



DATA MAPS AND MAPPING

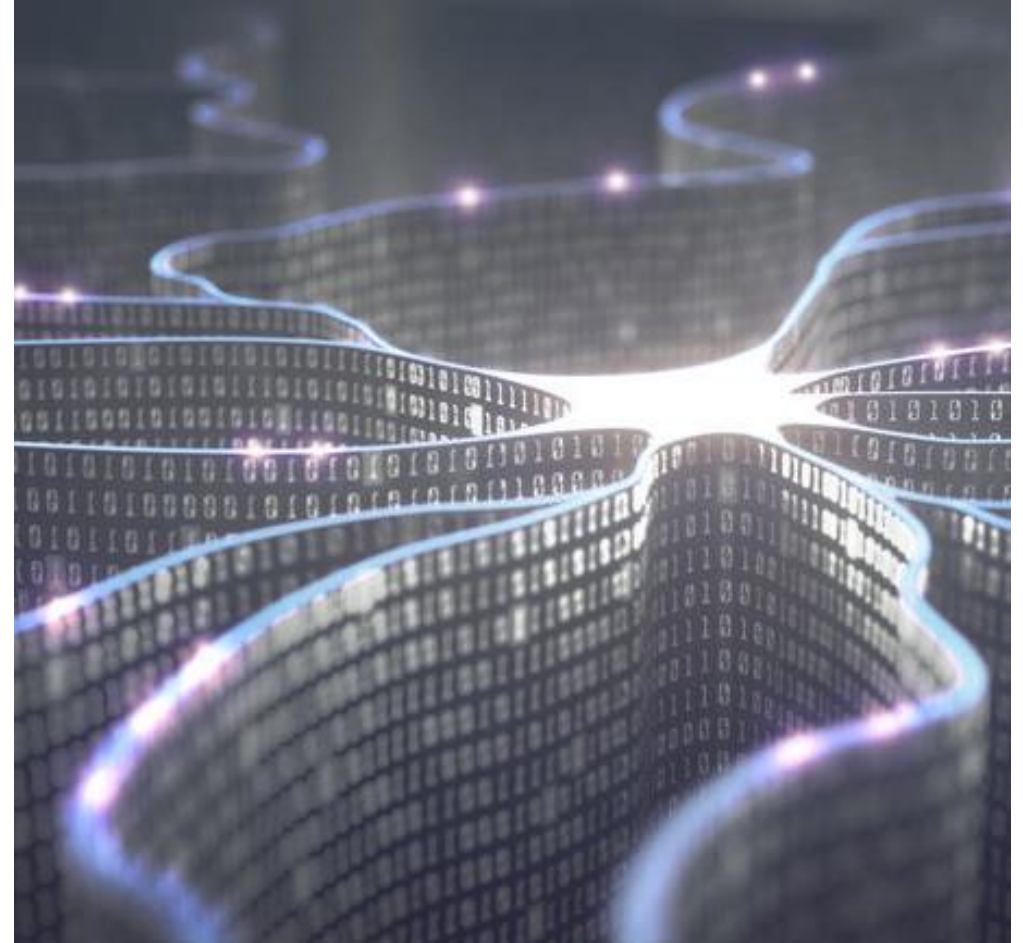
The unseen bomb

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We map to get a common format

- The Data Supply Chain
 - Clinical use
 - Share for clinical use
 - Collect for knowledge acquisition and feedback clinical decision support
 - Research from existing data
 - Other uses
 - Aggregation when you don't need the detail
 - Reporting
 - Billing
 - Trend analysis



Mapping ...

- Can change the meaning of the data
- Is expensive
- Requires maintenance
- Requires special skills
- Is increasing.....
- Is a mechanism to support vendor dependence
- Can be safety issue in clinical care

ISO 21564 Terminology Resource Map Quality Measures (MapQual)



PROCESS

- Country experts present problems,
 - What works and what doesn't
 - Often reflects experiences that have not been published
- Gather expert evidence
- Identify what is needed
- Develop the standard
- Nations contribute and vote
 - Update and publish
- Tested and used for 4 years
 - being tightened for clinical use cases

Determinants of map quality

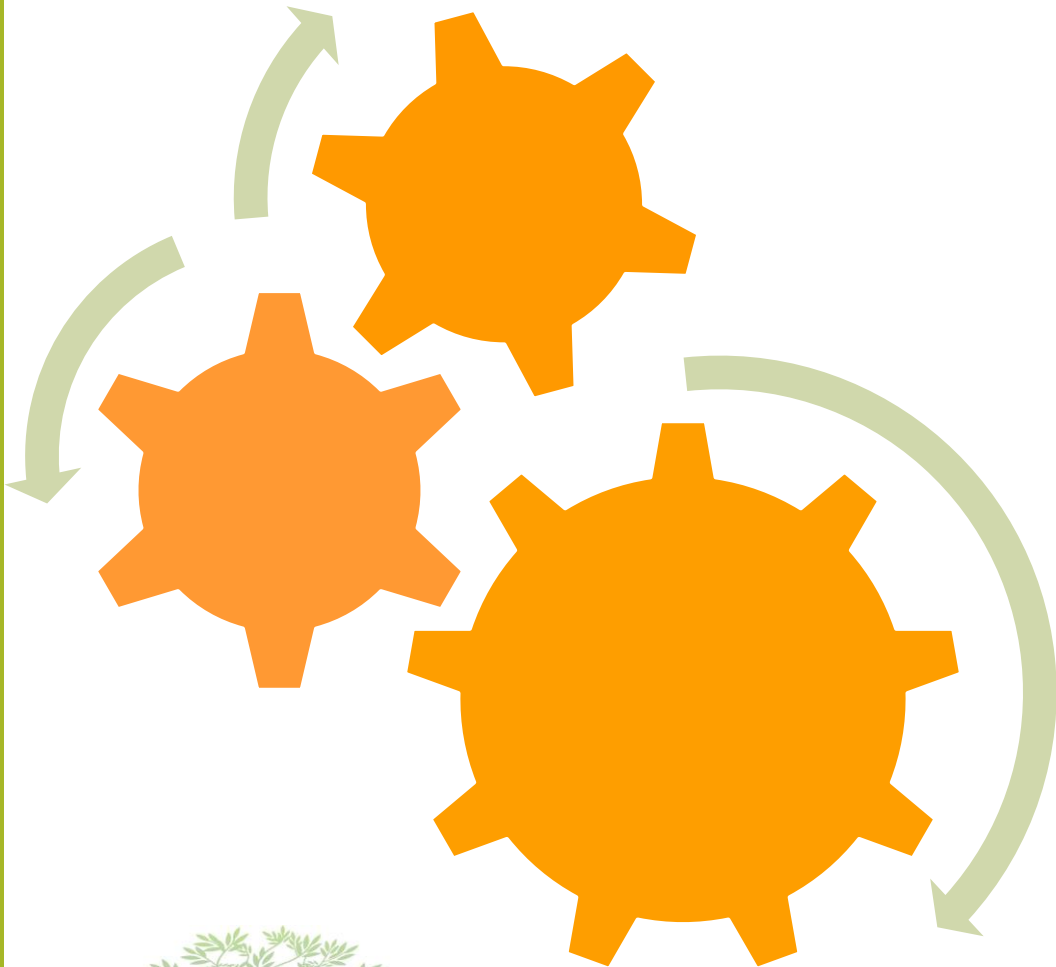
Terminology resource capacity – impacts ability to produce a map

- code system scope

Equivalence of the individual map - impacts safety of use and quality

- Equivalence of individual items as well as the map as a whole
- Identify the level of equivalence for each individual code map
- Understand outliers and how you manage them
- Published with the map

Determinants... 3: Building a map set



- **Single purpose**
 - Single use (unless 100% equivalence)
- **Currency**
 - Each time the code system changes – so does the map
- **Business Arrangements**
 - Third parties – quality assurance required
- **Methodology documentation**
 - For repeatability
 - For quality assurance
 - For validation
- **Workforce**
 - Skills in mapping
 - Skills in each code system

Determinant 4 Maintenance and Governance



- Establish minimum requirements for the use case
 - Which are the essential determinants to be met
- Regular quality assurance – independent
- Maintenance of process
- Retention of skills
- Consider contractual requirements

Issues.... What are the costs and safety issues

- Do you know who created the maps you use?
- Have the maps been quality assessed?
- Do they have a maintenance schedule – when are they updated?
- Where the maps built for your purpose?
- Is the map build repeatable – can you update it efficiently and effectively



Is mapping the best option?

- Benefits old systems (don't need to change them)
- Benefits software vendors (keeps us using their non-standard systems)
- Logical for data aggregation but....

If the source data were more standardised, we could automate more aggregation by using maps to reduce costs and improve quality.



Semantic Interoperability Impact

- Instead of getting your data ready when you in the middle of the healthcare race
- Get consistent from the start and reduce maps
- Get your shoes on before you start the race.....

Move to federated health data and systems....
Accounting systems all use this approach – the chart of accounts!





The changing world of EMR

1st Generation - best of breed

Cheapest solution, tactical, limited interoperability

2nd generation – monolithic

Centralized – one large acute EMR attempting to do everything for everyone with a bespoke data model

3rd generation – federated

Data focused, engineered for all care settings, longevity of standardized data, supports value-based care, citizen focused, modular, adaptive and additive, AI ready, communication ready

Reference: Rachael Dunscombe – Drivers for future EMR 2023, Barcelona openEHR conference

To avoid the bomb

- Assess your risk and costs
- **Quality assurance** for your purpose
 - Checked by a person with the **skills** (know the skills)
 - **Build skills inhouse**
 - Establish quality check points and contractual agreements
- **Reduce map** use over time, standardise early
- Understand how data is changing – the supply chain impact.



Actions – what next....

ISO TC249 is updating and extending the conformance requirements

- Make sure you know what is needed

- Contribute

- Learn (see ehe.edu.au for information on courses to build mapping skills)

- Have a plan....



More info...

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