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Implementation science and economic evaluation: not so strange bedfellows building a case for sustaining change

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Background

- Australia spends almost $6B in health and medical research each year
- There is an average 17 year gap to translate just 14% of research into benefits for patients
- **Implementation science** focusses on addressing real world barriers to the uptake and sustainability of new models of care
- **Economic evaluation** informs considerations around the ‘value for money’ of new models of care

From Longman Dictionary of Contemporary English

strange bedfellows

two or more people, ideas etc that are related or working together in an unexpected way

ICIF evaluations

- AusHSI was commissioned to evaluate 23 individual projects as part of Queensland Health's $35M Integrated Care Innovation Fund (ICIF)
- Projects were led by clinicians and were mostly small scale, quality improvement projects within a single hospital or health service.
- Aimed to deliver better integration of primary and tertiary care, address fragmentation in services and provide high-value healthcare

Approach

- Flexible overarching evaluation framework – individualised but generalizable
- Mixed methods
- Adoption of validated, customised and project-specific survey tools
- Post-project interviews and focus groups with key stakeholders to capture qualitative data

Evaluation outcomes

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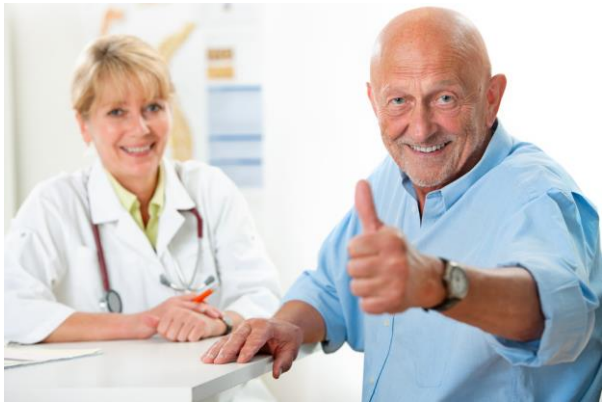
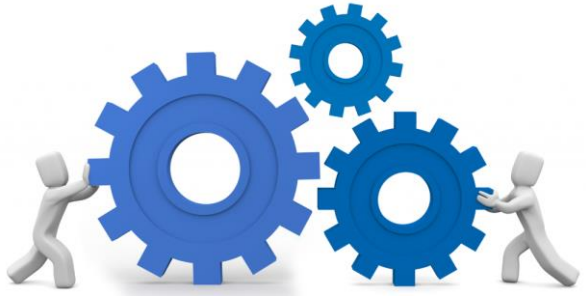
Patient/project outcomes



Economic outcomes

Implementation outcomes



Patient/project outcomes

Project specific

Symptom scores Quality of life scores Adverse events Early intervention dental services	Patient clinical outcomes
Patient satisfaction Patient access to services	Patient non-clinical outcomes
Admissions avoided/bed days saved Dental caries or extractions avoided	Health service utilisation outcomes
GP training outcomes	Non-patient project outcomes

Economic outcomes

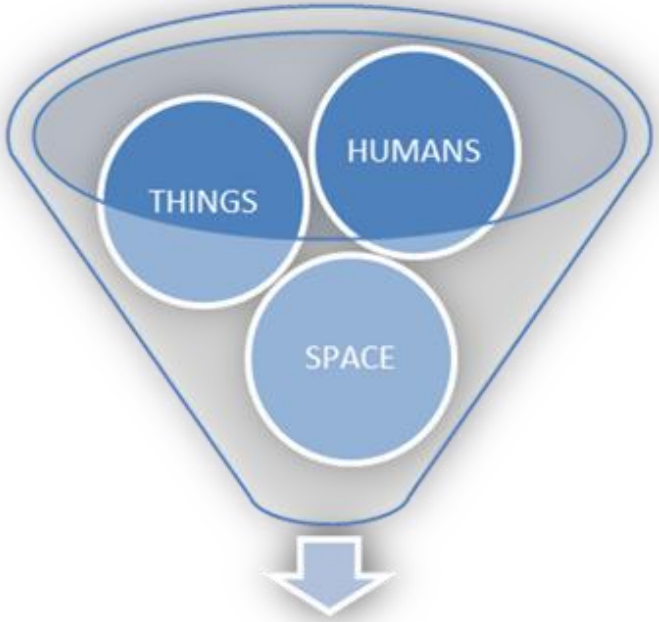
- Focus on **value for money**
- Two key components:

1. Cost of **delivering the change**
   - *"AusHSI costing tool"*

2. **Cost 'offsets' or savings** generated from the project due to changes in health service utilisation
   - *Retrospective, administrative datasets where possible*

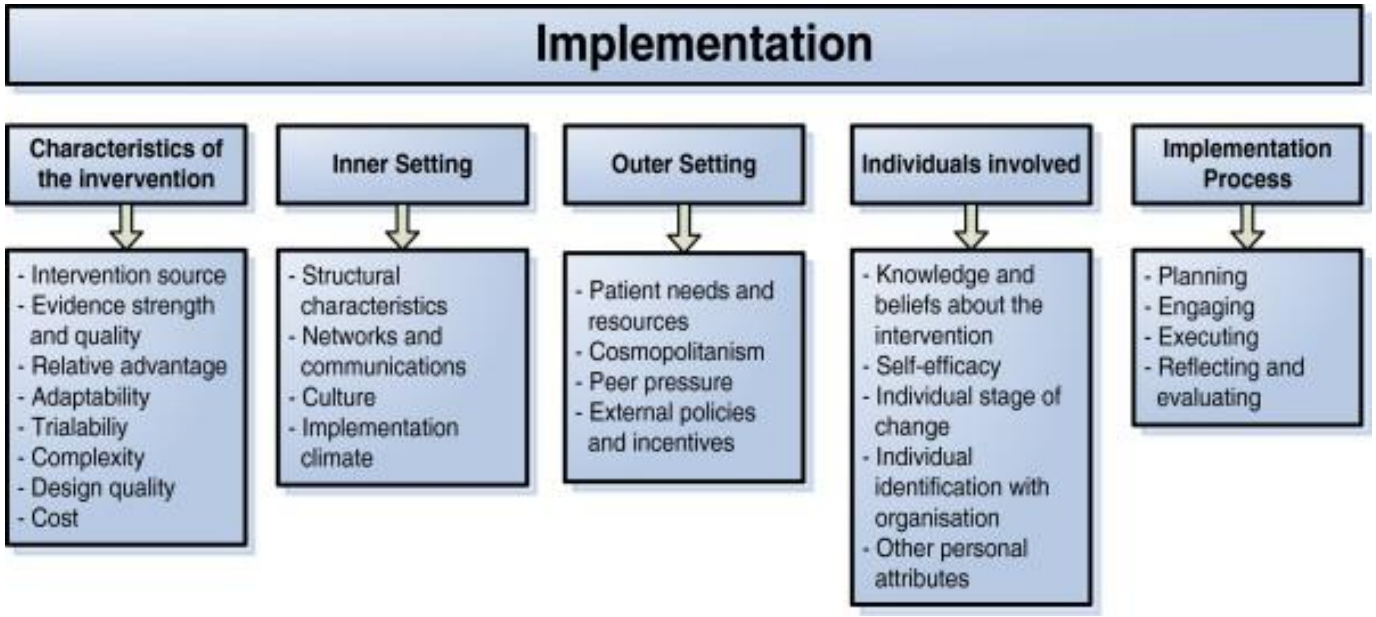
AusHSI Costing Tool

- "**Humans/things/space**" approach (Page et al 2013)
- Headings included:
  - Humans
  - Governance
  - Training/external engagement
  - Space
  - Things



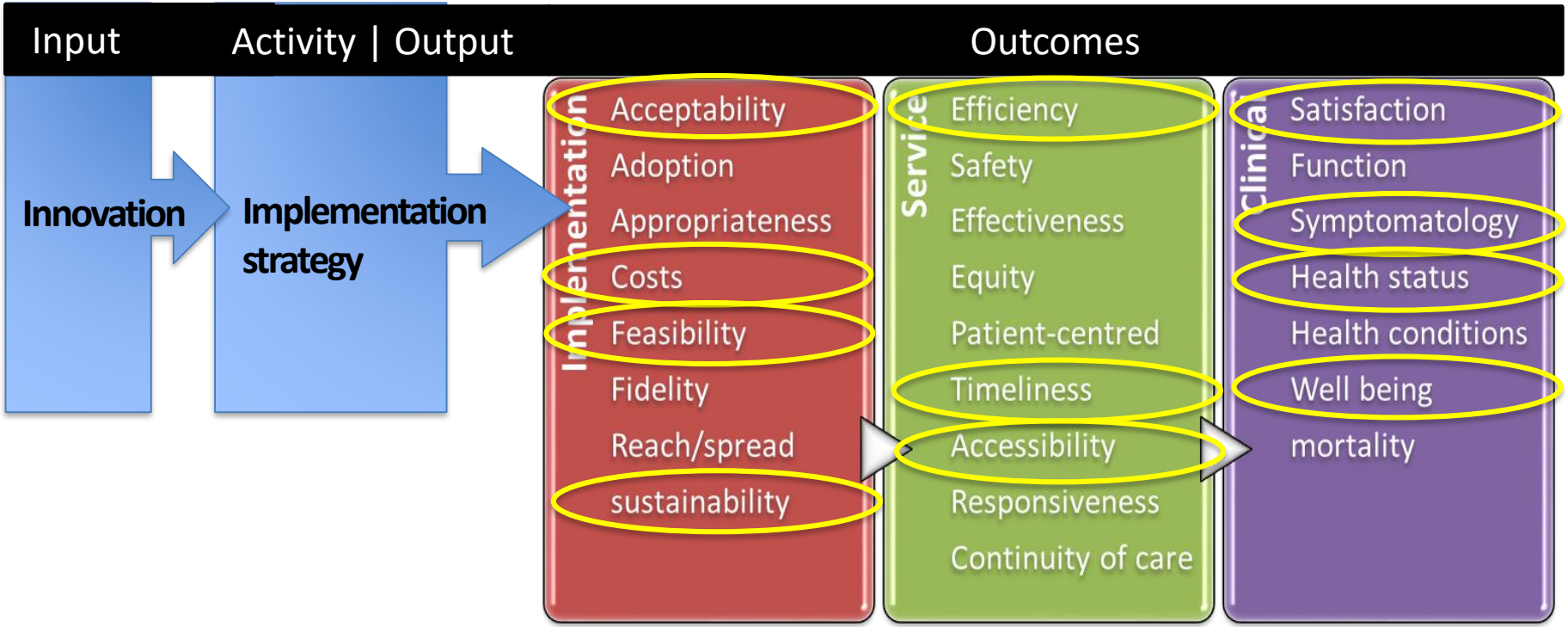
Implementation evaluation

We adopted the C-FIR framework to identify **barriers and facilitators** to change.



Implementation Evaluation

Conceptual model of implementation



Adapted from Proctor et al 2009, Proctor et al 2011, Australian National Health Performance Framework 2009

Implementation evaluation tools

All projects adopted the following core tools:

Non-validated:	- AusHSI C-FIR pre/post survey
	- AusHSI issues register
Validated	- Provider satisfaction tool (adapted from RAND)
	- Vic Health Partnerships (where appropriate)

Other tools were adopted as appropriate on a per project basis

Interviews and focus groups

- The evaluation plan allowed for a series of 5 interviews or 2 focus groups, to be conducted for each project at the end of the project

- Interviews will be with key stakeholders with the aim of capturing multiple perspectives

- Interview question guide is based on the five C-FIR domains and will also incorporate questions around issues as identified in the issues register

Case Study: Queensland Civil and Administrative Tribunal (QCAT) Guardianship Process Initiative

- Vulnerable patients with impaired decision making become ‘stranded’ in hospital
- Although medically stable, patients cannot be discharged until a decision has been made via a QCAT hearing
- QCAT waiting lists mean that patients typically remain in hospital for many weeks, consuming valuable bed days
- Much of this stay is due to the misalignment of hospital and QCAT processes and resources

QCAT: core components

- 8 additional dedicated hearing days per month
- The sitting of more hearings at hospital facilities
- Appointment of a hospital QCAT Social Work Coordinator to co-ordinate, liaise and manage hearings processes
- Assignment of a QCAT Case Manager to manage hospital based guardianship applications

QCAT: patient and economic outcomes

- The time between the QCAT application and QCAT hearing was reduced by 48 days per patient.
- Length of stay reduced by 25 days per patient
- Translated to 4,767 bed days saved per year (12 bed years!)
- Cost per bed day saved was $101

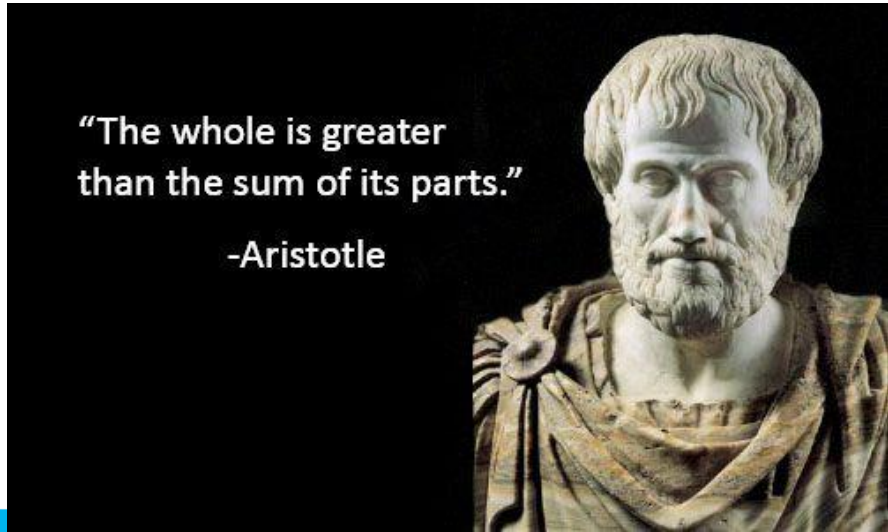
QCAT: implementation outcomes

- Factors influencing successful implementation:
  - Available resources
  - Tension for change
  - Championship at senior leadership level
  - Leadership and stakeholder engagement
  - Access to and sharing of information
  - Formally appointed implementation leader
  - Pre-implementation planning

- New model has been permanently adopted and funded by the hospital, with several other hospitals also considering its adoption

Conclusions

- We developed a broad framework for the mixed methods evaluation of health service projects
- A rigid “one size fits all” approach was not appropriate, but we incorporated common themes and elements
- For the best chance at creating sustainable change, patient outcomes should be measured along with both implementation and economic outcomes



References

- K Page, N Graves, K Halton, AG Barnett (2013) Humans,'things' and space: costing hospital infection control interventions. Journal of Hospital Infection, 84 (3): 200-205/
- Ament SMC, Gillissen F, Maessen JMC, et al. Sustainability of healthcare innovations (SUSHI): long term effects of two implemented surgical care programmes (protocol). BMC Health Services Research 2012, 12:423 http://www.biomedcentral.com/1472-6963/12/423
- Damschroder LJ, Aron DC, Keith RE, et al. Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. Implement Sci. 2009;4:50. https://doi.org/10.1186/1748-5908-4-50
- Proctor EK, Landsverk J, Aarons G, et al. Implementation research in mental health services: an emerging science with conceptual, methodological, and training challenges. Adm Policy Ment Health 2009, 36:24–34. DOI 10.1007/s10488-008-0197-4.
- Proctor E, Silmere H, Raghavan R, et al. Outcomes for implementation research: conceptual distinctions, challenges, and research agenda. Adm Policy Ment Health 2011, 38:65–76. DOI 10.1007/s10488-010-0319-7.

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