Better Data, Better Care?

How Can Data be Used to Improve Quality and Safety of Health Services?

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Monash Health

MONASH University

Monash Health acknowledges the Traditional Custodians of the land, the Wurundjeri and Boonwurrung peoples, and we pay our respects to them, their culture and their Elders past, present and future.

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Better Data, Better Care?

- Why is translating data into practice important?
- What are the most common barriers faced?
- How can we make it happen?
- How do we measure it?

Why is translating data into practice important?

Importance of data in healthcare

- We all want to improve healthcare to make patients and society healthier by curing and preventing illness or disability more effectively

- Data and analytics provide a suite of new and exciting tools that could enable rapid and significant advancement

What are the potential impacts of better data for patient care?

- Higher Quality of Care
  - Better patient outcomes
  - Less error and variation from evidence based treatment
  - Less patient harm (i.e., risk mitigation)
- Better compliance with legislation and standards
- Better quality care is a win-win
  - Healthier community with reduced healthcare utilisation
    - Allows focusing resources on those in greatest need
    - Provide care to more people, with the same or reduced resources
  - Improved job satisfaction for healthcare providers


HIGHER QUALITY OF CARE
LESS PATIENT HARM
BETTER COMPLIANCE
ALL GOOD STUFF, SO TRANSLATION INTO PRACTICE IS EASY, RIGHT?
RIGHT?

What are the barriers?

Barriers for Digital Health Data, Analytics & Informatics

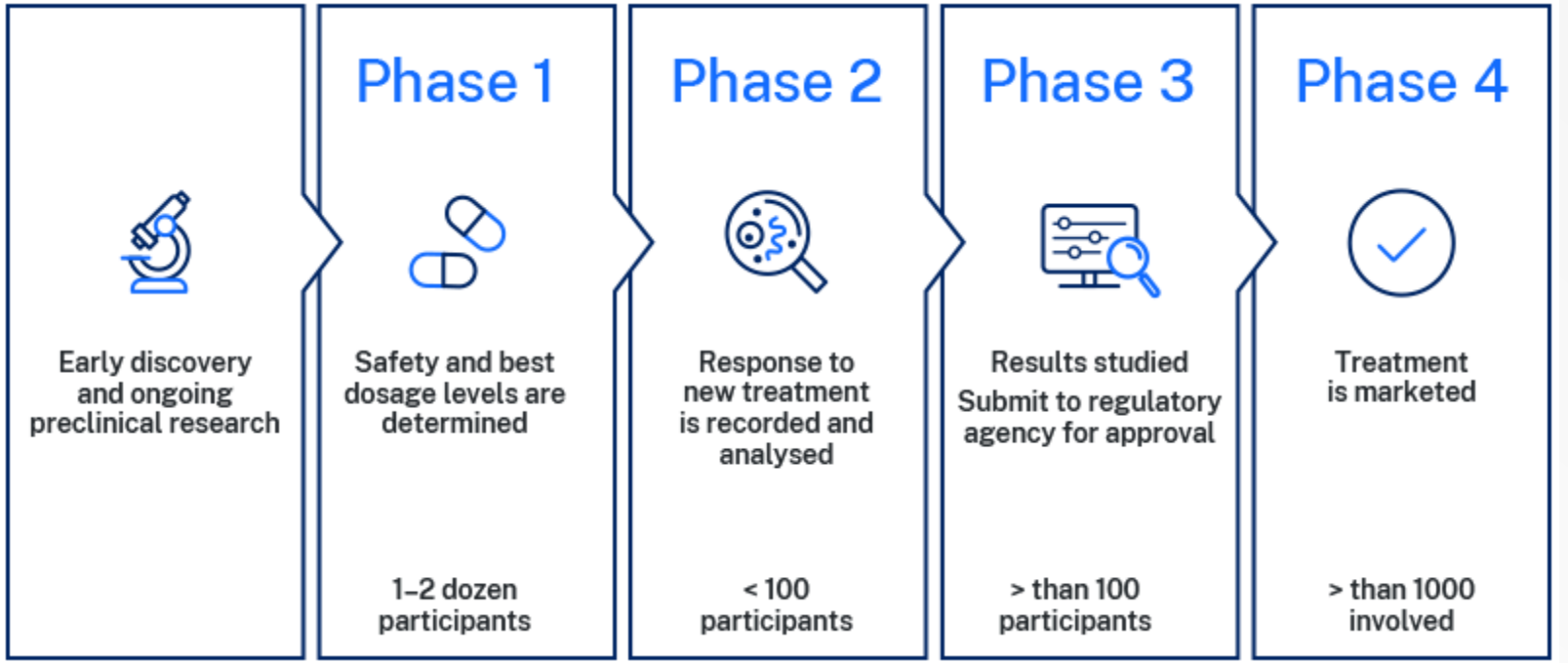
- Being the ‘new kid on the block’ with a lack (real or perceived) of track record and/or opportunities to provide and prove value

- Being viewed as just an on-tap service or extension of a Business Intelligence Unit, rather than something that requires care and expertise to develop and implement

- **Not being able to implement/operationalise successful data models/initiatives into practice**

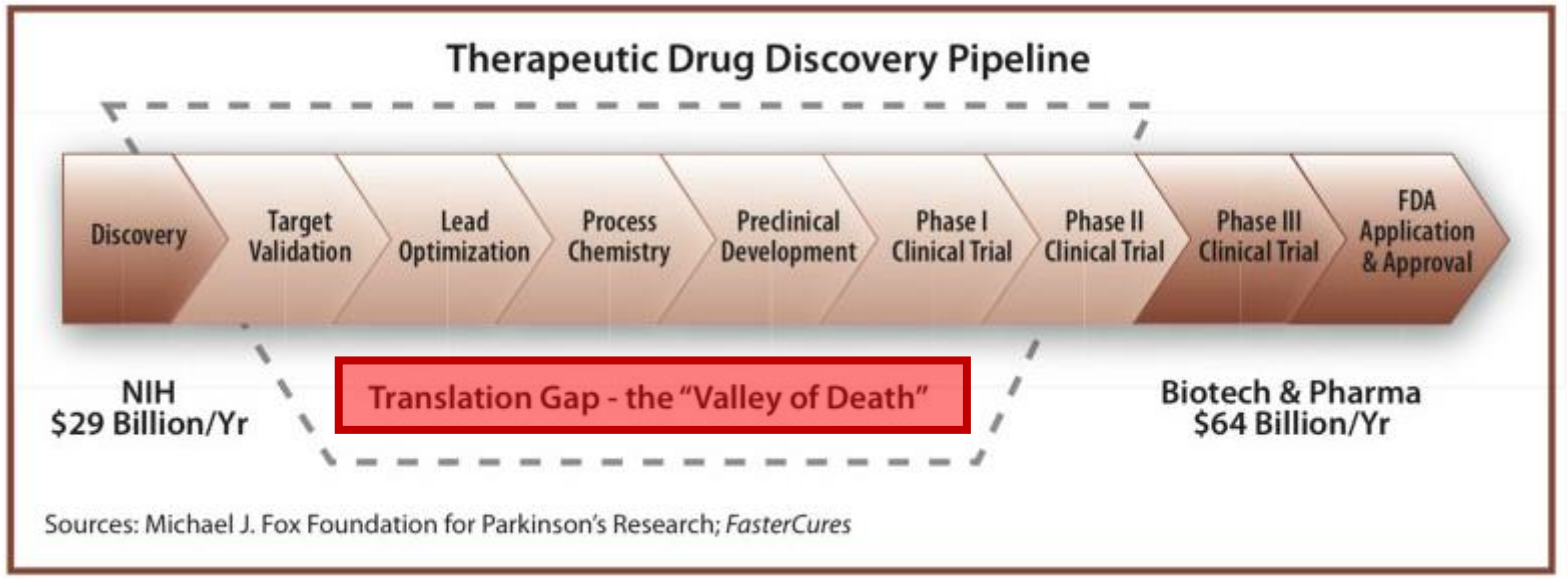
A situation that is somewhat analogous to issues faced in the 1990s, when it was realised that significant amounts of medical research was ineffective at producing meaningful outcomes…

Traditional Phases of Medical Research



Credit: Cancer Institute of NSW

The ‘Valley of Death’ in Medical Research



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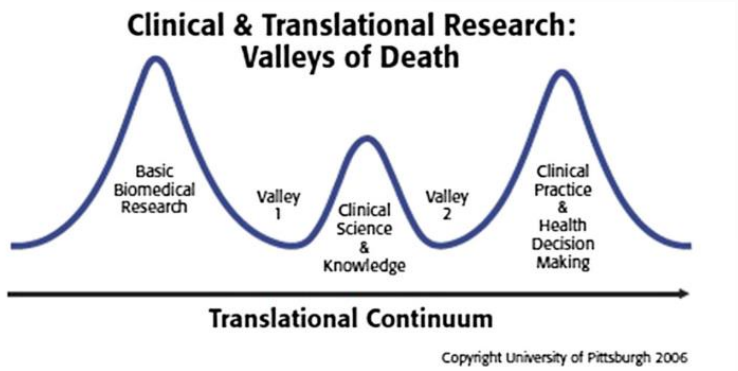
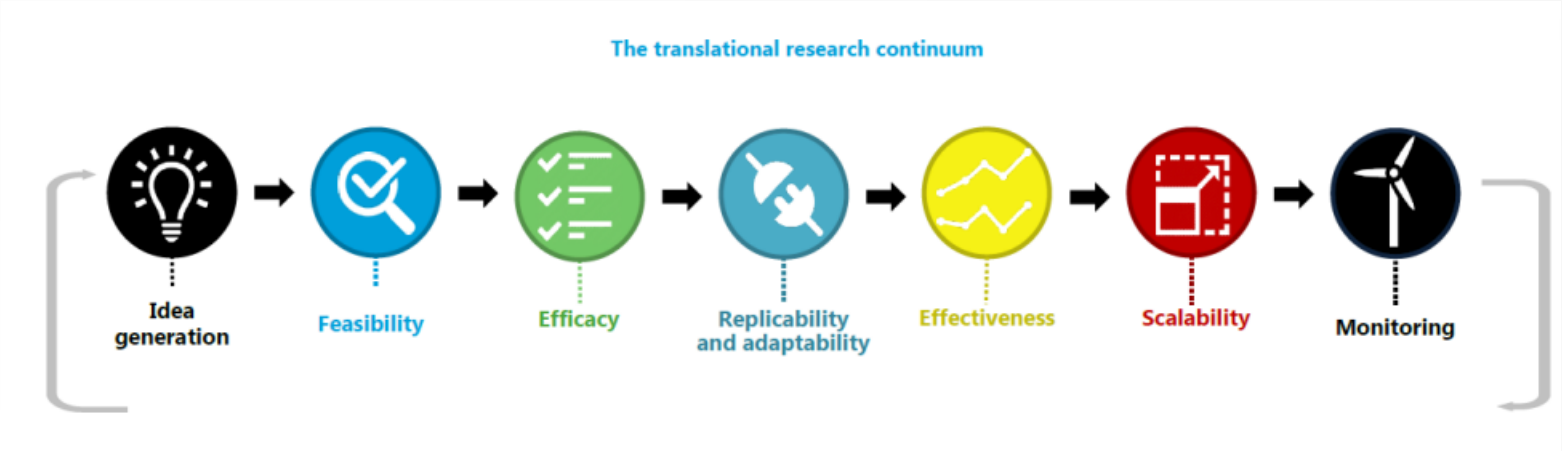


- Vast majority of great ideas in medicine end up in the Valley(s) of Death
- End results are:
  - wastage of ideas, effort, time and money
  - general disillusionment with innovation, research and development
- Realisation of this led to the birth of of translational research and translation science

Credit: Monash University

How do we avoid having a Valley of Death in Healthcare Data and Analytics?



Credit: NSW Health

- Connect with the intended recipients of the data as early as possible, to ensure the above are addressed
- Address translation and implementation into the real world as part of research and development – not as an afterthought
  - Co-design, collaboration and consultation are critical


Don't worry everyone!
Making it happen will be easy...

How can we make it happen?

Avoid the ‘Valley of Death’ and have meaningful impact on patient care

- We need to translate data and analytics into clinical action
- Axiom of data to information to knowledge…
  - Data needs to be transformed into information
  - Information needs to be synthesised by healthcare providers to become knowledge
    - Requires gaining the trust of organisations, regulators and consumers
    - Needs to be delivered in a way that is seamless in the workflows of the intended recipient/effector/actioner of the data
  - It then may be used to drive decisions made in a patient’s care or the operation of healthcare organisations

Deliver on meaningful benefits

- **Reduce clinical risk**
  - **Address previous adverse events and issues**
- Improve Patient Experience
- Drive Efficiency

How can we make it happen?

- Invest heavily to use data to engage, enable and inform Quality and Risk Management processes
- Engage closely with and gain support of relevant Boards and Executive Teams
- Work with your consumers/patients and the community at large to harness their opinions and power in advocacy
- Build excitement!

Case Study: Monash Health's Sentinel Event Process

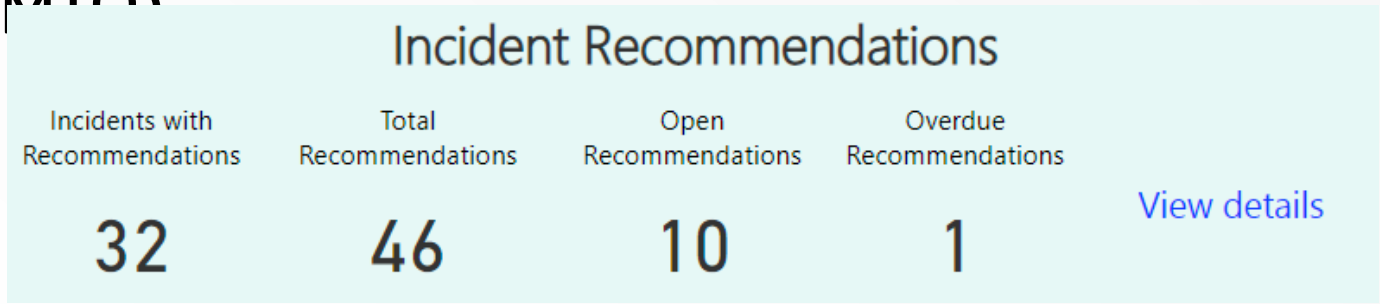
- All significant clinical events are reviewed by an expert panel who undertake a root cause analysis and document recommendations (with an owner and timeline for completion)

- Once the recommendations are approved by Monash's Clinical Council, they are submitted and tracked by Safer Care Victoria

- There is informatics representation and/or involvement on every panel

Sentinel Event Recommendations

- Chief Medical & Nursing and Midwifery Information Officer (CMIO/CNMIO)



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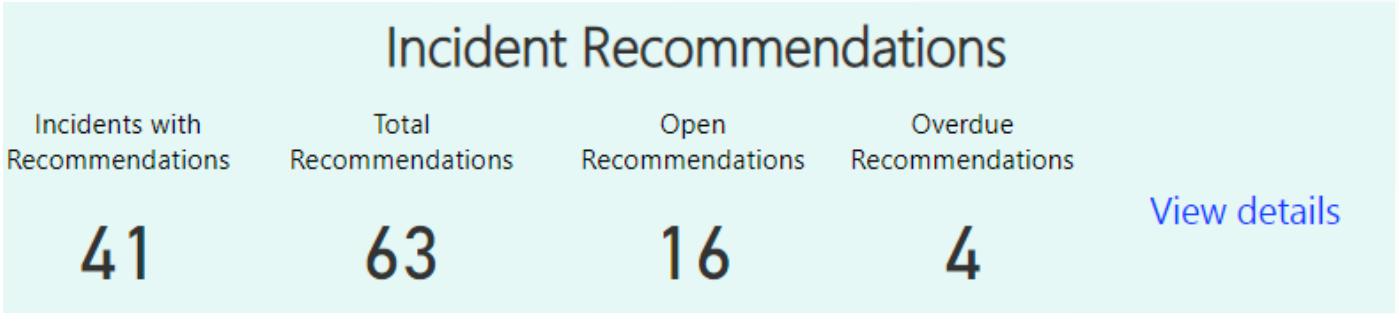

How do we measure it?

Measuring improvement in quality and safety

- Initially, do not look to reinvent the wheel by creating new measures of quality and safety

- Link in to existing structures and methods
  - Safer Care Victoria (or equivalent)
  - State Departments of Health (VAED, VEMD, VINAH)
  - Local quality, safety and risk process and structure

Measuring improvement in quality and safety

- Quality & Safety is an established field in healthcare
  - Partner with this field, rather than try and compete or reinvent
  - Institute for Healthcare Improvement (IHI) in the US and The Health Foundation (THF) in the UK

- Once we've got these basics right and built confidence and trust, we can then look to create new measures that provide unique insights

What’s next?

Questions to ask yourself:

- What are real world outcomes do you intend to achieve with your data and analytics initiatives?
- How do you envision your data being implemented in practice?
  - Are your initiatives at risk of falling into a ‘Valley of Death’ due to lack of ability to translate into the real world?
- What strategies are you using to connect your data and analytics to the end consumers of the data?
  - Are you co-designing, collaborating and consulting early enough?

Questions to ask yourself:

- Does your data have clinical, operational, academic and consumer credibility?
- Does your work need to connect with the existing quality and safety structures of the organisation(s) that you intend to influence with your data?
- Are you measuring impact, documenting and promoting your success?

Questions?

Thanks