everything!!!**
    - Ability to apply the X12 rules correctly
    - Ability to input/output correct data and formats
    - Interface to communications modules
    - Interface to application systems
    - Every type of SNIP recommended testing
    - Enforcement of both your business rules and the HIPAA IG semantics & business rules
    - Management of trading partner profiles
    - Creation/management of control segments
    - Auditing, logging, reporting
    - Error reporting to trading partners
    - Performance and processing statistics
    - Capture and reporting of other statistics
      - Number of trading partners
      - Number of transactions/trading partner
      - Rejections, etc.

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Trading Partner Implementation

And you thought the other stuff was a challenge!!!!

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Trading Partner Implementation: First Things First – Business Rules

- Have you determined your business policies and rules
  - Direct submissions
  - Use of clearinghouses and/or other intermediaries
  - Documented in a trading partner implementation manual
    - Easily available both internally & externally
    - Identified key contacts in your manual
    - Hours of operation
    - Testing criteria
    - Critical control segment data
    - Acceptance/rejection criteria
    - Other . . .

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Trading Partner Implementation: First Things First – Procedures

- Have you developed your policies and procedures for Trading Partner
  - Trading partner agreement
  - Testing support
  - How to manage full end-to-end testing
  - Criteria for production roll-over
  - Production support
  - Direct submissions versus use of clearinghouse(s)
  - Tracking and reporting status
  - Metrics for determining business benefits
    - Cost to get into production
    - Time to get into production
    - Number of trading partners via EDI vs manual
  - Problem escalation procedures

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Trading Partner Implementation:
First Things First – Organization

- Are you organized & staffed appropriately
  - Knowledgeable and trained
    - Testing implementers
    - Production support staff
    - Role of IT and business group
- Are you outsourcing this effort
  - Clearinghouse or other entity
  - Are both of you in agreement on expectations
    - Which party does what and when
    - What happens when things go wrong
      - Who's responsible for correcting
      - What could go wrong
  - Timing
  - Number of trading partners implemented

Now that you're ready . . .
What's Next for Testing?

- Depends on your trading partner's approach to creating the HIPAA standard transactions
  - Practice management/patient accounting/claims processing systems
    - Is it a homegrown system or commercially developed?
    - Is it generating standard data & format?
      - If no, then by whom and where
    - What's your business policy re 3rd party testing & certification
  - Are intermediaries involved?
    - Clearinghouse
    - Repricer
    - TPA
    - Other
  - What's your business policy when there are intermediaries between you and your trading partner

Now that you're ready . . .
What's Next for Testing?

- Testing beyond the WEDI SNIP 7 types
  - Ensuring that the business data exchanged is what's needed to successfully process the transaction
    - Interoperability between the respective application systems
  - Most likely requires companion documents to define specifics between trading partners, e.g.
    - Control segment details
    - For claims document: required provider numbers, policy numbers, etc.
    - What's needed to successfully adjudicate a claim
    - To what level of detail will a payer respond to a 270 ... a 278 ... a 276 – only the minimum required by HIPAA or the full maximum allowed
    - Field lengths
      - Truncation due to differences between X12 and internal fields
    - Output
      - Can the output required by receiver be produced, e.g. Paper EOB vs 835

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Now that you're ready . . .
What's Next for Testing?

- Interoperability below the application layer
  - Communications mode(s), requirements, options
  - Security
    - Authentication
    - Encryption
    - VPN vs public
  - Load, capacity, volume
    - Ensure system will not fail due to increased file sizes or numbers of transactions
    - Check
      - Temp file space
      - Batch run times
      - Translator or other front-end programs capacities, performance capabilities

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Now that you're ready . . . What's Next for Testing?

- Life cycle testing
  - Claims to check printing
  - Claims to "0" balance EFT transactions through banks
  - Eligibility inquiry to response
  - Authorization request to response
  - Claim status inquiry to response
- CMS recommends full loop end-to-end
  - Between providers and payers
  - Don't rely on software vendors solely
  - Law applies to you, not your vendor

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A Word about Testing

DO NOT UNDERESTIMATE THE TIME, EFFORT & RESOURCES REQUIRED FOR COMPLETE END-TO-END TESTING!!

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Mass Deployment

Issues for the industry

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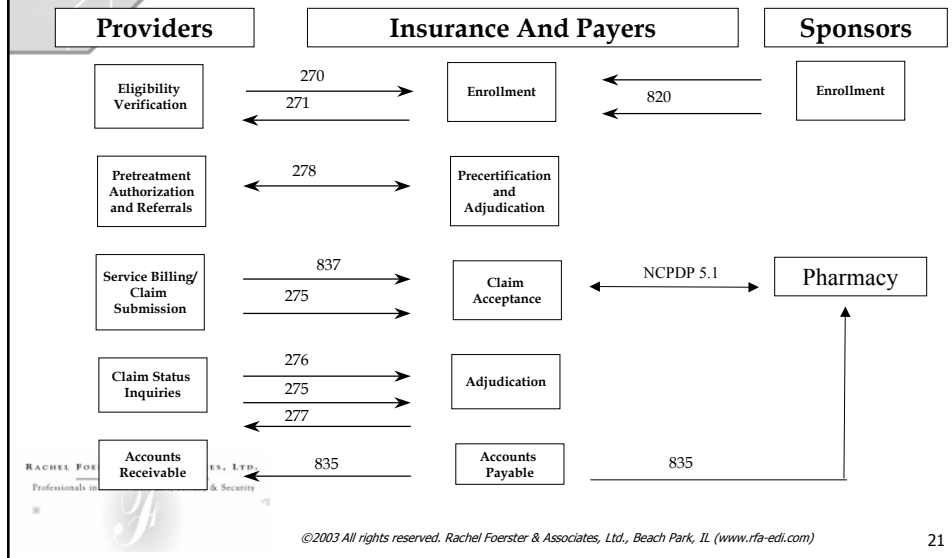

Final Rule HIPAA Estimates

- Providers: ~695,824
- Payers: ~3,078
- Self Administered Payers: ~50,000
- Other employer Health Plans: ~2,550,000
- What does this mean for **_YOU_**?

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The Magnitude of the Challenge

Providers	Insurance And Payers	Sponsors

| Eligibility Verification | 270 / 271 → ← | Enrollment | ← 820 | Enrollment |

| Pretreatment Authorization and Referrals | ← 278 → | Precertification and Adjudication | | |

| Service Billing/ Claim Submission | 837 → / 275 → | Claim Acceptance | ← NCPDP 5.1 → | Pharmacy |

| Claim Status Inquiries | 276 → / 275 → / ← 277 | Adjudication | | |

| Accounts Receivable | ← 835 | Accounts Payable | 835 | |

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Gartner Research

"For HIPAA to work, more than 13 million pairs of a payer and a provider must implement an average of 2.2 transactions each."

– Assuming only one analyst day per transaction, the industry would need 2.9 million analyst months to implement HIPAA

Research Note K-13-0374

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HIPAA Testing

- Incoming transactions
  - Payer: 820, 834, 837s, 270, 276, 278, 275 (+HL7)
  - Provider: 835, 271, 277, 278
- Outgoing transactions
  - Payer: 835, 837s+COB, 271, 277, 278
  - Provider: 837s, 270, 276, 278, 275 (+HL7)
- Self testing -- *before engaging trading partners*

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Testing Challenges

- How to test with trading partners within the compliance dates?
  - Without becoming their "EDI trainer"
  - Without constant disputes and finger pointing
  - Without disrupting my production
  - Without losing my shirt
- How are you going to test all the low volume connections?
  - How much will "free" testing really cost?
- Is "certification" the solution?
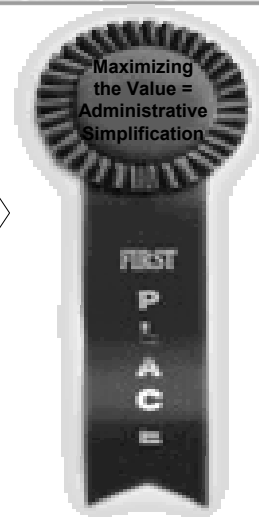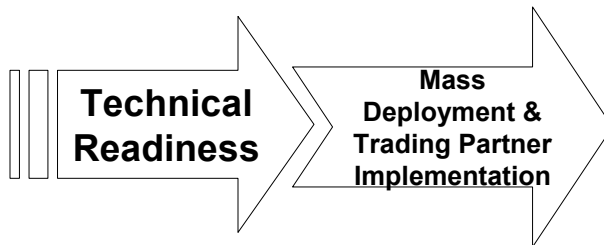
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Mass Deployment Requirements

- A comprehensive & detailed test plan – includes:
  - Identification & documentation of project's life cycle
    - From project initiation to production conversion
  - Estimated time to do the work
  - Estimated type, number and skill sets of resources
  - Estimated costs and establish budget
  - Method to identify, document and resolve risks
  - Involvement & support of all affected departments & functions
- Recognition that it's *not a one-time deal*
  - Must establish a group for ongoing support
    - Technical and business

Each Step of the Journey Increasingly More Difficult

Technical Readiness → **Mass Deployment & Trading Partner Implementation** → **Maximizing the Value = Administrative Simplification** (FIRST PLACE ribbon)

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