Introduction to activity based funding

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Goals

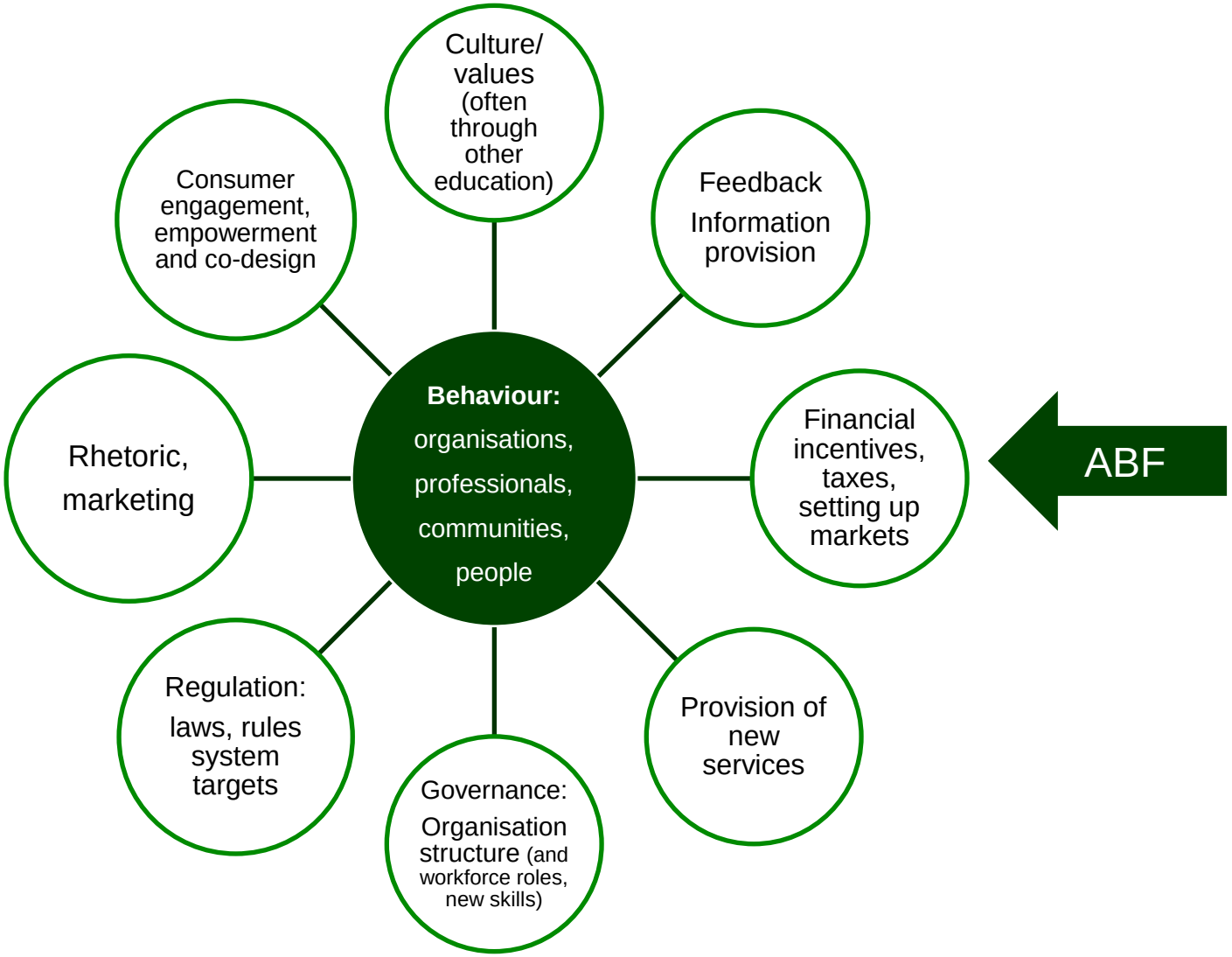
To understand:

1. the various ways in which health care can be funded and their strengths and weaknesses
2. the key elements of an activity based funding (ABF) system
3. the funding flows for healthcare in Australia including the role of the national efficient price (NEP) and the national efficient cost (NEC).

Your first day

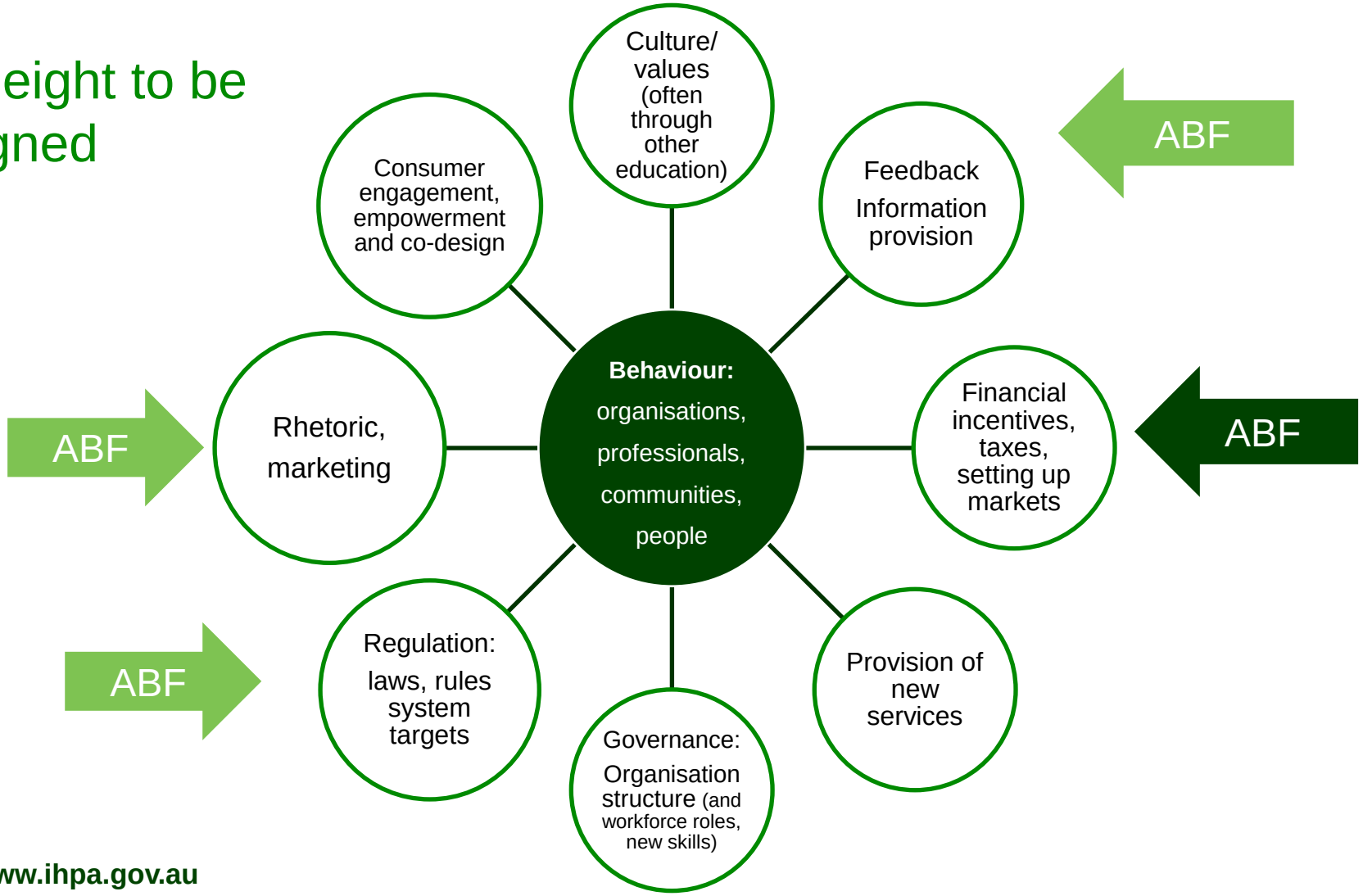
- You have just been appointed Director of hospitals in your country.
- There are 30 big hospitals and dozens small hospitals.
- In your first week on-the-job, commodity prices for your country's biggest export collapse and you have to make a 10% cut in hospital spending.
- You have no information on the relative efficiency of hospitals so you implement an immediate staff freeze.
- Is this a good idea? Why? Why not?

Policy levers to achieve change



Policy levers to achieve change

All eight to be aligned



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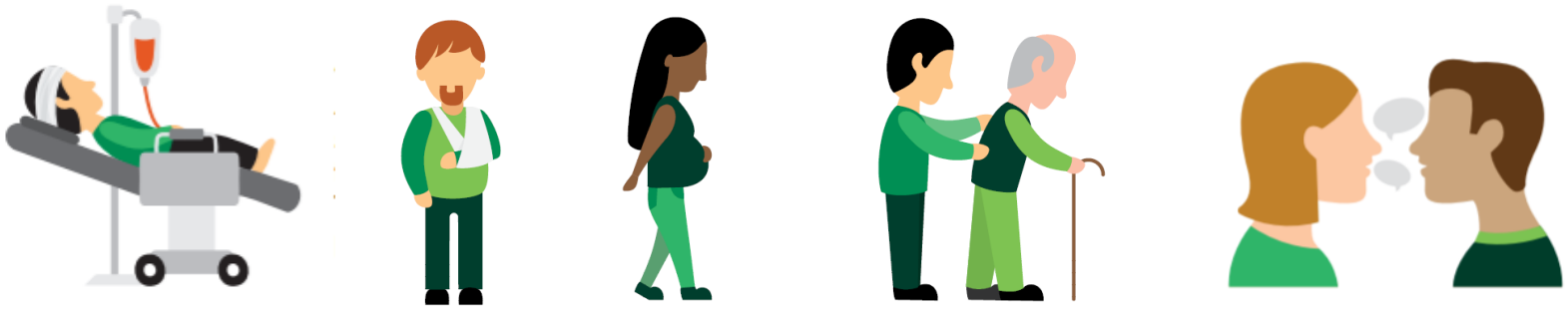
- The key elements of an activity based funding (ABF) system.
- The funding flows for health care in Australia, including the role of the national efficient price (NEP) and the national efficient cost (NEC).

The fundamental premises of activity based funding

- To hold hospitals accountable for costs and quality, patient variation needs to be adjusted for the mix of cases.
- The ‘product’ of hospital care is the ‘treated patient’ not individual ‘services.’



The object(s) of policy

Quadruple aim

Improving patient experience

Improving the patient experience of care (including quality and satisfaction)

Better health outcomes

Improving the patient experience of care (including quality and satisfaction)

Improved staff experience

Improving the patient work life of health professionals

Lower cost of care

Reducing the per capital cost of health care

Sikka, Rishi, et al. 2015. "The Quadruple Aim: care, health, cost and meaning in work." *BMJ Quality & Safety 24 (10):608-610. doi: 10.1136/bmjqs-2015-004160.*

The object(s) of policy

Quadruple aim

ABF is neutral on savings

Note: we need to look at equity within each of these aims too.

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There may also be funding system objectives e.g. transparency, equity between services

Sikka, Rishi, et al. 2015. "The Quadruple Aim: care, health, cost and meaning in work." *BMJ Quality & Safety 24 (10):608-610. doi: 10.1136/bmjqs-2015-004160.*

Options in paying for hospital and health care

Non-price-based

- History (+/-%)
- Negotiations
- Inputs

Options in paying for hospital and health care

Non-price-based

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- Negotiations
- Inputs

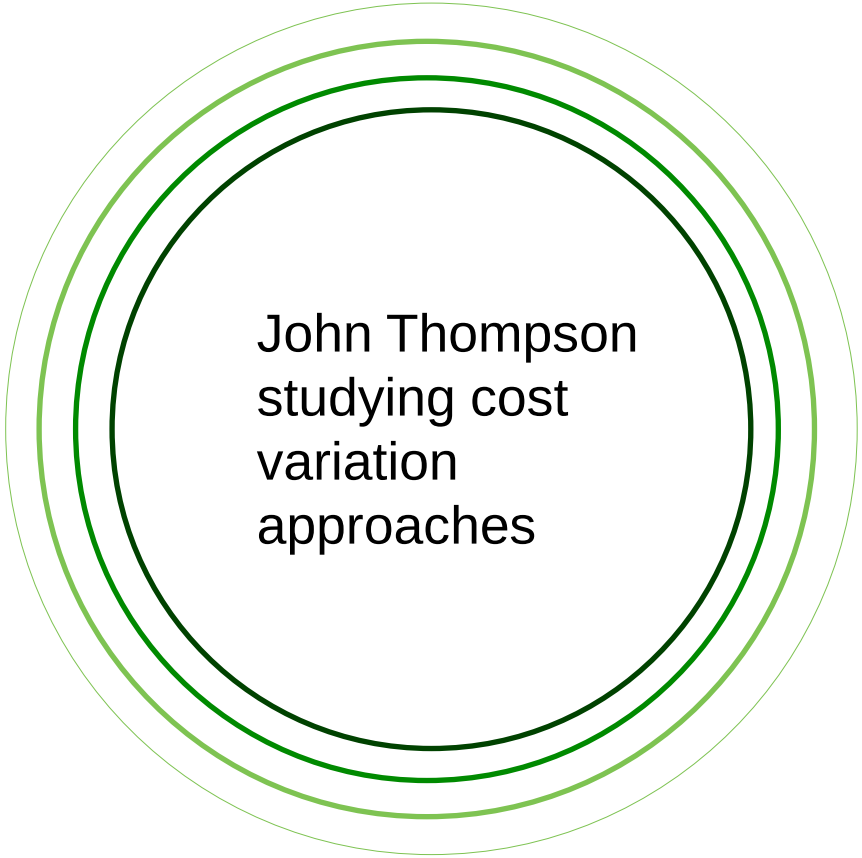
Price-based

- Tender
- Services provided
- Population served
  - capitation
  - but still need to pay hospital
- Patients treated
  - Adjusted for outcomes?
- Outcomes

- Different incentive effects
- Differ in the ability to hold to account
- A critical issue is who bears what risk

Need to be able to describe patients

The history – two competing stories



The fundamental premises of activity based funding

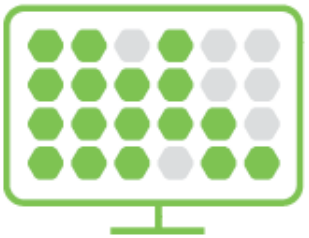
- **Aim:** to identify the abnormal (inpatients) for utilisation review.
- Bob Fetter (engineer, married to Audrey Fetter, hospital manager).
- **Reframed:** to identify the abnormal, one first needs to identify the normal, then the abnormal is something, which is different (statistically) from that.
- What is the normal?
  - Answer: groups of patients, which are similar to each other
- What do you mean by ‘groups of patients’?
  - Answer: groups of patients who have a similar pattern of care

→ **Diagnosis-Related Groups (DRGs)**

- The classification has evolved and is now at Australian-Refined Diagnosis Related Groups Version 10.0.
- There are other classifications used for emergency department patients, out-patients (non-admitted), sub-acute care, and mental health care.
- All classifications aim to create groups which are similar clinically (clinically homogeneous) and include patients who are expected to cost roughly the same (resource homogeneous).

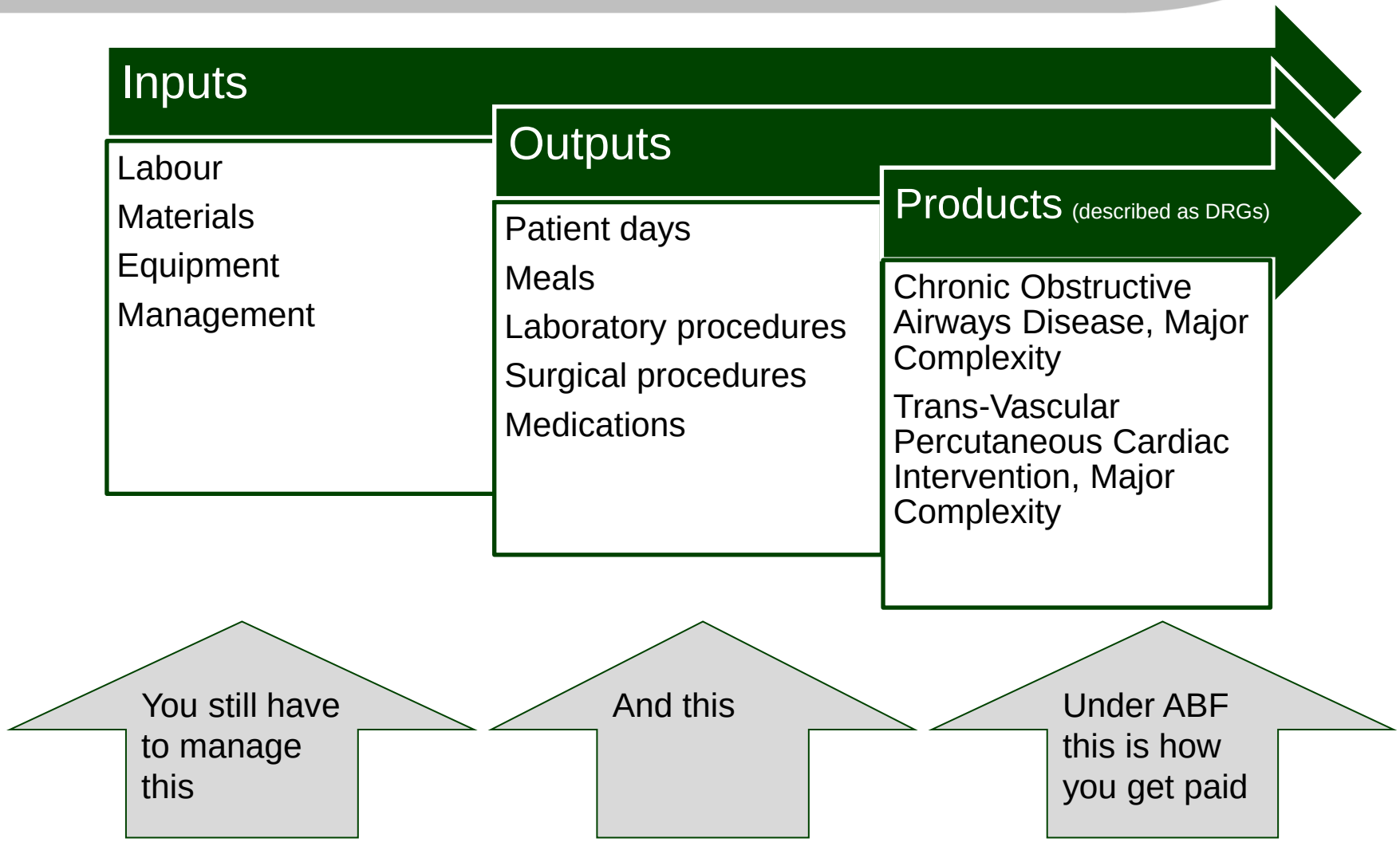
The (original) purpose of DRGs

- Diagnosis Related Groups (DRGs) are often associated with the United States' Medicare prospective payment system for hospitals, but they were initially developed for other purposes.
- The original goal of DRGs was to facilitate hospital management by providing a system that would allow the measurement and evaluation of hospital performance.

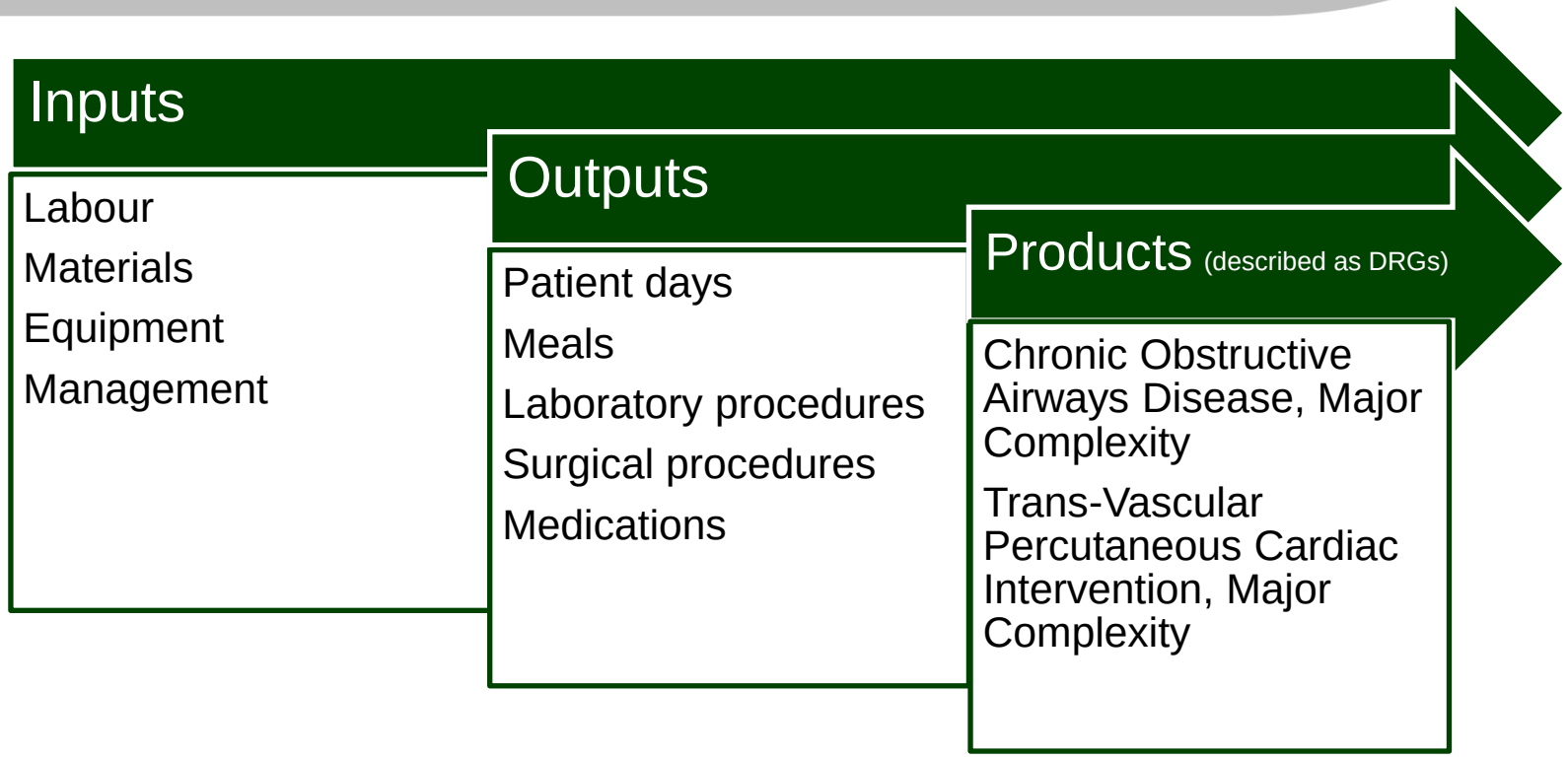


Fetter, R.B. (1991), 'The DRG Patient Classification System: background', in R.B. Fetter, D.A. Brand, and D. Gamache (eds.), *DRGs: Their design and development* (Ann Arbor: Health Administration Press), page 3.

The Fetter breakthrough

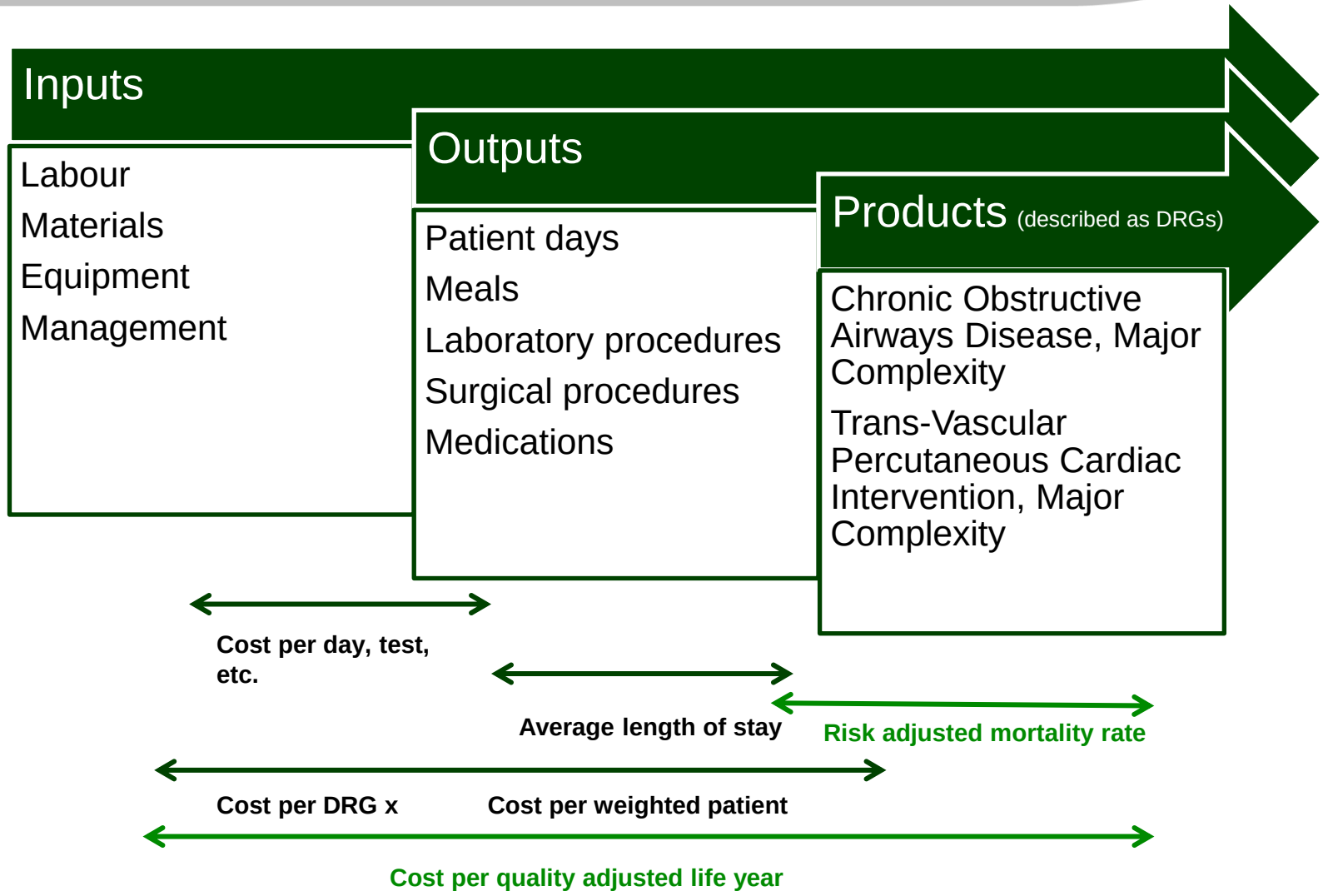


The Fetter breakthrough

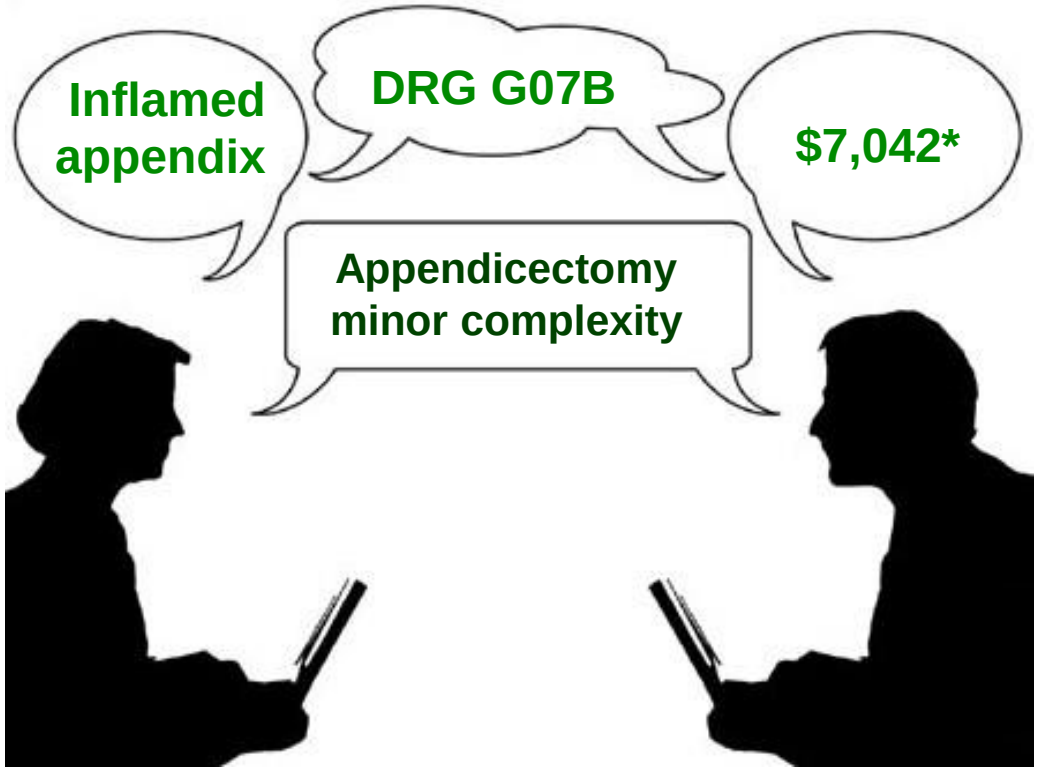


Once you can describe it, it is possible and logical to pay

Contemporary formulation



DRGs create a common language between clinicians and managers
(both resource and clinical homogeneity)



Price weight = 1.2583
2021–22 base price (NEP) = $5,597

The AR-DRG numbering system

A##A

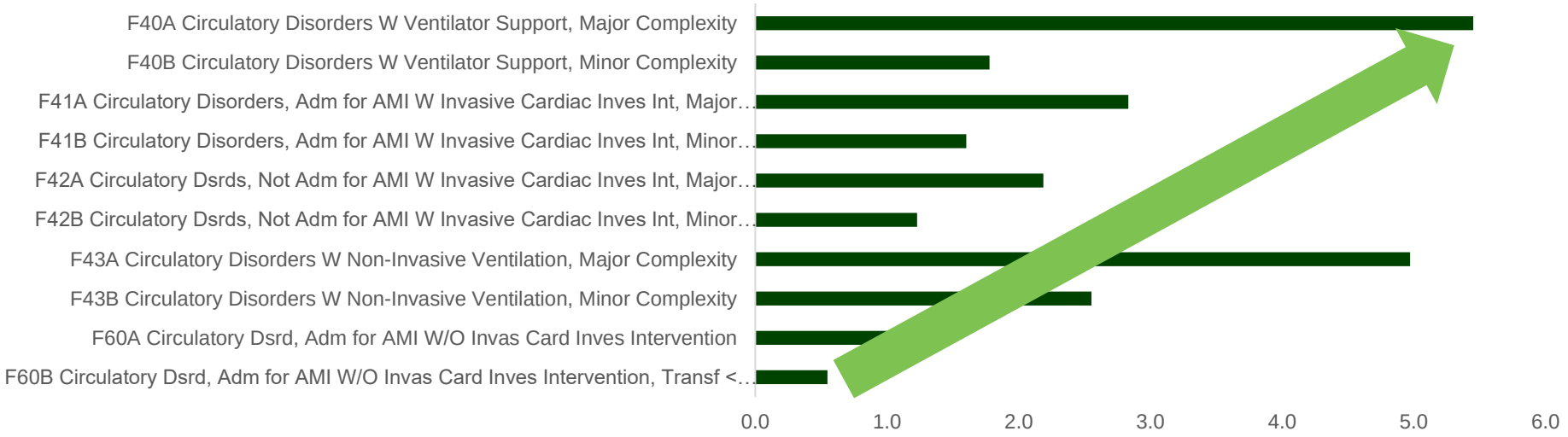
‘Body system’
(*Major Diagnostic Category)*

AdjDRG split, again most to least complex

Adjacent DRG:
00-59 = intervention
60-99 = medical
(ordered from most to least complex within these groupings)

Number of splits	AR-DRG V10.0
0 (Z)	87
1 (A,B)	227
2 (A, B, C)	78
3 (A, B, C, D)	5
Total	397

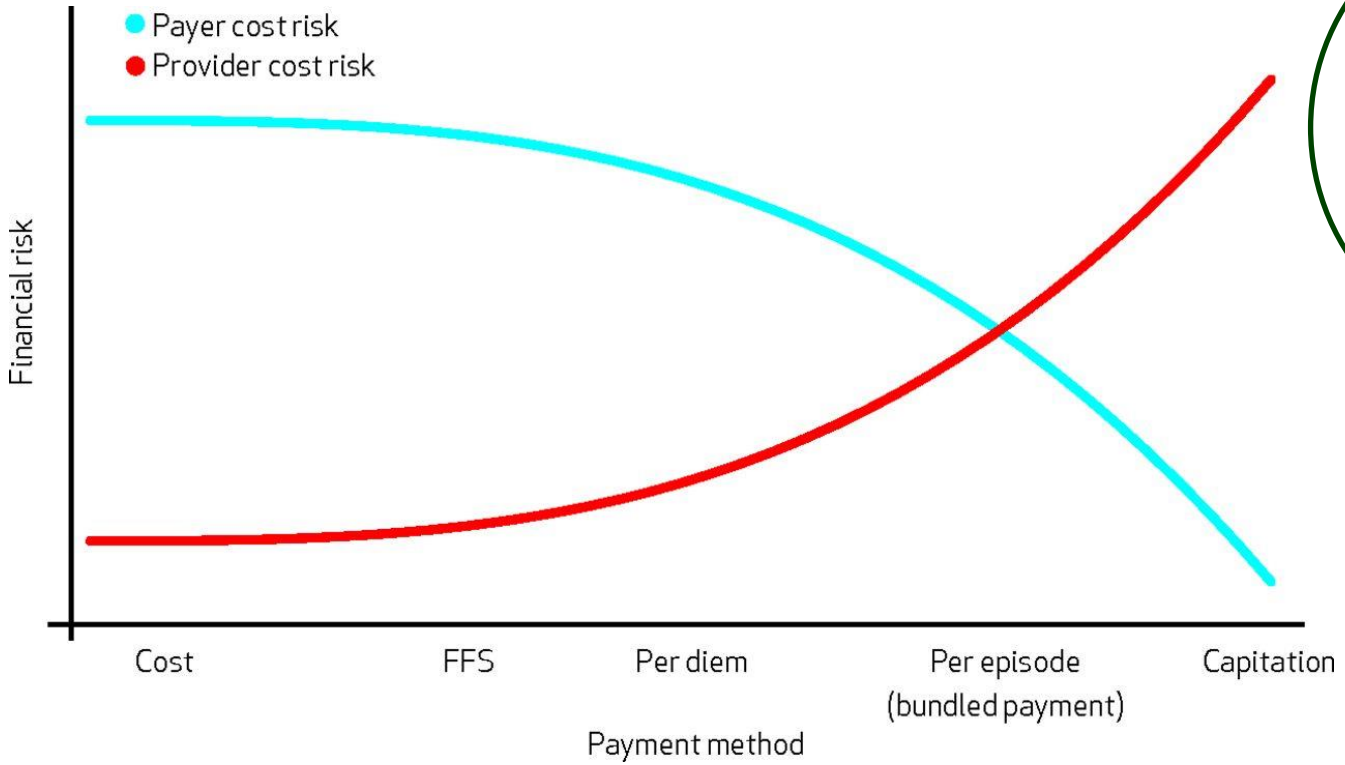
Clinical meaning requires distinguishing what is done and complexity



Fetter principle # 4:
Similar types of patients in a given class from a clinical perspective *(clinical homogeneity)*

Source: Independent Hospital Pricing Authority (2021), National Efficient Price Determination 2021–22', (Sydney: IHPA). https://www.ihpa.gov.au/publications/national-efficient-price-determination-2021-22

Financial risk of care for provider and payer by payment method



Consumer interests are not necessarily the same as either

Frakt, Austin B., and Rick Mayes. 2012. "Beyond Capitation: How New Payment Experiments Seek To Find The 'Sweet Spot' In Amount Of Risk Providers And Payers Bear." *Health Affairs 31 (9):1951-1958.*

HealthAffairs

Hospital payment incentives

	Increase activity	Expenditure control	Improve quality	Enhance efficiency	
				Technical efficiency (aka Doing things right)	Allocative efficiency (aka doing the right things)
Cost-based/ fee-for-service	Strong	Weak	Strong	Weak	Weak
Global budget (negotiated)	Weak	*Strong*	Moderate	*Weak*	Moderate
DRG-based payments	Moderate	*Moderate*	Moderate	*Strong*	Moderate

Source: Modified from Street, Andrew, et al. (2011), 'DRG-based hospital payment and efficiency: Theory, evidence, and challenges', in Reinhard Busse, et al. (eds.), *Diagnosis-Related Groups in Europe: Moving towards transparency, efficiency and quality in hospitals* (Maidenhead: Open University Press).

Hospital payment incentives

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				Technical efficiency (doing [illegible])	Allocative efficiency (doing the right things)
Cost-base for-se		*eak*	Strong		*ak*
Global b (negotiate		*Strong*	Moderate	*Weak*	**Moderate**
DRG-based payments	**Moderate**	*Moderate*	**Moderate**	*Strong*	Moderate

Depends on:
. Capping
. Marginal cost < marginal revenue

Depends on year to year transition

Depends on nature of quality incentives

Source: Modified from Street, Andrew, et al. (2011), 'DRG-based hospital payment and efficiency: Theory, evidence, and challenges', in Reinhard Busse, et al. (eds.), *Diagnosis-Related Groups in Europe: Moving towards transparency, efficiency and quality in hospitals* (Maidenhead: Open University Press).

Activity based payment impacts

- Mixed results on efficiency
  - Depends on where you set price and pre-existing arrangements
- Increases use of substitute services (for example, rehabilitation)

Palmer KS, et al. (2014) Activity-Based Funding of Hospitals and Its Impact on Mortality, Readmission, Discharge Destination, Severity of Illness, and Volume of Care: A Systematic Review and Meta-Analysis. PLoS ONE 9(10): e109975. http://127.0.0.1:8081/plosone/article?id=info:doi/10.1371/journal.pone.0109975

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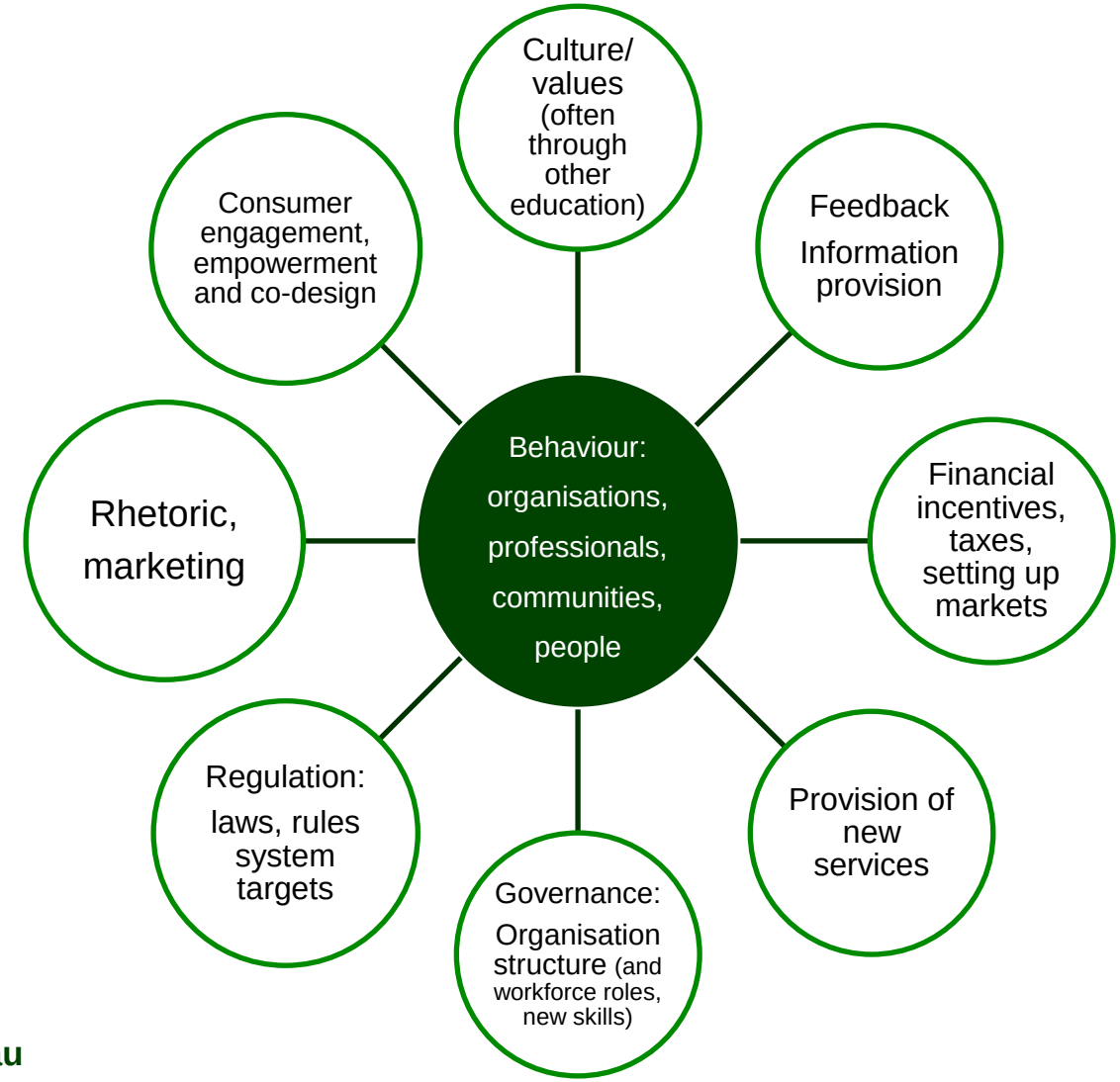
Policy levers to achieve change



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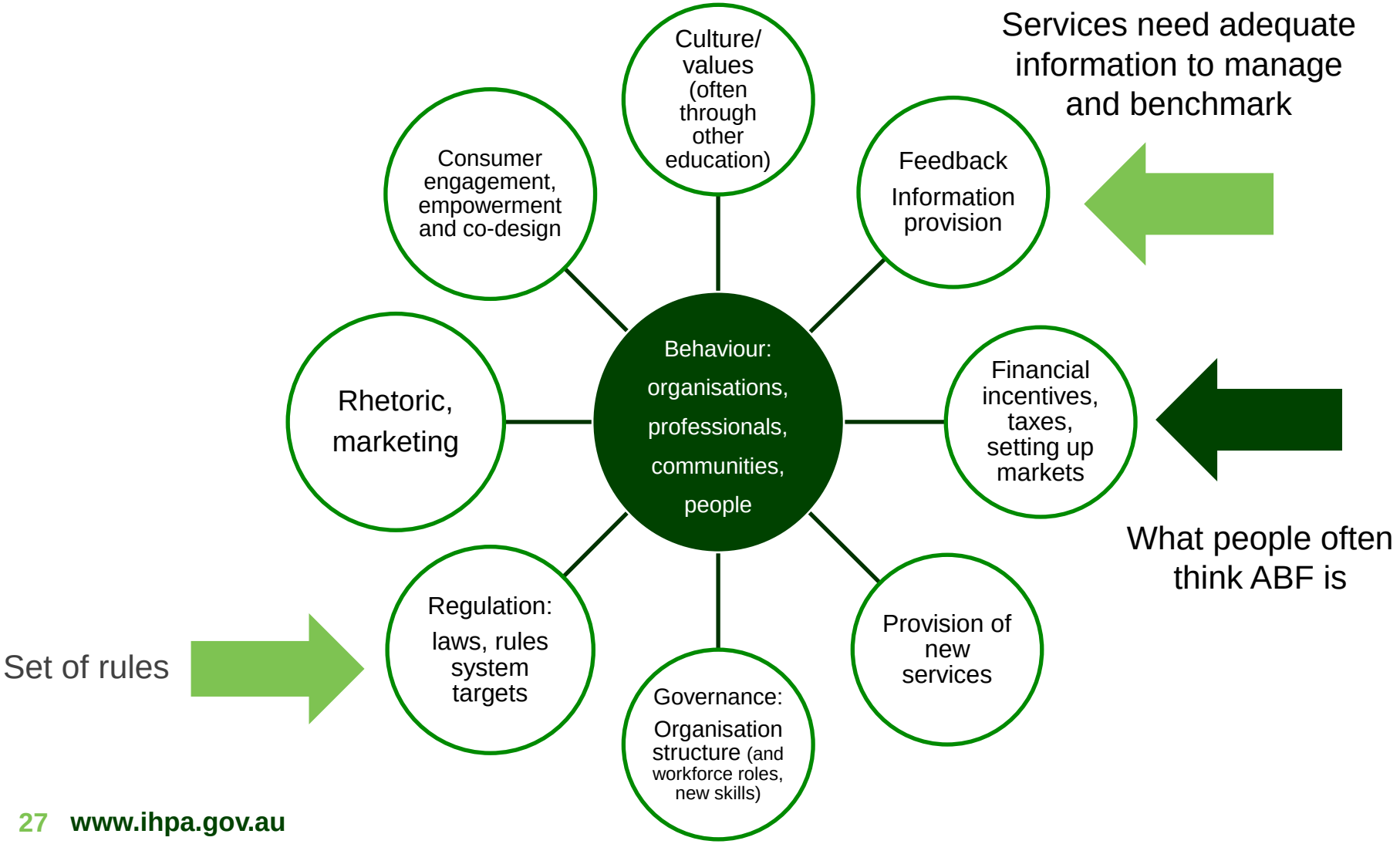

What is activity based funding?

Activity based funding timeline

2008

Activity based funding becomes a requirement of Commonwealth funding for public hospitals.

2011

National Health Reform Agreement signed by all Australian governments.

This agreement outlines the establishment of IHPA.

2012

First national efficient price was established for NEP12 at $4,808.

2013

First national efficient cost was established for NEC13 at $4,738m.

2021

Ninth national efficient price was established at $5,597.

Eight national efficient cost was established at 2.199m fixed cost and $5,762 variable cost.

What is activity based funding?

Funding varies with activity

Activity based funding has two components:

- Payment design
- Payment rules (alongside payment design).

Central health authority role shifts from allocating global budgets to allocating (potential) revenue (and monitoring and…).

Service management role becomes:

- Determining budget (given likely revenue)
- Managing costs to budget
- Managing revenue
- Watching adherence to the rules.

How does payment design work?
What are some choices?

- Recognition of multiple products:
  - Inpatient, outpatient
  - Inlier and outlier.
- Price adjustments:
  - Remoteness of patient
  - Indigenous
  - Extent of teaching (and research) (or is this a separate product?)
  - NB: what is exogenous, emphasise variation in inherent costliness of consumers not provider-cost variation.

These are now jobs of Independent Hospital Pricing Authority:

- Develop classifications for multiple products
- Determine price weights and price adjustments.

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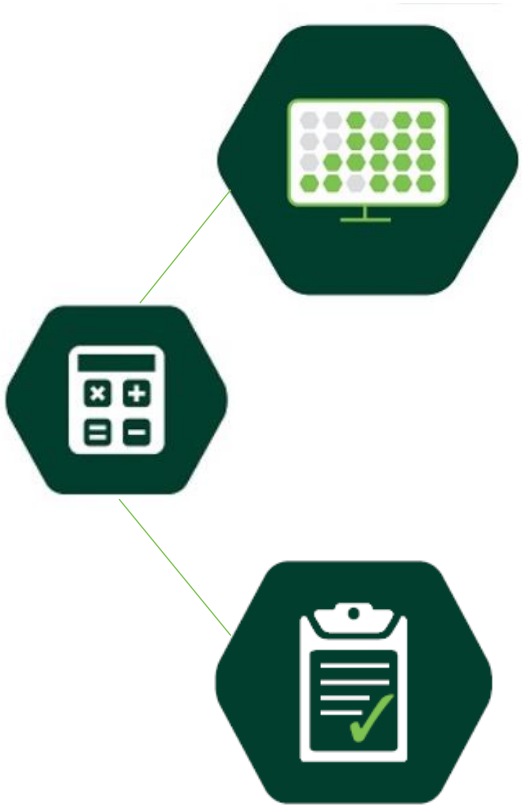
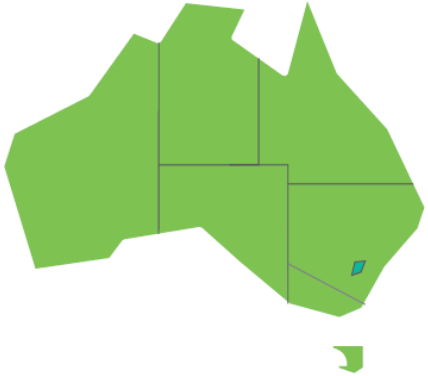
Commonwealth, state and territory relations

- States and territories face hospital cost growth
- Commonwealth share declining
- Commonwealth has taxing capacity, states and territories don’t
  - waiting times



Health funding flows

The Commonwealth now funds the states and territories (collectively) for growth in hospital costs.



… and there are two types of relevant cost growth: hospital-specific inflation and activity growth **(but the latter is only paid for at an '*efficient price*').**

What the Independent Hospital Pricing Authority does

Determines national efficient price (and national efficient cost for block funded services)

This determines the way Commonwealth funding to states and territories is described (and what each local hospital network's notional share of that is) and the rate for payment of additional activity

State as system manager

Hospital behaviour

What are public hospital services?

- In-patient (including acute, sub-acute, mental health)
- Emergency department
- Non-admitted (setting independent)
  - A public hospital service's eligibility for inclusion on the General List is independent of the service setting in which it is provided (e.g. at a hospital, in the community, in a person's home).

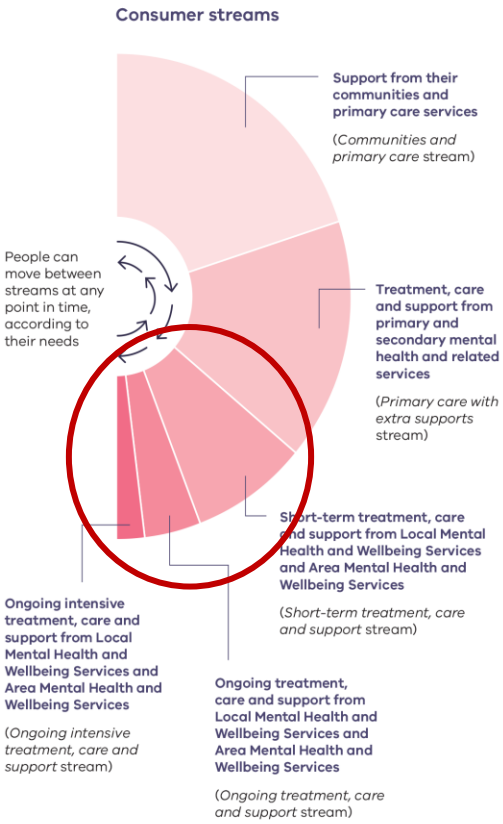
In line with the criteria, community mental health, physical chronic disease management and community based allied health programs considered in-scope will have all or most of the following attributes:

- Be closely linked to the clinical services and clinical governance structures of a public hospital (for example integrated area mental health services, step-up or step-down mental health services and crisis assessment teams)
- Target patients with severe disease profiles;
- Demonstrate regular and intensive contact with the target group (an average of eight or more service events per patient per annum)
- Demonstrate the operation of formal discharge protocols within the program;
- Demonstrate either regular enrolled patient admission to hospital or regular active interventions which have the primary purpose to prevent hospital admission.

Contemporary relevance

Contemporary relevance

At any given point in time, a person living with mental illness or experiencing psychological distress will need:



Services provided across two age-based systems

Infant, child and youth mental health and wellbeing system (0–25)

- Infant, child and family mental health and wellbeing service stream (0–11)
- Youth mental health and wellbeing service stream (12–25)

Adult and older adult mental health and wellbeing system (26+)

- Older adult mental health and wellbeing service stream

Developmentally appropriate transitions will be applied between age-based systems and service streams

Six levels in a responsive and integrated system

- Families, carers and supporters, informal supports, virtual communities, and communities of place, identity and interest
- Broad range of government and community services
- Primary and secondary mental health and related services
- Local Mental Health and Wellbeing Services
- Area Mental Health and Wellbeing Services

Regional Mental Health and Wellbeing Boards

- Statewide services

Community mental health and wellbeing services delivering three core functions

Core functions of community mental health and wellbeing services

Core function 1: Integrated treatment, care and support across four components:

- a Treatments and therapies
- b Wellbeing supports
- c Education, peer support and self-help
- d Care planning and coordination

Core function 2: Services to help people find and access treatment, care and support and, in area services, respond to crises 24 hours a day, seven days a week.

Core function 3: Support for primary and secondary services through secondary consultation with providers of those services, primary consultation with their consumers, and a formal model of comprehensive shared care.

These services will be delivered across a range of modes (telehealth and digital technologies; in centres and clinics; and in visits to people's homes or other settings, including through assertive outreach) and will be accessible and responsive to the diversity of their local community.

Costs and prices (or vice versa)

has costs

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has prices

costs (in aggregate)
inform price weights

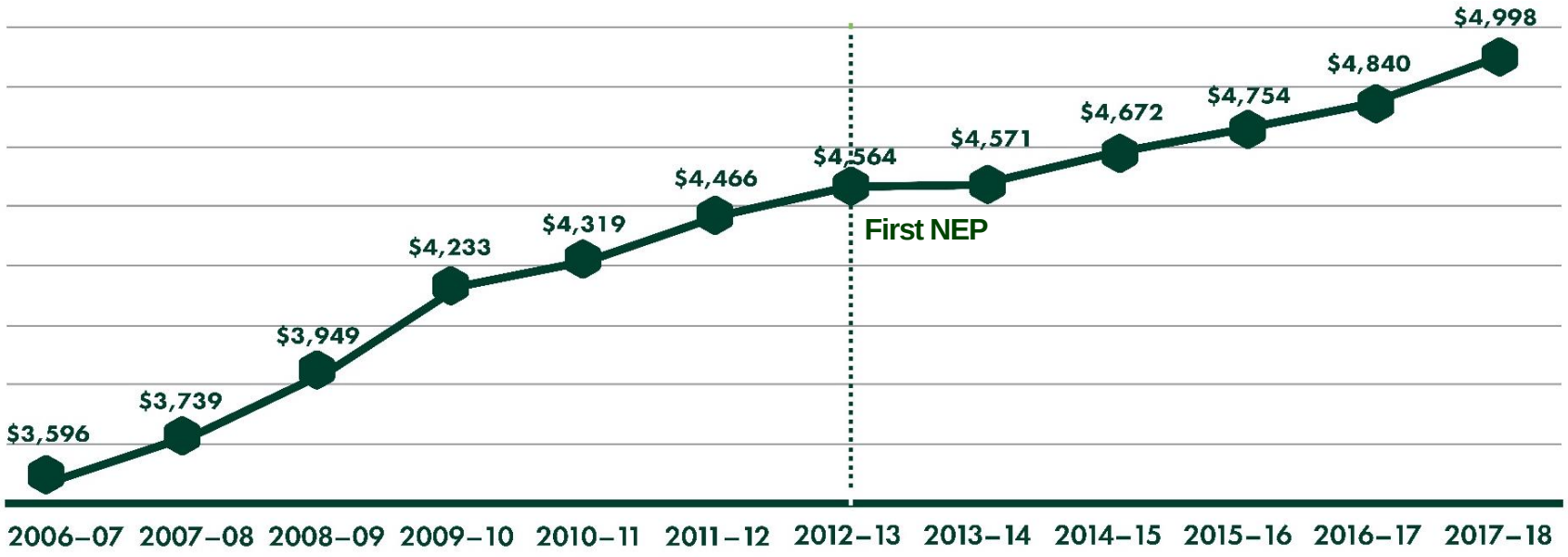
‘price weights’

Cost per national weight activity unit

Data underpinning a given national efficient price (NEP) has a three-year time lag.

For example, for the NEP Determination 2021–22 IHPA will use costed activity data based on 2018–19 models of care.

These costs are indexed forward to 2021–22.



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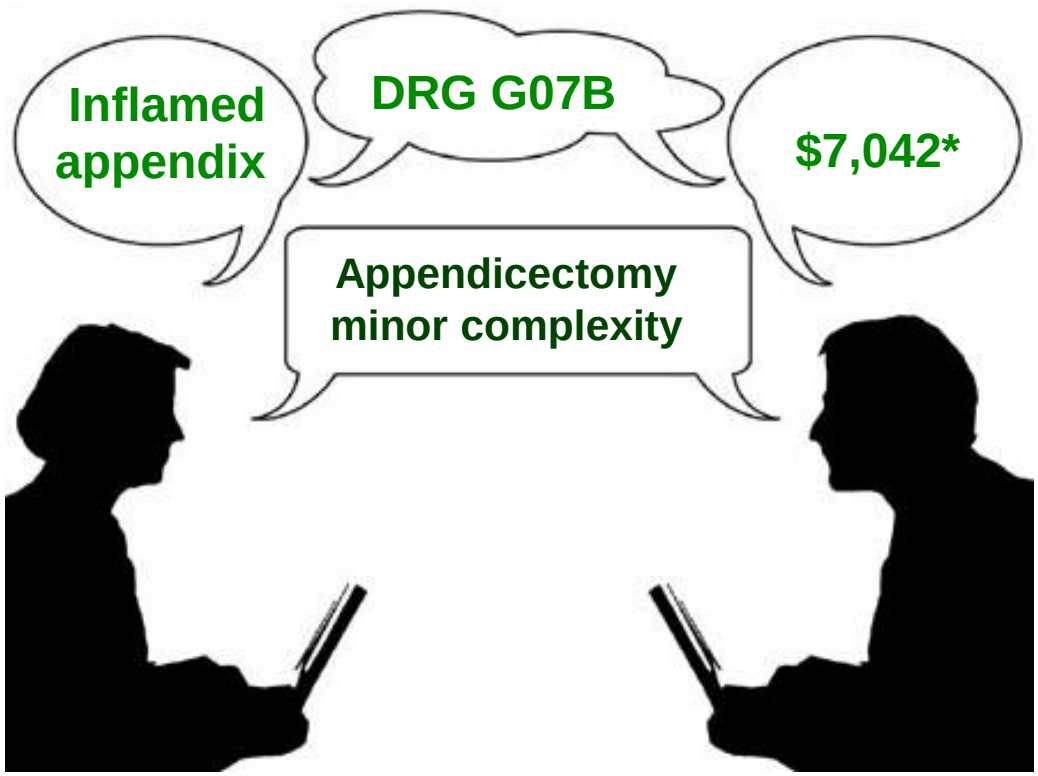

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Costs and prices (or vice versa)

Costing standards (rules and guidelines)

National Hospital Cost Data Collection

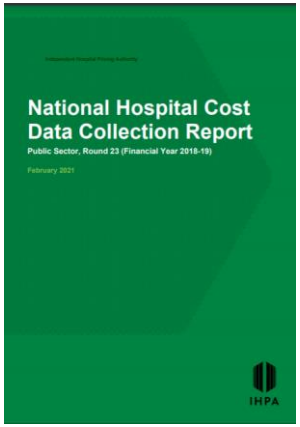
- Patient level Dx and $
- Cost centre and line items are grouped to cost buckets

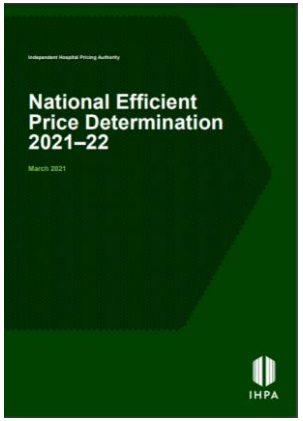
507 hospitals for 2018–19 year

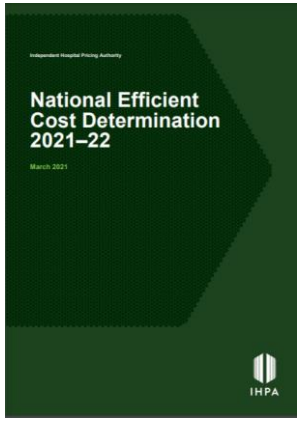
($50b)

Informed pricing for 2021–22

(NEP, NEC, and weights for all classifications)







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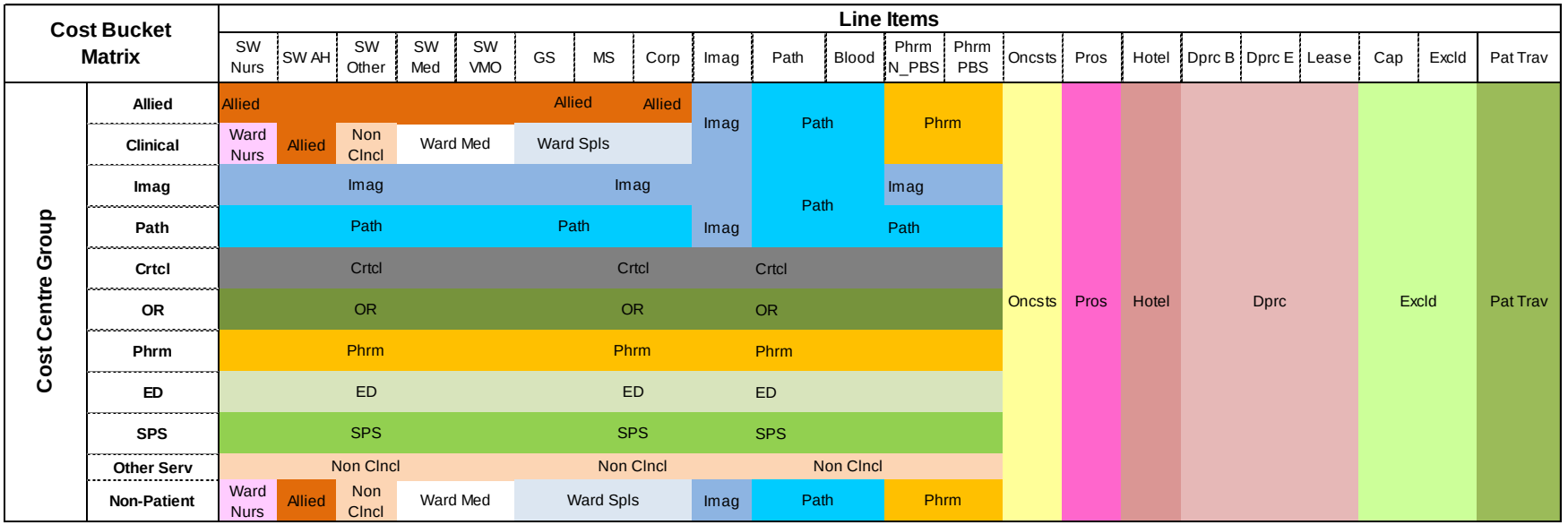
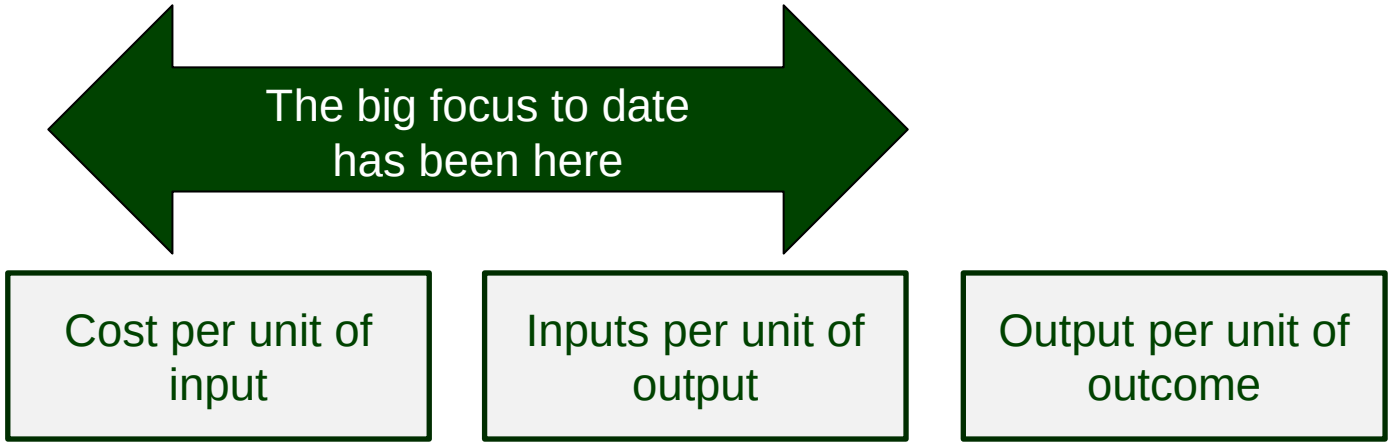


Payment system elements



Three issues for the future:

1. a broader definition of ‘output’
2. incorporating ‘outcome’ through
   - broader quality adjustment (for example, patient reported outcome measures)
   - allocative efficiency (low-value care, potentially avoidable admissions or presentations)
3. the future – stability of system into the future including workforce (dynamic efficiency).

Thank you

Prof Stephen Duckett,
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