Victorian Agency for Health Information

Registry SIG

Registry SIG Meeting

(20/9/19 – 12-2pm)

Dr Lance Emerson – VAHI CEO

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VICTORIA State Government

Overview

- Overview of VAHI – what's on the boil?
- VAHI's role / plans for CQRs in Victoria
- The benefits of public transparency – implications for CQR data
- A plug for the CQR Forum

Our Mission

MISSION

Delivering trusted information to inform better decisions that improve health and wellbeing of Victorians

VAHI will deliver value to its partners and stakeholders
service providers and organisations, clinicians, community, government

VAHI's approach to data

Uses:

- Clinical improvement
- Consumer activation
- Assess disease burden
- Policy formulation
- Resource prioritisation

Administrative health service data

- MBS / PBS data
- VAED / VEMD data
- Mortality (coroners data)

Built upon a 'spine' of routinely collected datasets

Patient reported data

- Program data
- VHES (PREMs)
- PROMs

Leverage initiatives that directly engage consumers

Clinical data

- Registries and Other Clinical Data

Human services and population health data

- Community Health, Education, Justice etc…
- Data from population Health Surveys

Add clinical richness of registry and other clinical data to understand quality and health outcomes

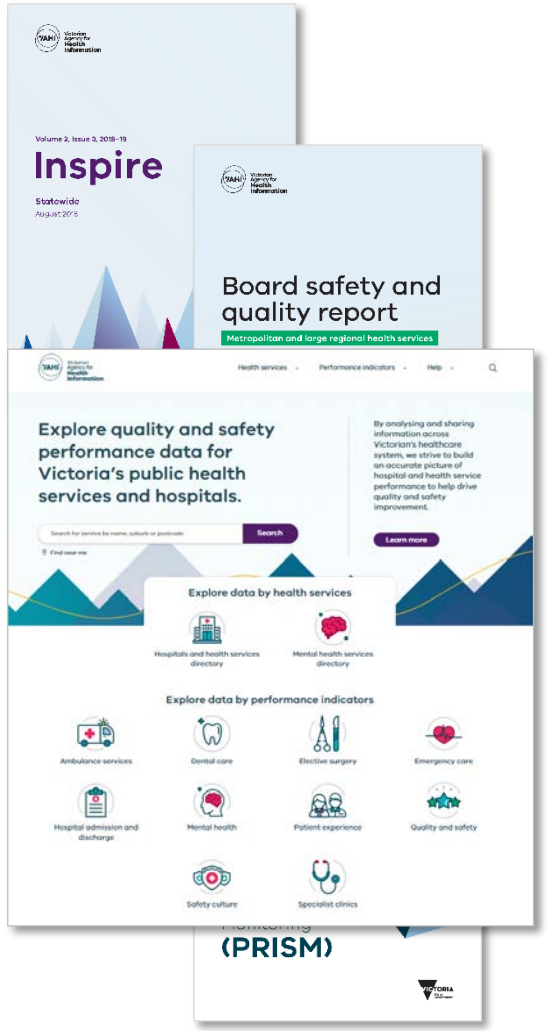
Better, safer care

- Safe
- Appropriate
- Effective
- Accessible and equitable
- Efficient and sustainable
- Providing continuity of care

VAHI reports

VAHI currently reports a range of health service quality, safety and performance measures.

1,500 PDF reports produced p.a.



Inspire

- For lead clinicians: essential quality and safety measures

Board safety and quality report

- For health service Boards: quality and safety measures in Inspire

Monitor

- For health service CEOs, Boards, the Department
- Specific targets outlined in the Performance Management Framework and health services' Statements of Priorities
- Quality and safety, governance, access, financial management

PRISM

- For health service executives, the Department
- Broader range of quality and safety, access, operational and financial measures

Victorian Health Services Performance website

- For consumers

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VAHI reports (continued)

NEW population health reports

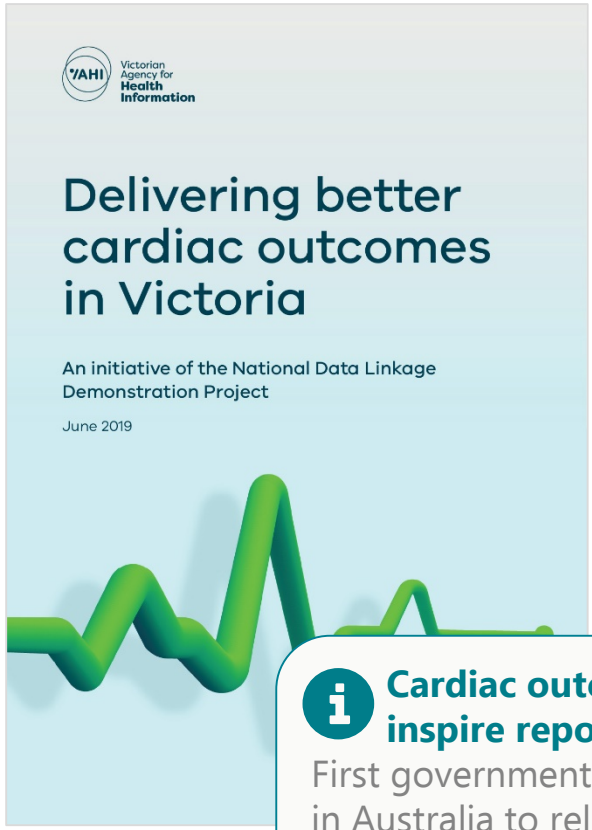
Health system performance: how does Victoria fare nationally and internationally? (compares Victoria with Australia and 11 other countries)

Healthcare in Victoria: How do older Victorians fare when compared nationally and internationally?

Body weight – adult Victorian population

Levels of overweight and obesity in the adult population in addition to the intake of sugar sweetened beverages and snack food

Challenges to healthy eating: food insecurity in Victoria



Cardiac outcomes inspire report

First government report in Australia to release big linked data (MBS, PBS, acute care)

VAHI – leading quality and safety reporting

Created
Australia's first private hospital quality and safety report

Released
the first big, linked data report in Australia – Cardiac outcomes report

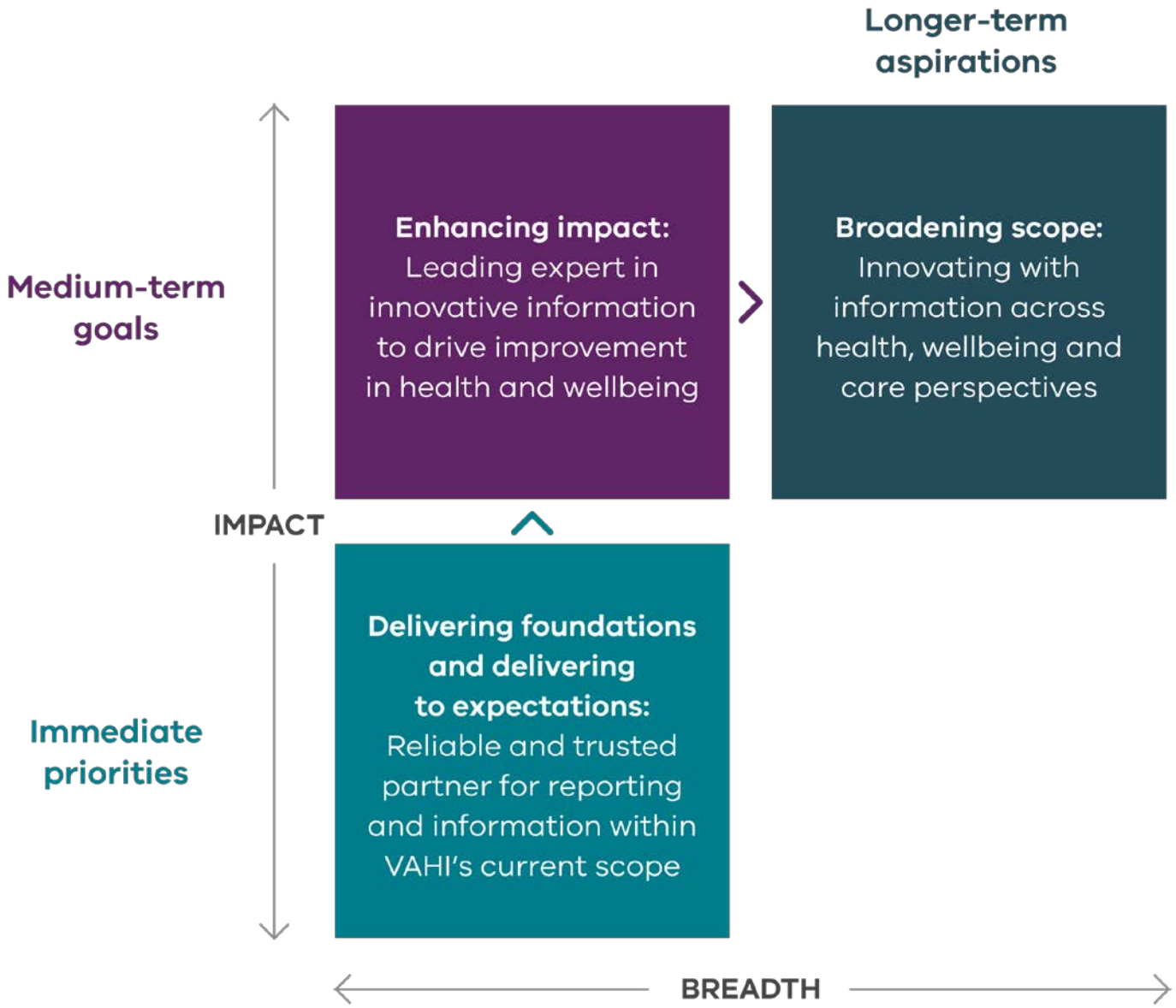
Developed and deployed
VHIMS Central Solution for incident and feedback reporting

Reforming
Victoria's patient experience program

Delivering
the strongest population health surveillance and reporting program in the country

Built the foundations
to increase the utility of clinical quality registries

Strategic direction



Looking forward – our priorities 2019 onwards

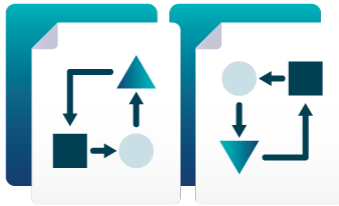
Increase scope and reach
by expanding datasets (community health aged care, human services)

Deploy
VAHI portal

Undertake
advanced analytics with a focus on HACs

Explore
data linkage with primary health data

Demonstrate
technical and thought leadership



Reform
patient experience, PROs and CQRs

Continue to address your feedback and deliver impact

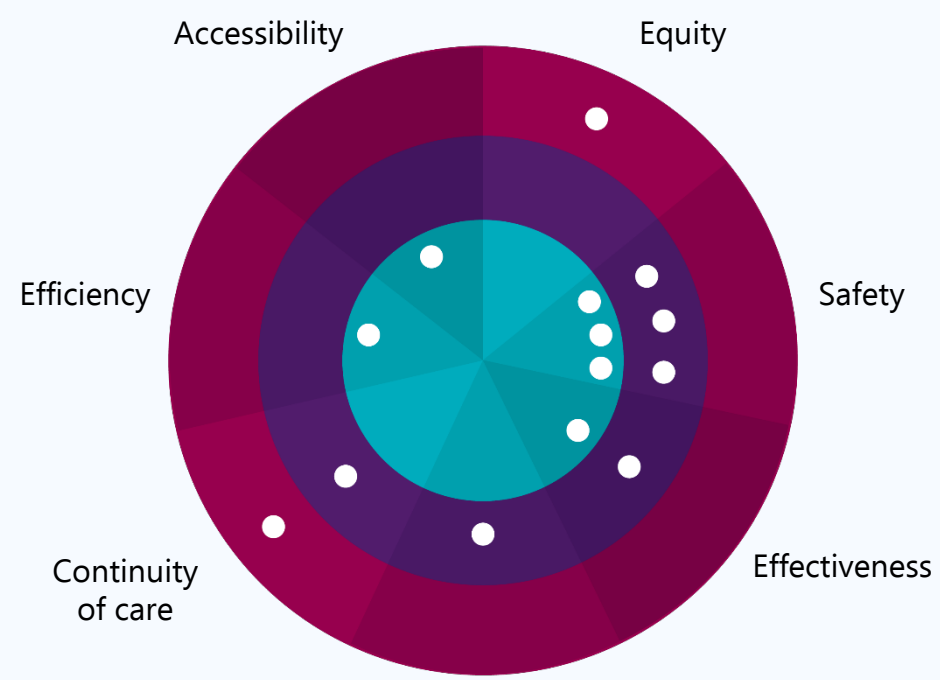
The Australian Health Performance Framework

Equity

Determinants of health

Health behaviours
Personal biomedical factors
Environmental factors
Socioeconomic factors

Health system

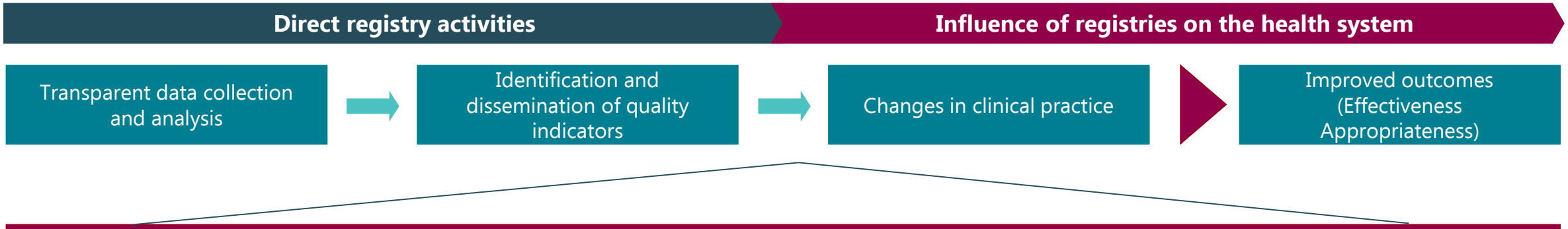


Health status

Health conditions
Human function
Wellbeing
Death

National Health Information and Performance Principal Committee, 2017, The Australian Health Performance Framework.

CQRs: reducing variation and improving practice



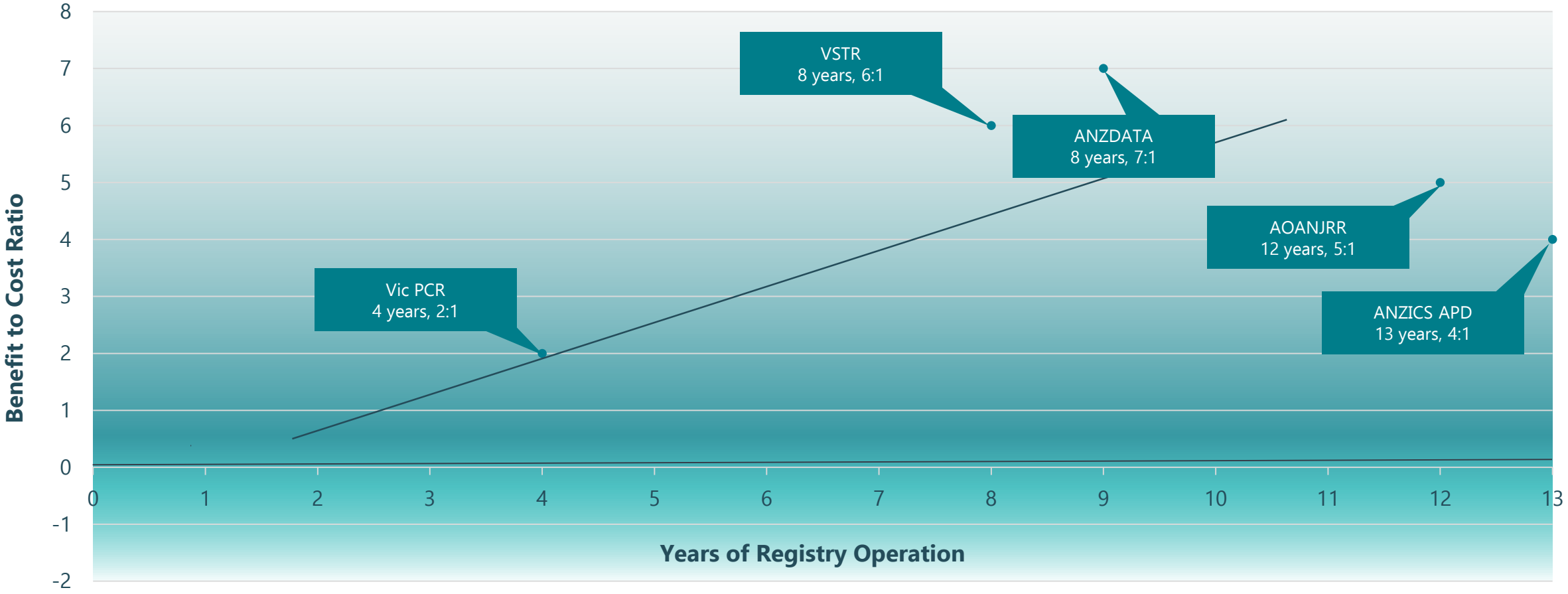
Changing clinical practice does not happen automatically

Hospital leadership and clinicians need to use insights generated by high-quality registries to improve quality and clinical practice

- The "Feedback loop" to hospitals and service providers has been determined to be essential to quality assurance and creating changes in practice.
- In some cases, it may be appropriate for necessary changes to be made to system structures to facilitate changes in practice

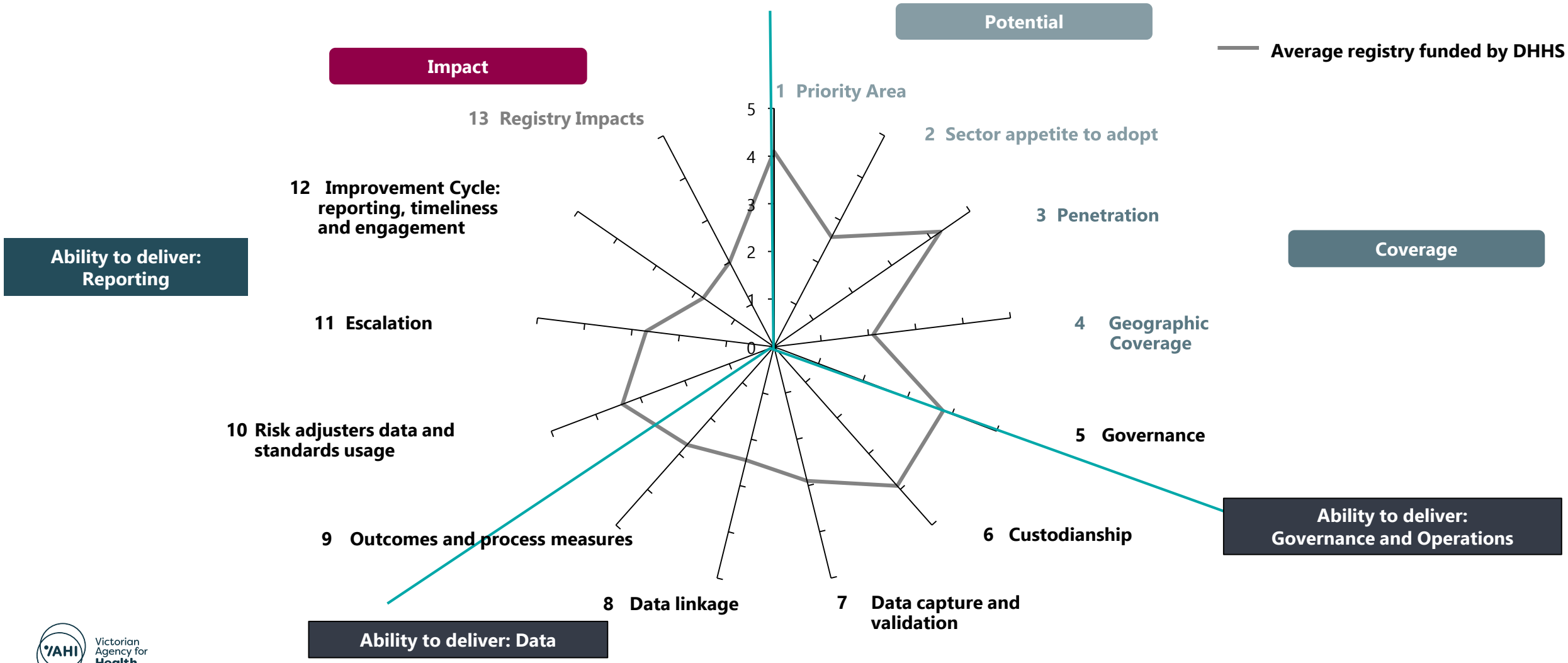
Why invest in CQRs?

Benefit to cost ratio attributable to CQRs range from 2:1 to 7:1



Source: Australian Commission on Safety and Quality in Health Care (2016) Economic evaluation of clinical quality registries

CQR Maturity matrix for individual registries



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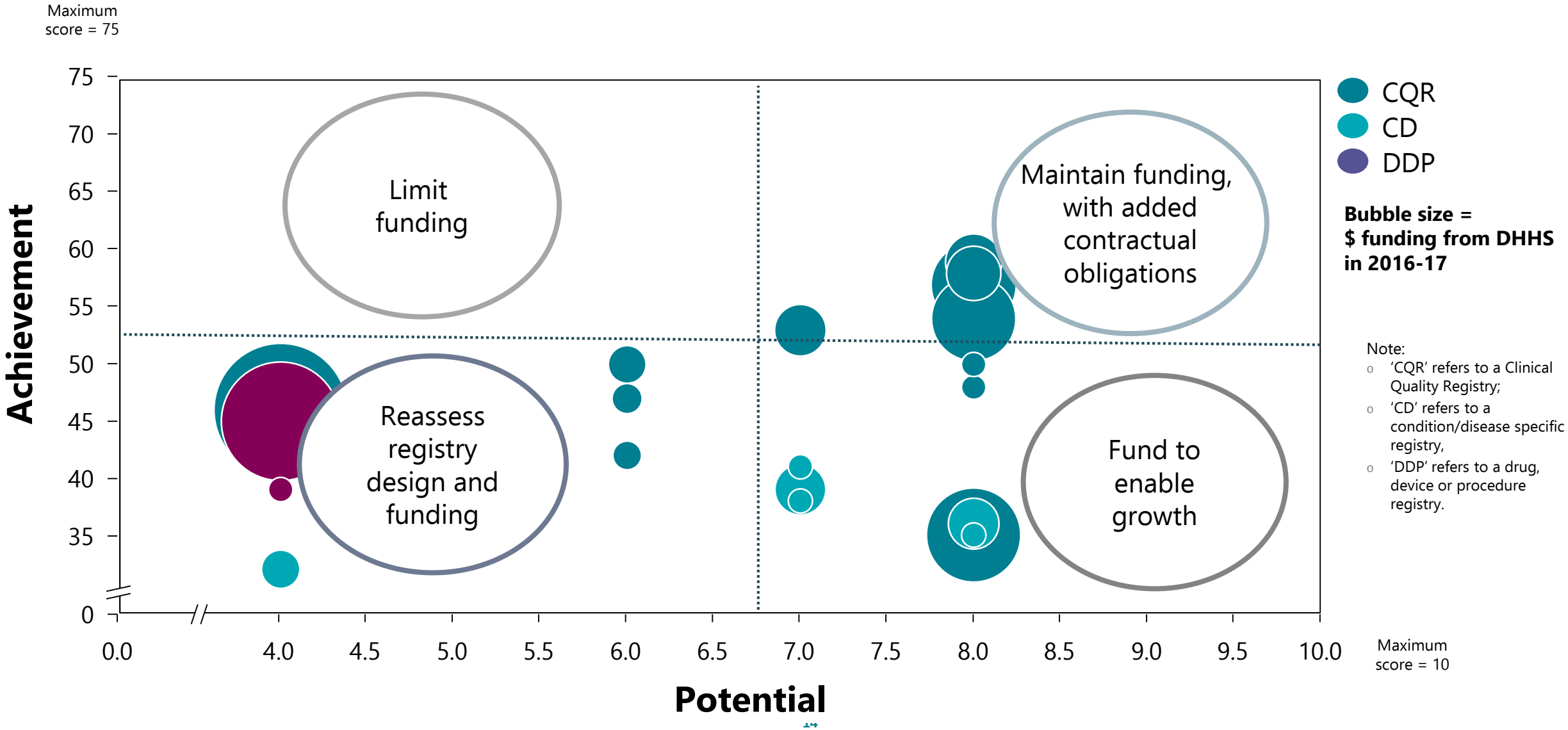
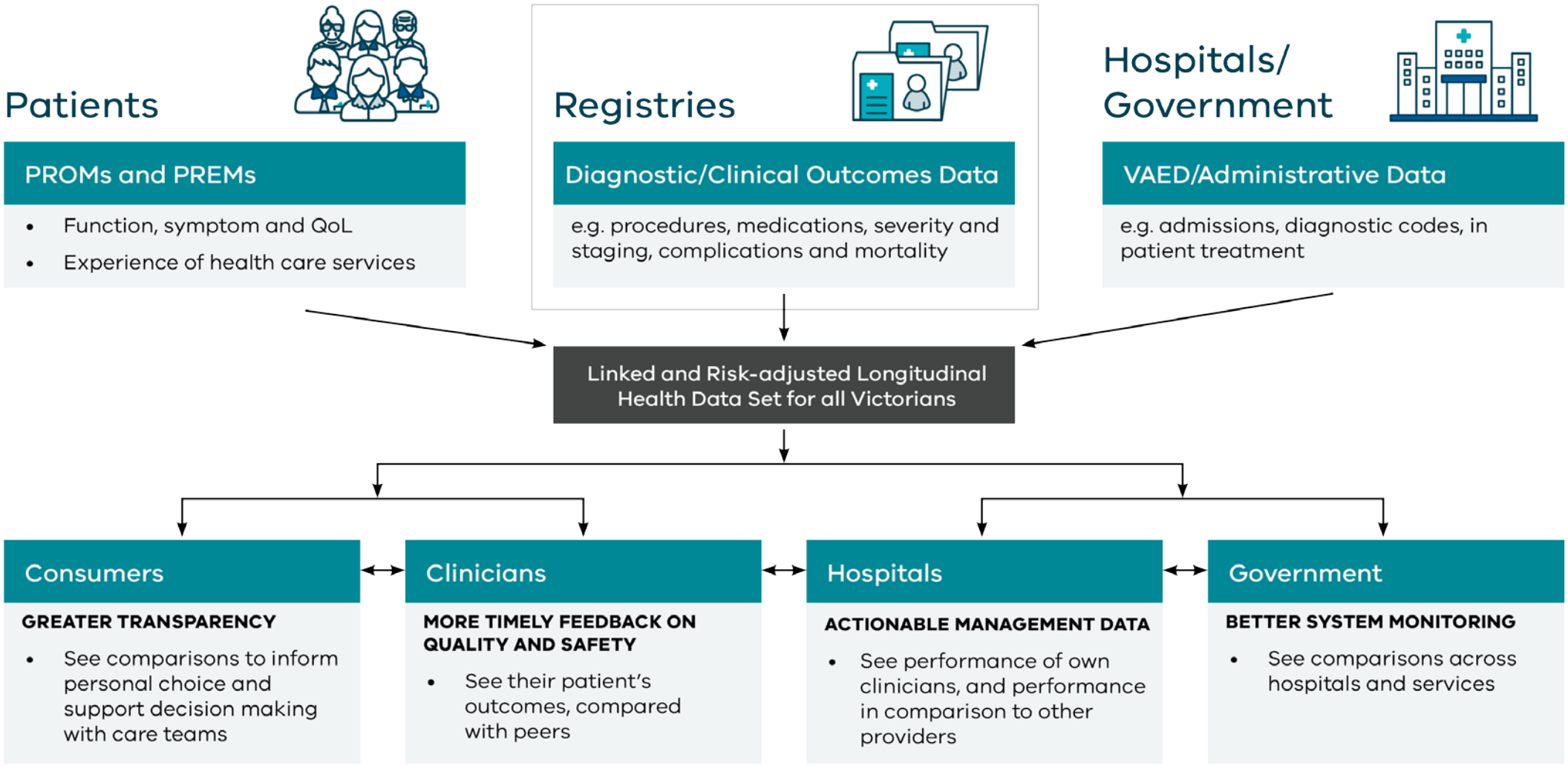
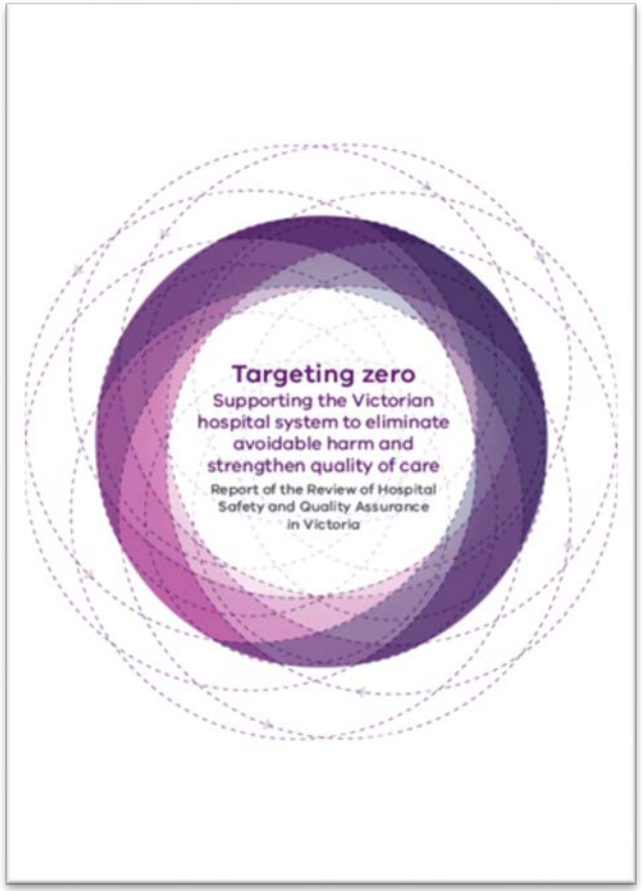
Mapping of CQRs according to funding, type and maturity



The potential: CQRs and other datasets

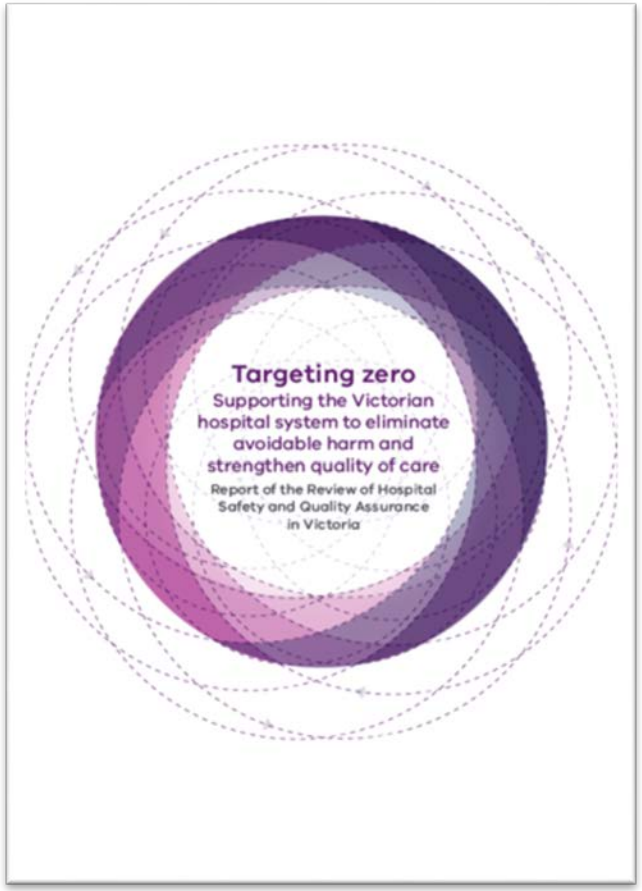


Targeting Zero and CQRs



- *"That departmental monitoring of safety and quality includes monitoring against a comprehensive range of outcome indicators using hospital routine data and data from clinical registries"*
- *"There be stronger obligations for clinical registries to report serious deficiencies in care once they are detected"*
- *"Clinical registries funded by the department should be required, as a condition of funding, to provide their data to VAHI"*
- *"CQRs funded by the department be renegotiated to provide … an explicit requirement for all performance metrics to be provided to hospital CEOs and to the department at the same time as they are fed back to clinical units"*

Targeting Zero and CQRs (continued)



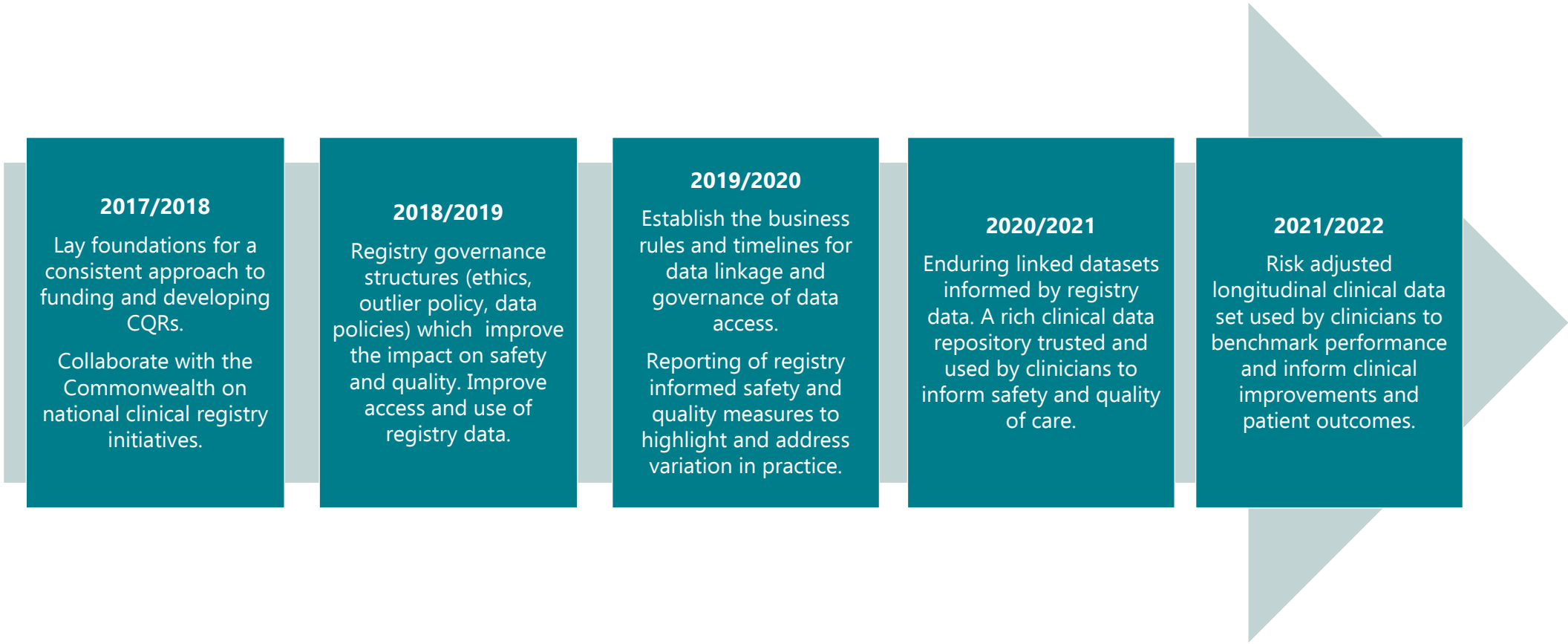
- *"for registries that have been in existence for more than a decade, a full dataset of registry data to VAHI at least annually to allow matching to, and incorporation in, the relevant routine dataset (the data provided should have the names of individual clinicians removed)*
- *VAHI publishes metrics derived from clinical registries in its quarterly public report*
- *clinical networks consider whether participation in relevant registry collections be mandated for public and private hospitals*
- *The department raises at the appropriate national forum that the Commonwealth Department of Health (or other national funding bodies) changes national funding contracts to ensure nationally funded registries meet the same requirements"*

VAHI support for Clinical quality registries (CQRs)

The VAHI CQR program will support high performing CQRs which are integrated into Victorian health information systems, and systematically drive patient-centered improvements in safety and quality.

- 2016 The Victorian Government was found to fund 20 registries through various funding agreements in an ad hoc, unco-ordinated fashion with inconsistent outcomes
- 2017 Clinical registry oversight committee formed by VAHI to oversee the development of a strategy for Clinical Quality Registries (CQRs).
- 2017 CQR maturity matrix developed and tested during consultation with the sector. 11 CQRs identified.
- 2018 Governance arrangements for CQRs developed with SCV clinical networks, VAHI and DHHS. National CQR draft strategy developed.
- 2018 A consistent approach to funding and developing Victorian Government funded CQRs is being implemented.

The direction of Victorian CQRs



VAHI CQR funding agreements

1. **three-year funding agreements for:**
   - (i) cardiac outcomes registry
   - (ii) cardiac surgery registry;
   - (ii) trauma registry;
   - (iv) intensive care registry,
   - (v) Australian Stroke Clinical Registry; and

2. **one-year funding agreements for:**
   - (i) the persistent pain collaboration; and
   - (ii) rehabilitation outcome centre.

3. **In 2019/20, VAHI plans to develop a contract with the Major Blood Transfusion registry.**

VAHI Clinical Quality Registries Working Group

- VAHI have established a CQR working group of national and state stakeholders to provide guidance on the implementation of the CQR strategy AND advise VAHI in its use and collection of CQR data
- Membership of the committee comprises representatives from the registry sector and key DHHS / VAHI staff. The membership list includes:
  - professors, John McNeil, Domonique Cadilhac and a/ professors Graeme Hart and Andrew Wilson
  - the Chief Digital Health Officer, Neville Board.
  - Directors from DHHS.

CQR data

Privacy impact assessment for Victorian CQRs.

- working with Legal on a Privacy Impact Assessment (PIA) for the transfer and linkage of registry data by VAHI/DHHS.
- The PIA confirms that the collection of CQR data by VAHI for the purpose of funding, management, planning, monitoring, improvement or evaluation of health services is permitted.
- A copy of the PIA has been distributed to VAHI funded registries.

Letter to Health Service CEOs

- VAHI has written to health service CEOs to advise them of contractual arrangements with registries that stipulate:
  - A full dataset of registry data being provided to VAHI; and the identification of your health service in the reports submitted to DHHS, SCV and VAHI.

First registry data set received and is with CVDL

- VAHI and CVDL are preparing the data from ANZICS for linkage - this first linkage project will provide a model for other registry data linkage.

CQR data (continued)

Outlier process and escalation procedure in place for all registries

As part of the contractual arrangements, VAHI now have a working outlier and escalation process in action for all funded registries. The process outlines the points at which various agencies are notified.

New minimum reporting CQR standards

- VAHI is in the process of developing minimum reporting standards for registries.
- VAHI has begun discussions with the Australian Commission on Safety And Quality in Health Care around national reporting standards for registries.

CQRs – specific projects in 2019

Development of consolidated CQR overview for inclusion in VAHI regular reports

- VAHI will work with registries to develop and improve the reporting of CQR data to promote the provision of safe quality care.
- The purpose of the CEO Dashboard report is to address a Targeting Zero recommendation, while providing CEOs with accessible and actionable performance information. The dashboard report will be tailored for each health service executive with summary results of each CQR their health service contributes data to shown against other health services in Victoria.

Clinical Network support

- VAHI is working with SCV clinical networks to provide analytical support for agreed priority projects to drive quality and safety improvements at Victorian health services and support improvements in clinical variation.

Public release of CQR data in the future?

"Public reporting has had a positive influence on provider quality improvement activities, particularly in the USA, and supports public reporting of agreed safety and quality indicators with risk adjustment, to facilitate accurate comparisons between healthcare organisations.

Evidence of benefits from public reporting at the hospital level is typically identified through increased quality improvement activities, overall performance and outcomes, or both"

AUSTRALIAN COMMISSION
ON SAFETY AND QUALITY IN HEALTH CARE

TRIM: D18-27543

March 2019

Public reporting of safety and quality in public and private hospitals

Literature review and environment scan

Evidence: Public release of data

Cochrane Library

Cochrane Database of Systematic Reviews

Impact of public release of performance data on the behaviour of healthcare consumers and providers (Review)

Metcalfe D, Rios Diaz AJ, Olufajo OA, Massa MS, Ketelaar NABM, Flottorp SA, Perry DC

Main results

We included 12 studies that analysed data from more than 7570 providers (e.g. professionals and organisations), and a further 3,333,386 clinical encounters (e.g. patient referrals, prescriptions). We included four cluster-randomised trials, one cluster-non-randomised trial, six interrupted time series studies, and one controlled before-after study. Eight studies were undertaken in the USA, and one each in Canada, Korea, China, and The Netherlands. Four studies examined the effect of public release of performance data on consumer healthcare choices, and four on improving quality.

There was low-certainty evidence that public release of performance data may make little or no difference to long-term healthcare utilisation by healthcare consumers (3 studies; 18,294 insurance plan beneficiaries), or providers (4 studies; 3,000,000 births, and 67 healthcare providers), or to provider performance (1 study; 82 providers). However, there was also low-certainty evidence to suggest that public release of performance data may slightly improve some patient outcomes (5 studies, 315,092 hospitalisations, and 7502 providers). There was low-certainty evidence from a single study to suggest that public release of performance data may have differential effects on disadvantaged populations. There was no evidence about effects on healthcare utilisation decisions by purchasers, or adverse effects.

Authors' conclusions

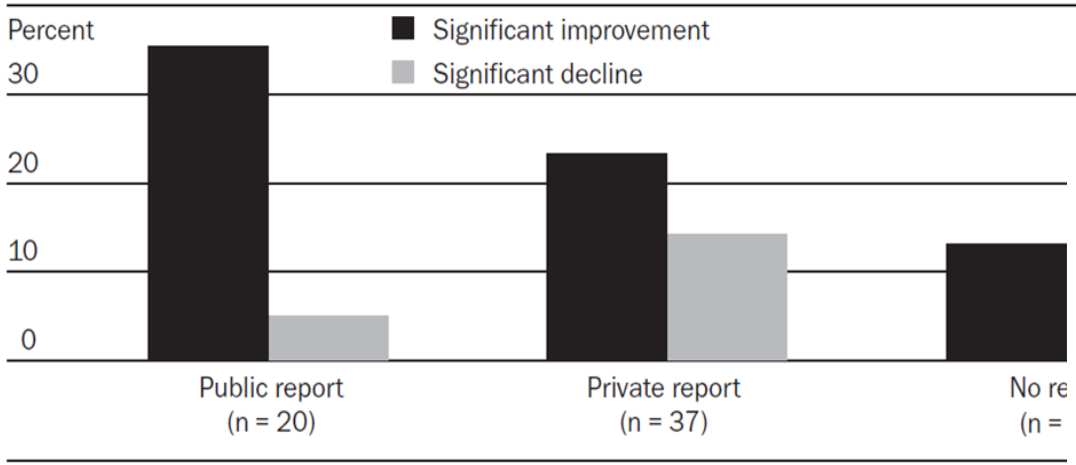
The existing evidence base is inadequate to directly inform policy and practice. Further studies should consider whether public release of performance data can improve patient outcomes, as well as healthcare processes.

Outcomes	Impact	No of clinical encounters (studies)	Certainty of the evidence (GRADE)*
Changes in healthcare utilisation by consumers	Public release of performance data may make little or no difference to long-term healthcare utilisation by consumers. However, two studies (one cNRT and one ITS) found that some population subgroups might be influenced by public release of performance data.	18,294 insurance plan beneficiaries[a] (3: 1 cRT, 1 cNRT, 1 ITS)	⊕⊕⊖⊖ **low**
Changes in healthcare decisions taken by healthcare providers (professionals and organisations)	Public release of performance data may make little or no difference to decisions taken by healthcare professionals. Two studies (2 cRTs) found that some decisions might be affected by public release of performance data. One study (ITS) found that decisions might be influenced by the initial release of data, but that subsequent releases might have less impact.	3,000,000 births[b] and 67 healthcare providers (4: 2 RTs, 2 ITS)	⊕⊕⊖⊖ **low**[c]
Changes in the healthcare utilisation decisions of purchasers	No studies reported this outcome.	-	-
Changes in provider performance	Public release of performance data may make little or no difference to objective measures of provider performance.	82 healthcare providers (1 cRT)	⊕⊕⊖⊖ **low**[d]
Changes in patient outcome	Public release of performance data may slightly improve patient outcomes.	315,092 hospitalisations and 7503 healthcare providers (5: 1 RT, 3 ITS, 1 CBA)	⊕⊕⊖⊖ **low**[e]
Adverse effects	No studies reported this outcome.	-	-
Impact on equity	Public release of performance data may have a greater effect on provider choice among advantaged populations.	Unknown (1 ITS)	⊕⊕⊖⊖ **low**

Cochrane Database of Systematic Reviews Impact of public release of performance data on the behaviour of healthcare consumers and providers (Review) Metcalfe D, Rios Diaz AJ, Olufajo OA, Massa MS, Ketelaar NABM, Flottorp SA, Perry DC, Metcalfe D, Rios Diaz AJ, Olufajo OA, Massa MS, Ketelaar NABM, Flottorp SA, Perry DC. Impact of public release of performance data on the behaviour of healthcare consumers and providers. Cochrane Database of Systematic Reviews2018, Issue 9. Art. No.: CD004538.DOI: 10.1002/14651858.CD004538.pub3

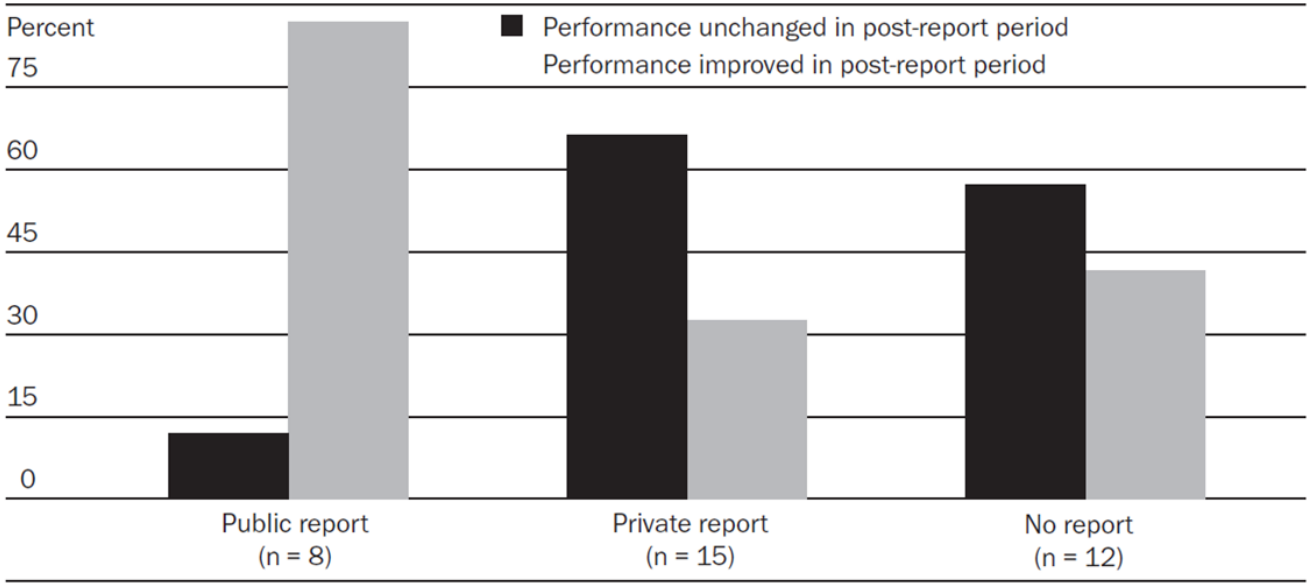
Evidence: Public release of performance data

Percentage Of Hospitals With Statistically Significant Improvements Or Declines In Obstetrics Performance In The Post-Report Period (2001–2003)



SOURCE: Wisconsin Bureau of Health Information, risk-adjusted by Medstat.

Changes In Hospital Performance In The Post-Report Period (2001–2003) Among Hospitals With Worse-Than-Expected Scores At Baseline



SOURCE: Wisconsin Bureau of Health Information, risk-adjusted by Medstat.
NOTE: Change in scores at baseline is significant at the 5 percent level.

Judith H. Hibbard, Jean Stockard, and Martin Tusler, Health Affairs, Vol 24 No. 4 – July/ August 2005 DOI 10.1377/hlthaff.24.4.1150 Project HOPE–The People-to-People Health Foundation, Inc.

Evidence: Impact of public relkeaser of data on consumer behaviour

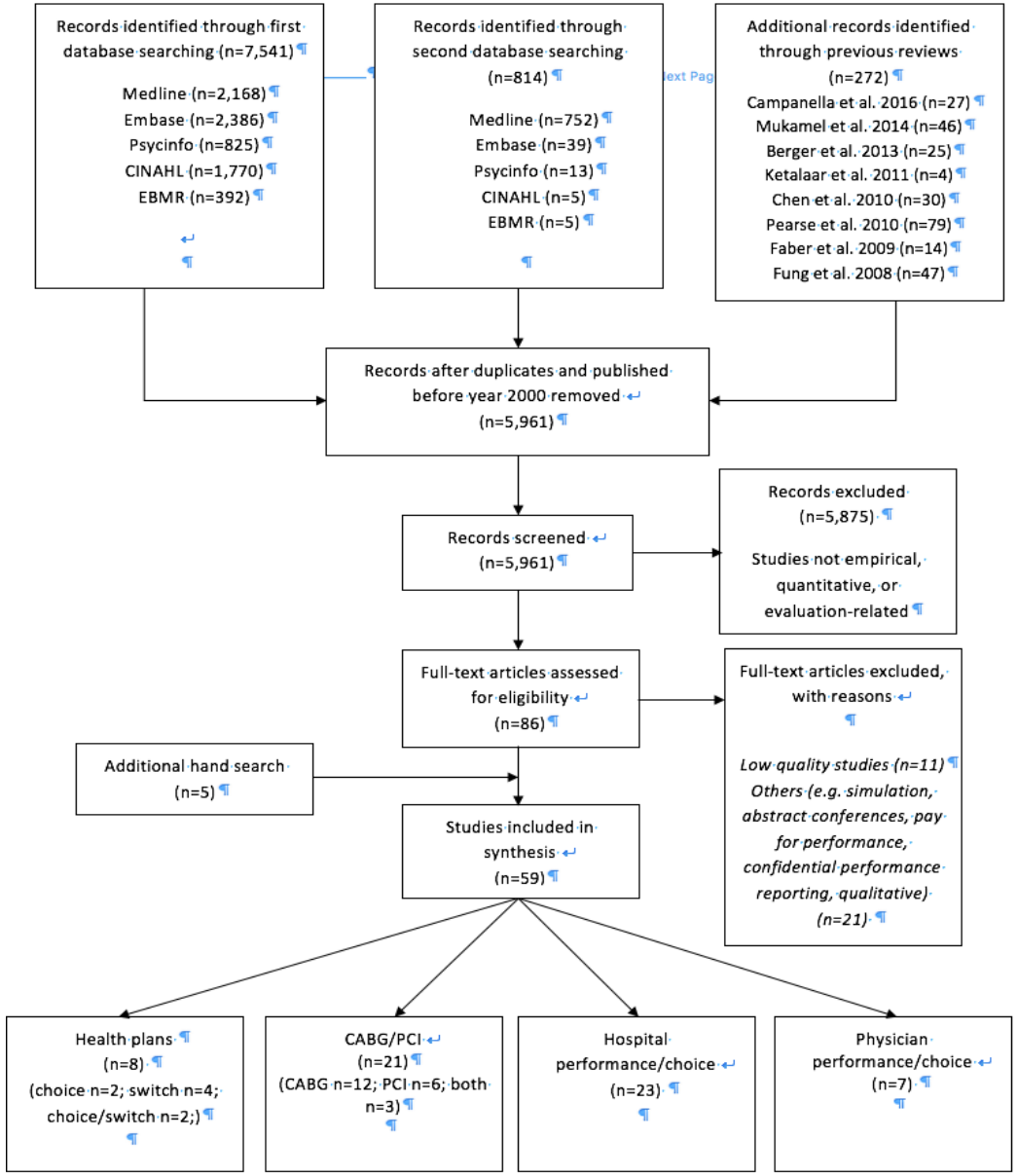
Is limited evidence

- An intervention review undertaken by Ketelaar et al. in 2011 to identify the impact of public release of performance data in changing the behaviour of healthcare consumers,
- four studies covering 35,000 consumers and 1,560 hospitals.
- The review found the evidence was limited and of low quality, thereby preventing the ability to arrive at any definitive conclusions on the impact of public reporting on consumer behaviour.
- Further evidence they reviewed from the Netherlands and the United Kingdom showed only between 3-4% of people had accessed available quality information before making a choice about a hospital.
- Even high-profile investigations and publication of reports and newspaper coverage of problems with infections in three hospitals in England did not prompt patients to switch hospitals.
- authors also found research from the USA that indicated individuals were more likely to spend more time researching the quality of a car or fridge before purchasing than researching a hospital before having a surgical procedure.

Prof Emer David Dunt, University of Melbourne

How relevant is public reporting of hospital and surgeon performance in Australia?

- Looked at IMPACT ON:
  - Coronary artery interventions - CABG and Percutaneous Coronary interventions (PCIs)
  - Health care plans (selection and switching)
  - Other (hospitals and physicians)



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Results of systematic reviews from Dunt et al

- PPR stimulates quality improvement activities and improve clinical outcomes including mortality - consistent with previous reviews
- PPR positively influences consumers' (i.e. patients, providers, purchasers) selection of healthcare providers (i.e. individual physician, hospital) – new / developing evidence .
- PPR led to small improvements in ED time-based process outcomes following the introduction of the national healthcare reforms in 2011. These occurred in most hospital peer groups immediately and over the longer term, across the various triage categories.
- While good evidence-based support for PPR, there is also some inconsistency – PPR mostly but not always able to identify important positive effects
- current thinking is that this heterogeneity is due to local differences in PPR schemes (eg some schemes mandatory, some voluntary; different susceptibilities to gaming etc), as well as different local health care policies and practices

What is the assumed change mechanism?

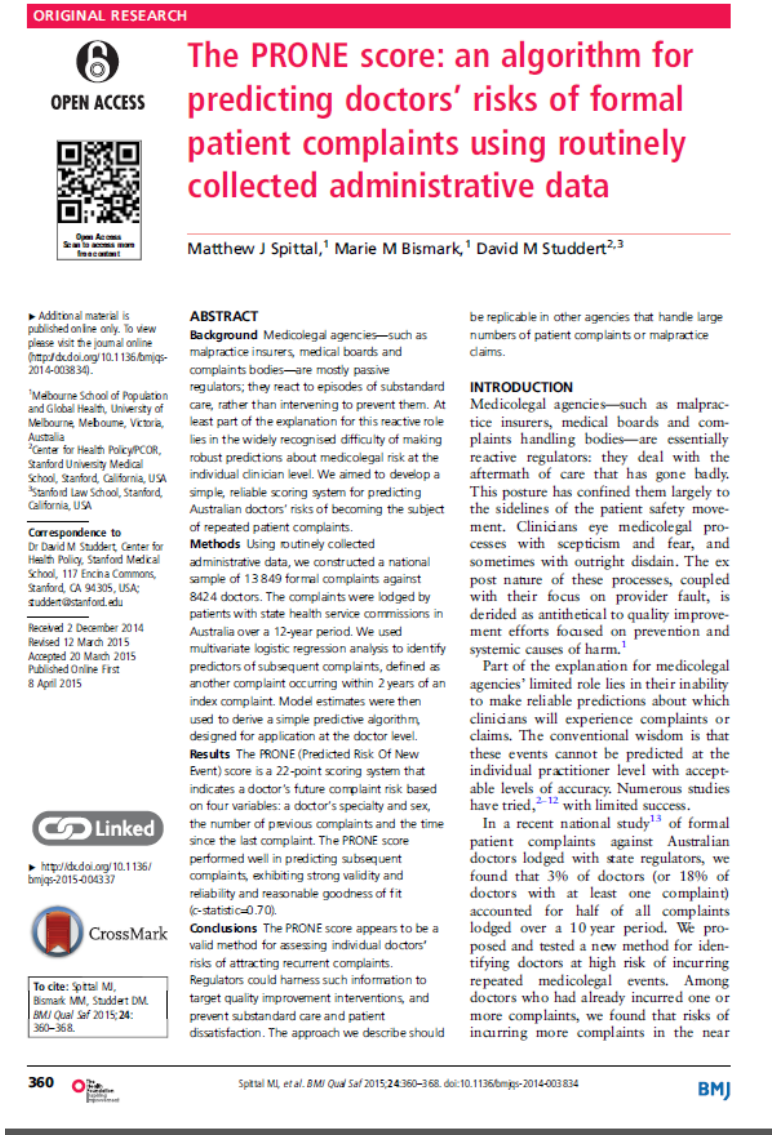
1. Selection (consumer empowerment / behaviour), whereby public reporting empowers health consumers and other relevant health sector stakeholders such as health insurers to identify and choose services from healthcare organisations that perform better and have better outcomes
2. Changes in care (provider quality improvement), whereby public reporting provides greater visibility of organisational performance, generating momentum within an organisation to drive ongoing quality improvement activities to maintain or enhance its reputation.

Barriers to the use of reporting to inform consumer choice

- Consumers are not aware that there is a quality gap,
- Consumers and clinical experts define quality differently, with consumers tending to value affordability, access and doctors' qualifications over the more complex clinical and patient outcome measures that public reporting currently tends to involve
- Existing public reporting measures are complicated and not meaningful to consumers, citing length of stay (LOS) indicators as an example, which some consumers interpret as they are more likely to be allowed to stay longer to complete their recovery and rehabilitation
- Making informed choices based on existing public reporting measures is cognitively challenging and giving people large amounts of information to make a choice can be counterproductive

What about star rating of individual clinicians?

- Evidence indicates that cardiac surgical patient mortality rates **did not** follow a particular surgeon moving between institutions (i.e. that their performance was not fully 'portable').
- Patient outcomes were not tied to an individual surgeon; rather, they were dependent on other factors related to team, facility, and organisation.
- The USA Veterans Health Administration discourages use of surgeon specific outcomes for this reason.



ORIGINAL RESEARCH

OPEN ACCESS

The PRONE score: an algorithm for predicting doctors' risks of formal patient complaints using routinely collected administrative data

Matthew J Spittal,[1] Marie M Bismark,[1] David M Studdert[2,3]

► Additional material is published online only. To view please visit the journal online (http://dx.doi.org/10.1136/bmjqs-2014-003834).

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Received 2 December 2014
Revised 12 March 2015
Accepted 20 March 2015
Published Online First 8 April 2015

Linked

► http://dx.doi.org/10.1136/bmjqs-2015-004337

CrossMark

To cite: Spittal MJ, Bismark MM, Studdert DM. *BMJ Qual Saf* 2015;**24**:360–368.

ABSTRACT

Background Medicolegal agencies—such as malpractice insurers, medical boards and complaints bodies—are mostly passive regulators; they react to episodes of substandard care, rather than intervening to prevent them. At least part of the explanation for this reactive role lies in the widely recognised difficulty of making robust predictions about medicolegal risk at the individual clinician level. We aimed to develop a simple, reliable scoring system for predicting Australian doctors' risks of becoming the subject of repeated patient complaints.

Methods Using routinely collected administrative data, we constructed a national sample of 13 849 formal complaints against 8424 doctors. The complaints were lodged by patients with state health service commissions in Australia over a 12-year period. We used multivariate logistic regression analysis to identify predictors of subsequent complaints, defined as another complaint occurring within 2 years of an index complaint. Model estimates were then used to derive a simple predictive algorithm, designed for application at the doctor level.

Results The PRONE (Predicted Risk Of New Event) score is a 22-point scoring system that indicates a doctor's future complaint risk based on four variables: a doctor's specialty and sex, the number of previous complaints and the time since the last complaint. The PRONE score performed well in predicting subsequent complaints, exhibiting strong validity and reliability and reasonable goodness of fit (c-statistic=0.70).

Conclusions The PRONE score appears to be a valid method for assessing individual doctors' risks of attracting recurrent complaints. Regulators could harness such information to target quality improvement interventions, and prevent substandard care and patient dissatisfaction. The approach we describe should be replicable in other agencies that handle large numbers of patient complaints or malpractice claims.

INTRODUCTION

Medicolegal agencies—such as malpractice insurers, medical boards and complaints handling bodies—are essentially reactive regulators: they deal with the aftermath of care that has gone badly. This posture has confined them largely to the sidelines of the patient safety movement. Clinicians eye medicolegal processes with scepticism and fear, and sometimes with outright disdain. The ex post nature of these processes, coupled with their focus on provider fault, is derided as antithetical to quality improvement efforts focused on prevention and systemic causes of harm.[1]

Part of the explanation for medicolegal agencies' limited role lies in their inability to make reliable predictions about which clinicians will experience complaints or claims. The conventional wisdom is that these events cannot be predicted at the individual practitioner level with acceptable levels of accuracy. Numerous studies have tried,[2–12] with limited success.

In a recent national study[13] of formal patient complaints against Australian doctors lodged with state regulators, we found that 3% of doctors (or 18% of doctors with at least one complaint) accounted for half of all complaints lodged over a 10 year period. We proposed and tested a new method for identifying doctors at high risk of incurring repeated medicolegal events. Among doctors who had already incurred one or more complaints, we found that risks of incurring more complaints in the near

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Patient Reported Outcomes (PROs)

What the program is about

- Collection of PROs on a systematic basis to promote improvements in patient centred care

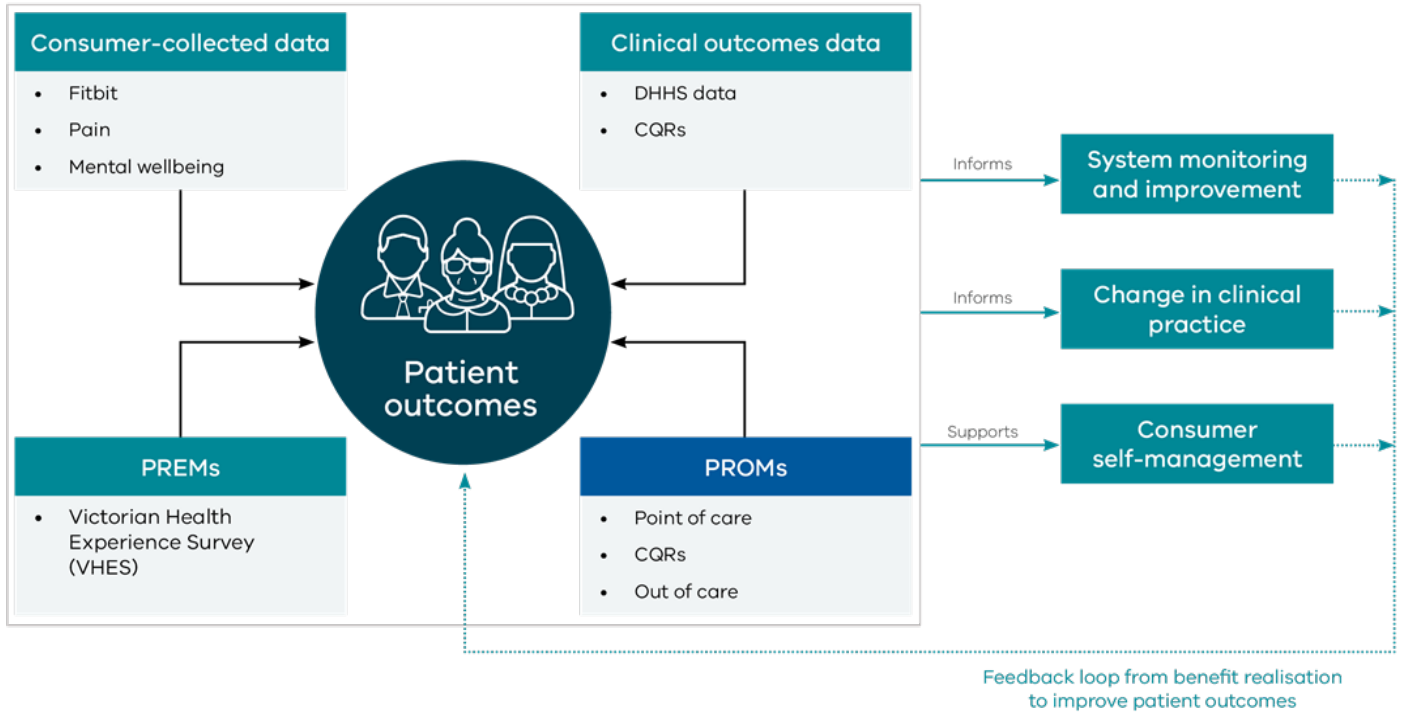
What we have done to date

- In partnership with the Australian Orthopaedic Association, Monash University, the Florey Institute, Safer Care Victoria and DHHS, VAHI is piloting four innovative and scalable initiatives aimed at better understanding how Patient Reported Outcomes (PROs) can be collected and utilised at a state-wide level.
  - Exploring the link between patient experience and patient outcomes. Cognitive testing of a collection of PROs through the Patient Experiences of Cancer Care Survey (PECCS), for patients who have undergone chemotherapy treatment in an outpatient setting is now complete.
  - Exploring best practice approaches to improving the impact of PROs in the clinical setting. Rapid literature review complete and first workshop held to understand current experience reporting on and feeding back PROs data
  - Exploring collection processes and patient engagement. Collection of PROs data from patients (at participating pilot sites) before and after shoulder, hip and knee replacement surgery
  - Exploring patient feedback methods. Pilot of a co-designed patient facing prostate cancer quality of life predictor tool, and resource hub

Next steps

- A broader roll out of the PECCS to approximately 12,000 patients is scheduled for early 2020.
- Continued roll-out of pilot program and regular updates to the sector

The value of Patient Reported Outcomes



Greatest Opportunity for Value

Data Collection + **Change Management** = Impact

The value of patient experience data

Kemp (2016) linked administrative data to patient experience data and found that:

- Patients who indicated they were not involved in care decisions were 34% more likely to be readmitted
- Patients who did not receive written information describing
  post-discharge signs and symptoms to watch for were 25% more likely to be readmitted
- Patients who indicated they were not involved in care decisions as much as they wanted to be AND did not receive written discharge information were 54% more likely to be readmitted

Harrison et al (2018) linked patient experience data and routinely collected administrative data to examine patient and admission characteristics and found that:

- Unplanned admissions and experience of an adverse event were both strongly associated with a poorer patient experience

CQR forum 28th October

- The CQR Forum will showcase the contribution of clinical quality registries to the quality and safety of Australia's health care system.
- The forum will open with Mr Eric Hans Eddes, the keynote speaker from the Dutch Institute for Clinical Auditing.
- The focus of the presentations will be the current use of registry data in supporting patient safety and quality improvements.

CQR Forum

Maximising Australian CQRs' potential to improve safety and quality

Monday 28th October 2019 – 8:45am to 5:30pm

Time	Session	Location
8:30	Registration, arrival tea and coffee	Outside ballroom level 1
9:00	Welcome Event facilitator – Kira Leeb, Victorian Agency for Health Information *Professor John McNeil, Dr Lance Emerson and Ms Sally Rayner*	Ballroom level 1
9:30	Key note: The highs and lows of building national outcomes registries – lessons and opportunities for Australia *Mr Eric Hans Eddes*	
10:30	Q and A *Mr Eric Hans Eddes*	
10:40	Morning tea	Outside ballroom level 1
11:00	Key stakeholder presentations - current use of registry data in supporting patient safety and quality improvements.	Ballroom level 1
11:05	Royal Australasian College of Surgeons *Associate Professor Philip McCahy*	
11:20	BUPA *Ms Zoe Wainer*	
11:35	Australian Commission on Safety and Quality in Health Care *Ms Catherine Katz*	
11:50	Alfred Hospital *Dr Susan Sdrinis*	
12:05	Victorian Agency for Health Information and Safer Care Victoria *Ms Paula Wilton and Associate Professor Andrew Wilson*	
12:20	Panel discussion: What is needed to develop the role of CQRs in Safety and Quality *Philip McCahy, Zoe Wainer, Catherine Katz, Susan Sdrinis, Paula Wilton and Andrew Wilson*	
12:40	Lunch	Ground floor
13:30	**Session 1: Showcasing registries – peer review of variation in clinical practice** Presentation from the Australian and New Zealand Society of Cardiac Thoracic Surgeons database *Mr Gil Shardey*	Breakout room 1*

*Break out room locations to be confirmed at the event. Please see event staff for assistance.

Victorian Agency for Health Information

Australian Government Department of Health

MONASH University

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Thank you

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