The Analysis Challenge of Clinical Documents

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Wrapper
Not part of the document itself (may be removed)
Specific to a particular use of a document
May replicate items from the header or body

Header
Patient identity and demographics
Administrative information

Body
Clinical information
Key elements for patient safety are computable where possible

Wrapper often works like an envelope addressed to an individual or workgroup

(Could be CDA, could also be something else altogether...)
Patient identity aligned with the E-MPI makes the document part of a patient's record.

Patient demographics as recorded in the document supports records management.

Narrative and data content are available in human readable form.

Data is also processable (eg codes, measurements).
A clinical view: Computable data priorities for Patient Safety

- **Priority 1 core data**
  - Blood Pressure
  - Weight
  - Height

- **Context and Continuity of Care**
  - Social circumstances
  - Family History
  - Clinical Narrative
  - Exam Findings
  - Assessments

- **Supplementary data and Management of care**
  - Problems
  - Diagnoses
  - Procedures
  - Care plan
  - Meds
  - Allergies

Door to needle time
A clinical view: Practical priorities

Priority 1 core data
- Blood Pressure
- Weight
- Height

Context and Continuity of Care
- Social circumstances
- Family History
- Problems
- Diagnoses
- Allergies
- Procedures
- Exam Findings
- Assessments
- Care plan
- Meds

Supplementary data and Management of care
- Door to needle time

Clinical Narrative
Anatomy of a Document
...with all the trimmings

- Supplementary indexing
- Clinical coding
- Full text indexing
- "Visual" recognition

Document type
- Care setting

Patient Identity
- Recorded demographics
- Human readable document

Records management

Annotation

Processable, computable clinical information

Meds

Functional Metadata for Business Processes
Functional Metadata for Business Processes

- Supplementary indexing
- Clinical coding
- Full text indexing
- "Visual" recognition

Care setting

Document type

Patient Identity

Human readable document

Recorded demographics

Records management

Annotation

Processable, computable clinical information

Meds
Documents are managed, communicated, analysed...

Folders may be physical collections, or views & lists constructed using attributes of the documents.

Document participates in business process

Envelope/wrapper for transport

Functional Metadata for Business Processes

Supplementary indexing

Clinical coding

Full text indexing

“Visual” recognition

Patient Identity

Human readable document

Recorded demographics

Records management

Care setting

Document type

Annotation

Record element 1

Record element 2 - n

Envelope/wrapper for transport

Record element

Header

Content

Meds

Documents are managed, communicated, analysed...
Existing Store

Document scanning

Specialist clinical systems, Social care etc.

Word processed letters

Record Storage Services

Records Management Services

External Store Adapter

eForms and eWorkflow

Record Access Services

Analyse that!
• Magic, of course! 😊

• Use the data for (exactly) what it’s worth
  – Use the “right stuff” well, it’s costly & (hopefully!) valuable
  – Don’t misuse data through technical sleight of hand
  – Make the most of everything that can be used safely for a particular purpose

• ...a bit like graceful degradation, without the degrading bit
Thank you for your attention

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