Interoperability Questions and Issues: Assessing Implications of the NAACCR Clinical Data Interoperability Pilot Project

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Interoperability hurtssss poor SMESMO!!
Yesss, hurtssss!!
The NAACCR Charge

Examine transmitting cancer abstracts:

- hospitals ↔ central registries
- not ccr ↔ nat'l programs

Consider transmitting data to entities outside cancer surveillance community

Attend to interoperability issues (NAACCR priority)
1. Issues
1.1. Size & Processing Time

CDA format $5 \times 20 > v11.3$ or $v12$

- Larger size = longer processing time.
- Project focus was accuracy, **not** size
  - Could reduce size $\approx 10\% \leftrightarrow 15\%$
- Remove optional elements
1.2. Batch vs. Individual Records

CDA: One record = one file
- Makes sense in real-time, clinical environment
- Example: transmit a discharge summary

CCR: Multiple records = one file
- Makes sense in surveillance environment
- Flexibility essential (1 ↔ < ∞ records)
1.3. State CCR ↔ National Programs

CDA submission:
- $\geq 100,000 \rightarrow 2,000,000$ files, 1 / record

Test
- 500,000 files
- Zipping: 10x $\rightarrow$ 20x longer (CDA overhead)
- Not economical for CCR
1.4. Develop an Editor

Current standard
- Simple
- Proprietary flat file record

CDA options:
- Custom XML editor
- Web-based tool (e.g., Xforms)
- Non-proprietary as is, customizable
1.5. CDA Maintenance Resources

CDA development costs not trivial
Documenting and versioning
- E.g., v12 and beyond?
- Non-standard items (e.g., state)
- CDA object identifier (OIDs) codes
2. Recommendations
2.1. CD WG Activity

Explore alternate file formats
Explore editing and transformation tools
Monitor national standards
  - Interoperability
  - Electronic transmission
2.2. A Board Request

Examine XML options (send / receive)
- Hospitals ↔ CCR
- Non-hospital reporters ↔ CCR
- CCR ↔ NAACCR, NPCR, SEER & CoC
- “Green CDA” (mini-CDA)
  - Batch record capability
  - Processing overhead

Feasibility of a NAACCR XML?
2.3. CD WG Next Steps

Explore & select alternate (national) XML format
Develop project proposal
  - Scope-of-work
  - Budget
  - Subject matter experts, as necessary
2.4. Collaborate

Focus on interoperable surveillance systems
NAACCR and:
- Sponsoring member organizations
- Cancer registry software vendors
- EMR/EHR vendors

Understand Federal EMR/EHR initiatives
Contribute to public & private standards development
3. Next Steps
3.1. CD WG Current Work

Developing basic XML requirements document
- Interoperability requirements
- Address / avoid CDA issues
- Define test data set
- Expand # of pilot sites by 1

Defining phase 2 proposal for NAACCR Board

Working with subject matter experts
3.2.1. Surveillance Partners

- American Cancer Society
- American College of Surgeons
- American Joint Commission on Cancer
- Canadian Partnership Against Cancer
- CDC National Program of Cancer Registries
- College of American Pathologists
- National Cancer Institute
- National Cancer Registrars Association
- Public Health Agency of Canada
3.2.2.1. Non-Surveillance Partners

American National Standards Institute, Accredited Standards Committee (ASC) X12
- Electronic data interchange (EDI) standards
- Healthcare Information Technology Standards Panel (HITSP)
  - Public – private partnership
  - Harmonizes / integrates clinical & business standards
3.2.2.2. Non-Surveillance Partners

Health Level 7 (HL 7)
- Develops framework and standards for information exchange, integration, sharing, and retrieval
- Supports clinical practice and managing, delivering, and evaluating health services
3.2.2.3. Non-Surveillance Partners

Integrating the Healthcare Enterprise (IHE)

- **Purpose:** create interoperable information transmission frameworks

- **Work:** define, test, and implement standards-based electronic health records interoperability
3.2.2.4. Non-Surveillance Partners

Public Health Data Standards Consortium (PHDSC)

- Public / private consortium:
  - Public health IT standards for individual and community health
  - Advocate for IT standards to benefit healthcare and population health
Lucky, lucky SMESMO! Interoperability! Yesss! So preciouss!!"
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