HLN’s Perspective: Development of Syndromic Surveillance Standards for Meaningful Use

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Purpose of this talk

- Describe HLN’s perspective on this collaborative partnership
- Describe the process resulting in the successful development of recommendations for Syndromic Surveillance.
  - Identify challenges and lessons learned
HLN’s Background

- Small company providing consulting services in public health information technology
- Public Health projects for over 15 years
- Last several years: HIE and Meaningful Use activities; HL7 messaging guides
- One of our main efforts: Help align Public Health with Meaningful Use / HIE activities
HLN’s Role for this project

- Deliverables: Preliminary / Provisional / Final Rec
  - Documentation of Business Process Analysis
  - Plan: Technical Approach ➔
    Actual: Minimum Recommended Data Set and provide bridge/help translate data set for SS PHIN Messaging Guide (CDC OSELS)

- Role
  - Facilitate discussions; build consensus
  - Analysis and documentation
  - Coordinate with CDC OSELS
Project Timeline

- Total: 4 month project; overlapping activities
- 3 weeks to develop Preliminary Recommendation
  - High-level Business Process Analysis; Preliminary Minimum Data Set
  - One in-person meeting; Daily WG calls
- 2 months to conduct, finalize, and document business process analysis
  - One in-person meeting; Weekly WG calls
- 3 months to finalize Minimum Recommended data set and coordinate with CDC QSELS
Business Process Analysis

Methodology

- Plan: Top-down approach; PHII’s *Taking Care of Business* Methodology
- Actual: Start with **high-level** business processes followed by defining data set
  
Knowledge transfer in short time
  
Change facilitation style from exploratory to decision-driven
Business Process Analysis

- How to document the “Art of Syndromic Surveillance”? 
  - System analysis of data is limited 
  - Investigative human analysis (characterization, interpretation, synthesizing) of data is needed 
  - Analysis is not linear; cyclical, iterative
Task Set 2 (TS2): Characterize, Interpret, and Analyze Data

- **Inputs**: Counts and Results of Automated Statistical Algorithms
- **Input Level of Authority**: 
- **Input Contact**: 
- **Input & Output Health Condition of Interest**: 
- **Input & Output Purpose**: 

**Start**

1. **Review Results from TS2**
2. **Run Ad Hoc Analysis**

**3. Characterization of Results**

- **Sorting and Grouping**
- **Frequency and Distribution Analysis**
- **Time Series Analysis**
  - Time Series Analysis Across Historical Norms
  - Line Listing / Drill Down
  - Other Statistical Algorithms

- **Review Flags**
- **Generate Flags**
- **Geo-Spatial Analysis (Facility, Zip Code of Residence)**

- **Severity Assessment**
- **Data Quality Check: Internal Consistency, Misclassification**

**5. Conduct Data QA (P70)**

**4. Output, Characterized Results**

**6. Synthesize/Characterize Results in Context**

- **7. Factor Information From Other Sources**
  - (e.g., Colleagues, Other Situational Information, Media)

- **8. Pattern Analysis Across Syndromic Data: Compare Outcomes Across Individual Characterizations (TS2.4 Output) for Corroboration or Discrepancy**

**Output Conclusions and Results of Characterization and Pattern Analysis**

**Refine Analysis?**
Business Process Analysis

- Identifying that the main business process is “conducting syndrome-based population health monitoring”
  - Multiple inputs rather than separate business processes
Minimum Recommended Data Set

- **Scope**: Data set for *current* practices
  - Common tendency to gravitate toward improving SS with wanted data
  - Implement now vs. later
  - Minimum data set vs. kitchen sink
  - Variations in practices

- **Consensus building**
  - Agree on how to reach consensus despite differing opinions
What worked

- Strong participation from project sponsors
- Adaptability
- Communication
  - Multiple stakeholders + Various Locations + Tight Timeline = Potential disaster, unless have vigilant communication
- Workgroup members
  - Contributing their expertise and consider differing opinions
  - Collaborating with each other
Contact Information

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