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

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Interoperability hurtsss
poor SMESMO!!
Yesss, hurtsss!!

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 x ↔ 20 x > v11.3 or v12

- Larger size = longer processing time.
- Project focus was accuracy, **not** size
  - Could reduce size ≈ 10% ↔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 ($1 \leftrightarrow < \infty$ records)

1.3. State CCR ↔ National Programs

CDA submission:

- ≥ 100,000 → 2,000,000 **files, 1 / record**

Test

- 500,000 files
- Zipping: 10x → 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 preciousss!!”

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