



Enabling the future: funding health infrastructure for transformational change

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- Modelling a changing environment-alignment
- Effective funding for patient access to efficient hospitals -investment
- A guidelines approach to sustain clinical change-innovation

Appropriate, sustainable health environments



Alignment of capital costs with efficiency

- Economic or financial sustainability
 - Allocative efficiency of capital resources
 - Productive efficiency of labour and capital
 - Dynamic efficiency for a sustainable future

Behind Royal Perth Hospital



My Health Record



Perth Childrens Hospital 2018



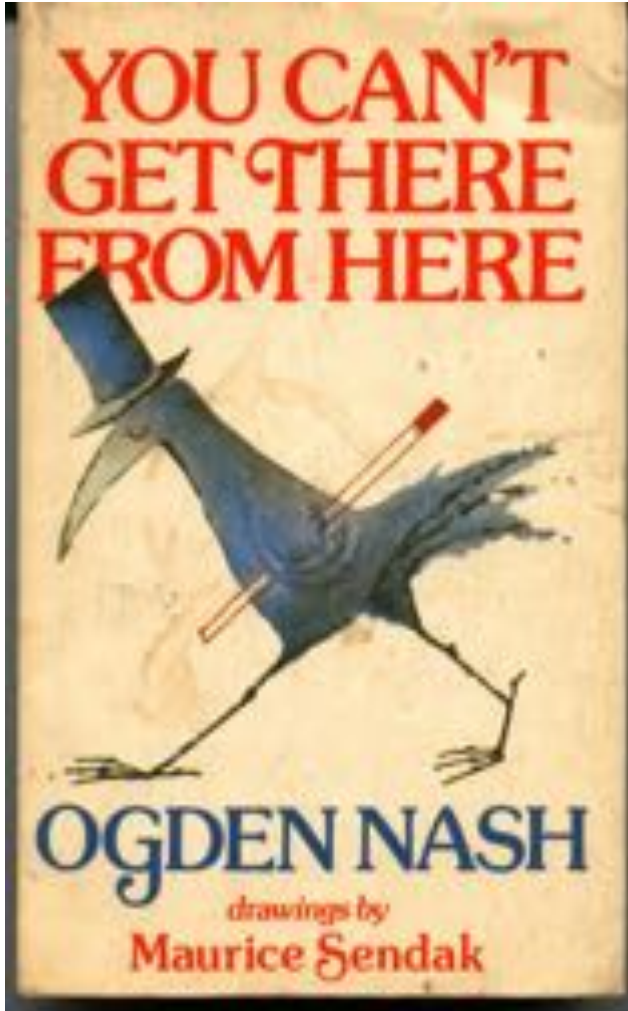


Funding patient access to efficient hospitals

Systems of capital investment

Efficient public hospitals

Patient access





Funding patient access to efficient hospital systems

Can diagnosis-based capital fund

appropriate

sustainable

innovative

acute care facilities?



Part 2. Aligning Investment

appropriate

sustainable

innovative

Standards

- Clinical
- Building
- Government

Guidelines

Evidence- based

Expert advice

Clinical & technological
change

Clinical pathways

- Defining areas
- Defining equipment
- Defining ITC



Perth Children's Hospital

Aligning capital with clinical pathways for each diagnosis group



Fiona Stanley Hospital,
Perth

- Directly required for patient care
- Indirectly required in the hospital





Part 3

A guidelines approach to sustain clinical change

Capital required for:

- Haemodialysis
- Vaginal Delivery, Intermediate Complexity
- Vaginal Delivery, Minor Complexity
- Vaginal delivery, day only
- Caesarean Delivery, Intermediate Complexity
- Caesarean Delivery, Minor Complexity
- Hip Replacement for Trauma, Minor Complexity
- Knee Replacement, Minor Complexity.

Directly required

- Clinical and government guidelines
- Expert clinical advice
- 18 interviews per diagnosis group across 4 states
 - medical and nursing specialists,
 - managers and,
 - physiotherapists.



Royal Adelaide Hospital

Capital indirectly required

- Modelled the costs of a typical hospital managing this range of diagnoses



Bendigo Hospital

- For a capital cost per patient by time required

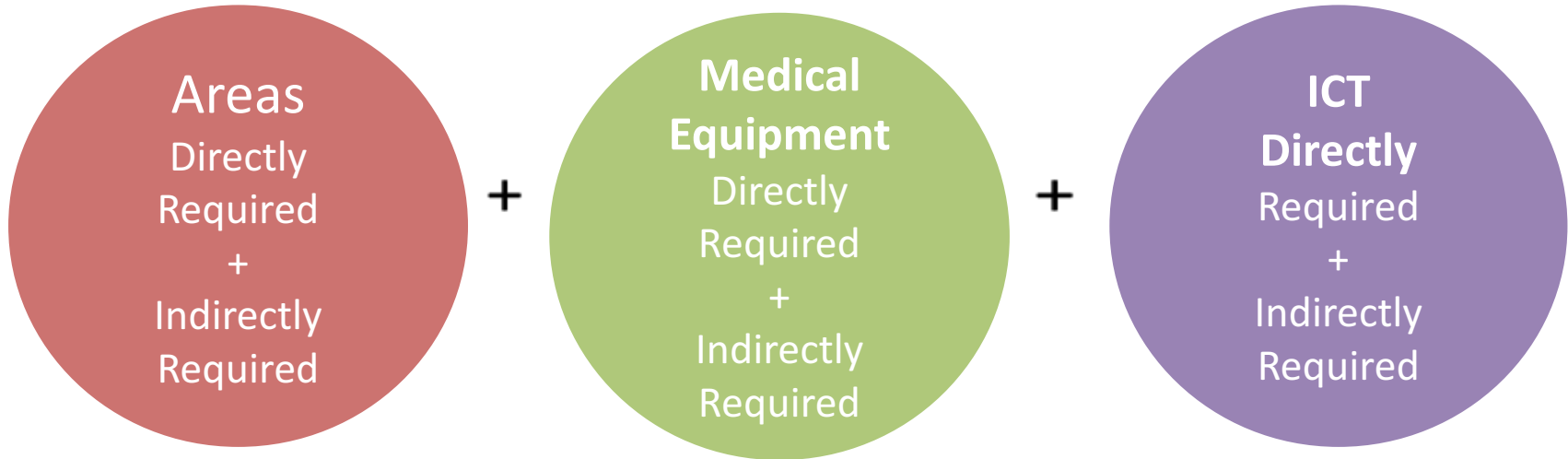
Specialised facilities

- Modelled for ICU costs
- Operating theatres
- Rehabilitation
- Medical testing and assessment

ICU, The Alfred Hospital, Melbourne



Capital=



Midland Health Campus, Western Australia.



Costing

- Areas costed by function and practical lifespan
- Green costing
- Costs for medical equipment and ICT

LDR Calvary Hospital Canberra



CSSD NSW Health





Comparing recurrent and capital cost per patient estimates ,2017

	Recurrent	Capital cost	Percentage
Government estimate	A\$4,883	A\$ 927	19%
Guideline -based estimate	A\$ 9,676	A\$ 1,443*	18%

*Exclusive of indirect costs for medical equipment and ICT.

Sources: Recurrent costs from IHPA Price Determination 2016-17; Depreciation-based capital cost from the 2018 Annual Report on Government Services, Productivity Commission, Canberra.

Diagnosis Group results

Diagnosis Group	National Efficient Price 2016-17 A\$	Capital Cost 2017 A\$	Capital as percentage %
Caesarean Delivery, Intermediate Complexity	10,935	2,797	26
Caesarean Delivery, Minor Complexity	9,127	2,792	31
Vaginal Delivery, Intermediate Complexity	5,606	1,937	35
Hip Replacement, Major Complexity	24,006	1,403	6
Knee Replacement, Minor Complexity	19,278	1,189	6
Vaginal Delivery, Minor Complexity	3,968	1,110	28
Vaginal Delivery, Minor Complexity Day -only	3,968	276	7
Haemodialysis	519	42	8



**Enabling
transformation**


John Nash and Denys Lasdun
transformed using:

Great design

+

Appropriate funding

Results- Design



- Allocative, productive and dynamic efficiency for the health system, clinicians, patients and the people can be found in a guidelines-based approach to capital allocation for hospitals.
- A guidelines/clinical expert approach to capital allocation can 'learn' and adapt to evidence-based innovation
- Clinical pathways support evidence-based change between capital elements and modalities of care



Results- Appropriate funding



Using clinical pathways the cost of capital per patient by diagnosis group can be transparently established for:

- all functional areas
- major medical equipment and
- ICT.

Depreciation-based capital cost estimates do not:

- relate to contemporary standards of care
 - adapt to clinical and technological change
 - provide equitable funding for similar patients.
- Capital and recurrent costs are not equally aligned for diagnosis groups



Thank you

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