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

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Jim Martin, Ph.D. Director, Virginia Cancer Registry Richmond, Virginia Interoperability hurtsss poor SMESMO!! Yesss, hurtsss!!



The NAACCR Charge

Examine transmitting cancer abstracts:

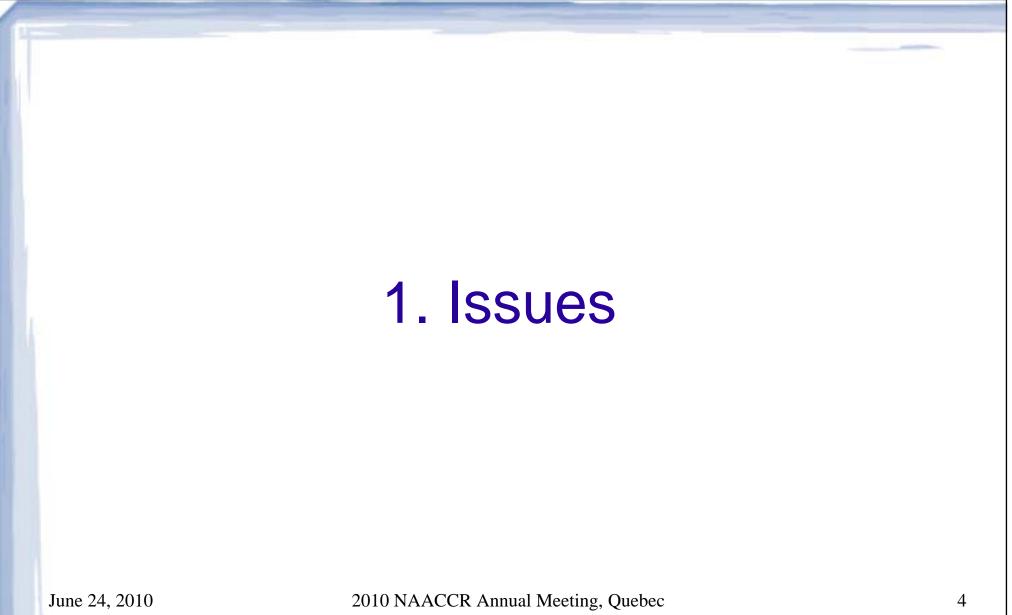
- hospitals ↔ central registries
- not ccr ↔ nat'l programs

Consider transmitting data to entities outside cancer surveillance community

Attend to interoperability issues (NAACCR priority)

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1.1. Size & Processing Time

CDA format 5 x \leftrightarrow 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)

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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

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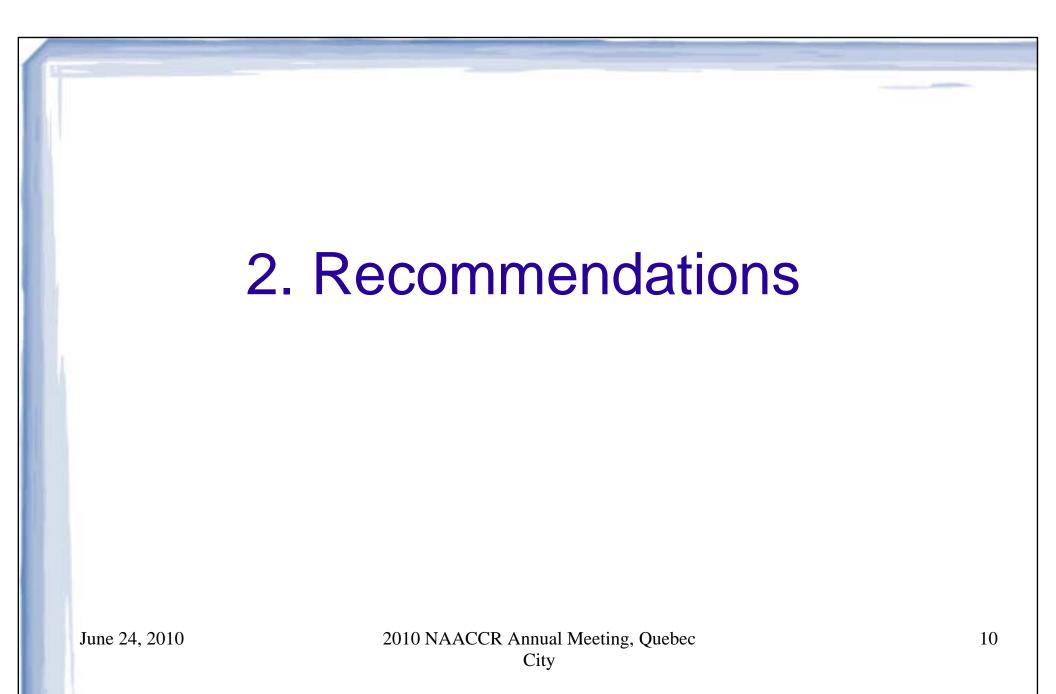
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1.5. CDA Maintenance Resources

CDA development costs not trivial Documenting and versioning

- E.g., v12 and beyond?
- Non-standard items (e.g., state)
- CDA object identifier (OIDs) codes



2.1. 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 \leftrightarrow CCR
- CCR ↔ NAACCR, NPCR, SEER & CoC
- "Green CDA" (mini-CDA)
 - Batch record capability
 - Processing overhead

Feasibility of a NAACCR XML?

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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

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3. Next Steps

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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

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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

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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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