Vicious to virtuous

The factors that influence and support high quality data collections .

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Authors

Paul O'Connor

Beth Reid

Lee Ridoutt

Bin Jalaludin (Jal)

Ric Marshall

Cliona O'Donovan

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Introduction- Journey to Iceland

And the traveller hopes "let me be far from any physician".....

And the student of prose and
conduct, place to visit ,
The site of a church where a
Bishop was put in a bag,
The bath of a great historian,
the rock where
An outlaw dreaded the dark ....

W.H Auden

Content

- **Introduction**
- **Method**
- **Key Findings**
- **Towards best practice**
- **Conclusion**

Data and Information quality [1]

data that is sufficiently accurate, timely and consistent to make appropriate and reliable decisions, rather than aiming to produce perfect data..

1. HIQA Dimensions of data quality used in Ireland://www.hiqa.ie/sites/default/files/2018-10/Guidance-for-a-data-quality-framework.pdf

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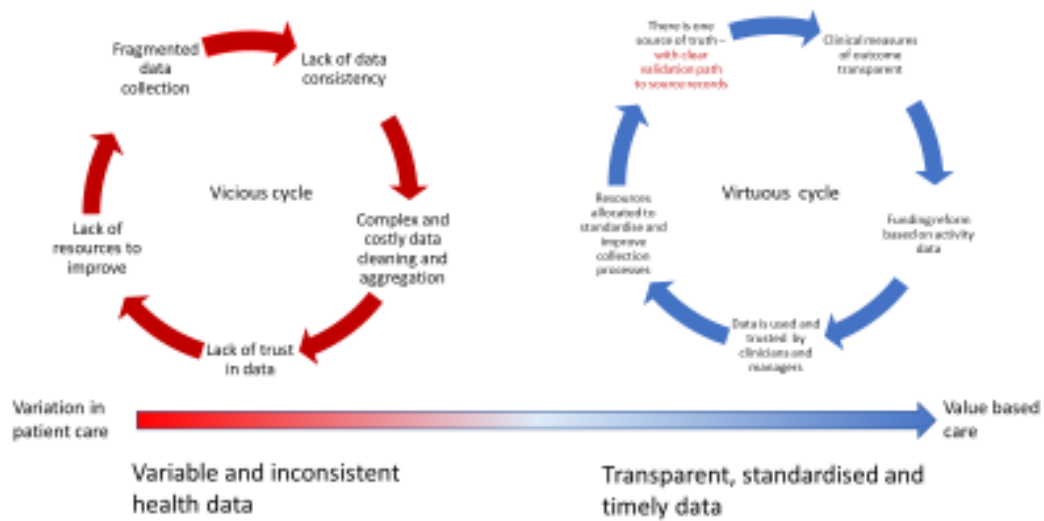# Data to information –problems [1]

- **Data gathering and integration**. Possible problems include fallible manual entry, biases (e.g. upcoding in claims), erroneous joining of tables in an EHR, and replacing missing values with default ones.
- **Data storage and knowledge sharing**. Potential problems are lack of documentation of the data model, and lack of meta-data.
- **Data analysis**. Problems can include incorrect data transformations, incorrect data interpretation, and use of inappropriate methodology.
- **Data publishing**. When publishing data for downstream, use not timely or relevant .

Data and information life cycle 2.

1.Dasu, Tamraparni, and Theodore Johnson. 2003. *Exploratory Data Mining and Data Cleaning*. Vol. 479. John Wiley & Sons.
2. https://www.hiqa.ie/sites/default/files/2018-10/Guidance-for-a-data-quality-framework.pdf

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From the vicious to the virtuous [1]

Variable and inconsistent data cannot support value based care

Method

The foundation of our insights into data quality with a focus **on data collection and classification** is based on work conducted over the last 6 years reviewing data collection processes, their impact on the quality of the data and establishing best practice.

The methods included detailed reviews of the original data sources, the quality of the collected data, benchmarking of processes, and interviews with data "stewards" and "custodians".

These insights were refined through hundreds of workshops with clinicians and the collectors of the data in developed and developing health sectors

key findings

The key driver of ongoing improvements in data quality are;

- **Interest** in using coded data by the clinicians and managers :
  - Measuring the Quality of care
    - Outcome measures e.g., Hospital- Acquired Complications
    - use of routinely collected data in clinical audit
  - Funding/invoicing
  - Understanding cost of care
  - Efficiency of care

- **Transparency** – the more the data is shared the better the quality

1. ISACA. (2019). COBIT® 2019 Framework: Governance and Management Objectives

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Towards best practice –Data

Make the data Important

- Quality and efficiency of care reform based on
  - o Activity/funding
  - o Outcomes
  - o efficiency e.g. Length of stay
- Identify and promote clinical champions
  - o Promote and demonstrate the value of the coded data for clinical quality performance measurement.

Towards best practice –Data

Make the data Transparent (access to all internal stakeholders)

- Benchmarking portal that measures
    - Data quality for funding and patient care
        - Outcome measure KPIs e.g. Hospital Acquired complications tools linked to clinical decision makers and clinicians
    - Efficiency measures
    - Cost data

Towards best practice –Data

Adopt one standard – (Count and Code in a standard way)

- Agree /adopt
    - Minimum data set definitions
    - Standard Admission policy
    - Care type definitions and rules for changing care type
- Adopted international classification standard and coding rules

Towards best practice –Governance

Make one body responsible for the rules and compliance

- Coding, Counting , Costing standards and maintenance
- Establish Coding Advisory Group
    - National standards on Medical records
    - Application of coding standards and queries
- Establish a Clinical Advisory group
- Funding framework

Towards best practice –Governance

Establish national KPIs that are sensitive to coding and counting variations

- Submission deadlines
- Data quality scores on compliance to standards
- Results of external audits
- Measure compliance and score
- Ensure compliance to KPIs is included in SLAs between Funders and Providers

Towards best practice –Process

- **Create viable data collection processes ; collection should be organised as a system not enterprise centric**
  - Develop workflows e.g coding by specialty/complexity mapped to competency of the coder, system based as well as external data accuracy/integrity audits.
  - Automate simpler records/ natural language with regular reviews and refinements of maps from natural language to data categories.
  - Use the technology

Towards best practice –Infrastructure

- Ensure IT systems are compliant and can accept code structures
- Improve the structure of source documents
- Open source Abstracting/reporting software and coding systems
- National data repository with 2-way validation
- Data quality tools that measure compliance to standards and provide targeted education to coders

The people – collectors and users

- **Make data collectors and their output valued**
  - Invest in building the capabilities of the existing workforce
  - Targeted competency-based training, continuous education
  - identify champions in the workforce, use them as change agents
  - Industry round tables performance orientation that includes including data quality achievements and challenges. E.g. Activity and quality data integrity advisory committees that review DQ metrics by clinical team.
- **Resource workforce appropriately**
  - Establish appropriate workforce size and competency based on KPI and common measures

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Conclusion

making the data important and transparent in funding and clinical care decision making by the clinicians and managers who use the data will ensure that resources and recognition are provided to the data gatherers, leading to a virtuous cycle of quality improvement