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Assessing the value of accreditation to health systems and organisations

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policy issue

What is accreditation in healthcare?

Accreditation is a process of external peer review to assess the performance of a healthcare facility in relation to agreed healthcare accreditation standards. Although there are numerous accreditation reviews that health services are required to achieve including pre-vocational medical training accreditation, the focus of this brief is health service accreditation against healthcare standards.

In Australia, the requirement is mandatory accreditation against the Australian National Safety and Quality Health Service (NSQHS) Standards[1].

Accreditation in healthcare has existed for over 100 years (Brubakk et al, 2015) and has been widely adopted as an essential part of healthcare systems in more than 70 countries, including Australia (Greenfield et al, 2013).

Whilst the core function of healthcare accreditation remains assurance that a level of compliance to minimum standards is achieved (Brubakk et al, 2015) it is very much a primary driver of quality and safety internationally (Braithwaite et al, 2006).

Health service accreditation is an assessment of performance against standards at a given point in time. It provides a snapshot of performance against standards and ongoing maintenance and improvement of this performance is the responsibility of the accredited facility.

What is 'value' in healthcare?

A lack of consistent understanding of what 'value' means in healthcare (Porter 2010) has led to several definitions which generally converge around a goal of achieving maximum health outcome per monetary unit of expenditure (Porter 2006).

Achieving value in healthcare has been proposed as the primary aim of health systems worldwide (Porter, 2010) and the international drive to achieve maximum value has been described as a new paradigm in healthcare (Gray et al, 2017).

What is the 'value' of accreditation?

Accreditation is part of healthcare globally, and in Australia all health care facilities are required to be accredited. Accreditation is a reliable activity (Greenfield et al, 2010) which has been found to improve patient care and support a positive culture and effective leadership in various countries and settings (Bogh et al, 2016; Braithwaite et al, 2010;

[1] https://www.safetyandquality.gov.au/our-work/assessment-to-the-nsqhs-standards/

Shaw et al, 2014). It may contribute to continual and systematic quality improvement changes, at a process and sub-system level within hospitals (Greenfield et al, 2019).

However, current literature is unable to consistently assess the effectiveness of accreditation (Brubakk et al, 2015), with some commentators arguing that inconsistent and unconvincing evidence fails to demonstrate the value of accreditation to the Australian health system (Duckett et al, 2018).

Despite a lack of clarity around the costs and benefits associated with accreditation (WHO, 2003) and with some researchers questioning if the investment in accreditation delivers sufficient outcomes (Øvretveit, 2000), the uptake of accreditation continues globally. Ambiguity in the value accreditation brings to healthcare (Brubakk et al, 2015) and escalating costs across Australian healthcare (AIHW, 2018) mean that understanding the value accreditation adds to healthcare remains important for policy makers given the scale and cost involved (Scmaltz et al, 2011).

Further challenges exist for healthcare accreditation with commentary suggesting that the process has 'failed' (Duckett et al, 2018). This is attributed to variation in complication rates in Australian hospitals and high profile examples of safety failures in healthcare resulting in multiple patient deaths at accredited hospitals such as those seen at Bundaberg (Queensland Health, 2005), Campbelltown (NSW Department of Health, 2004), Bacchus Marsh (Victorian Department of Health, 2016) and Bankstown-Lidcombe (NSW Health, 2016).

Measuring value in health care

Facilities being accredited vary in a number of ways including the range of conditions treated and procedures provided (casemix), inclusion of specialist facilities and size of facility and population covered. However, all healthcare facilities are complex (Martinez-Garcia and Lemus, 2013; OECD, 2015) and this complexity makes assigning value challenging.

NSW Health has adopted the 'Healthcare Triple Aim' framework (NSW Health, 2018, Berwick et al, 2008; Hendrikx, 2016) to measure value in healthcare.

The three components of the healthcare triple aim are:

- Improving the patient experience of care (including quality and satisfaction)
- Improving the health of populations
- Reducing the per capita cost of health care

In recognition of the role workforce can play in enhancing or impeding the triple aim, it has been suggested that to truly deliver the best value a 'Quadruple Healthcare Aim'

should be adopted (Bodenheimer and Sinsky, 2014; Sikka et al, 2015). Healthcare organisations worldwide are adopting this model including within Australia (Primary Health Network Hunter New England and Central Coast, 2016; Primary Health Network North West Melbourne, 2018).

This policy brief adopts the Quadruple Aim framework, including workforce in addition to those components listed above, in assessing the value of accreditation to health services.

What does the evidence say?

Research into health services accreditation and its value to healthcare is lacking and the Australian setting is no exception (Hinchcliff et al, 2012; Duckett et al, 2018; Brubakk et al, 2015). International literature is dominated by studies in the USA, although Australia contributed the second highest number of papers considered in a 2012 review (Hinchcliff et al, 2012).

In Australia, as with many countries covered by the existing literature, all health care facilities are required to be accredited. This prevents appropriate control comparisons between accredited and non-accredited facilities and as such the literature relies heavily on observational studies; typically cross-sectional in nature. This limits conclusive statements regarding the effectiveness of accreditation (Mumford et al, 2013).

More systematic consideration of the evidence base has been attempted, although differences in accreditation methods, health systems, outcomes measured and study design limit the capacity to conduct the strongest research approaches such as systematic review and meta-analysis (Brubakk et al, 2015; Hinchcliff et al 2012).

Within the literature those studies which present results with the greatest certainty are typically small studies which are often in dissimilar regions and systems which mean results are not easily extrapolated to the Australian context (Al Awa et al, 2001 & Al Tehewy et al, 2009).

Larger studies and those in more applicable settings present results more cautiously (Hinchcliff et al, 2012; Brubakk et al, 2015). Such papers review a number of studies and note that the pooling of results is challenging for several reasons. These include the wide variety of metrics captured, variable consideration of other factors which may affect results and differing definitions of terms such as quality. However, these studies remain comprehensive summaries of the current literature.

Given the absence of standardised metrics for assessing effectiveness and as such the value of accreditation, the healthcare quadruple aim may provide a meaningful lens for considering existing literature.

Improving the patient experience of care

Satisfaction

Evidence is limited concerning the impact of accreditation on patient experience with only thirteen studies, including two from Australia, covering this as an outcome in a review of one hundred and twenty-two studies (Hinchcliff, 2012).

Findings from international studies on the value of accreditation are conflicted. Patient satisfaction, perception of quality of care and rates of recommendation do not differ between accredited and non-accredited hospitals in Germany and the United States (Beaulieu et al, 2002; Heuer, 2004; Sack et al, 2010; Sack et al, 2011). This is in contrast to the improved patient satisfaction reported in accredited versus unaccredited hospitals in Saudi Arabia (Al Tehewy et al, 2009).

The role of accreditation may well not be easily related to patient satisfaction as it impacts on healthcare in a way which is not clear for consumers to recognise (Hinchcliff et al, 2012). Variation in public and indeed staff perception also varies by region. Studies from the Middle East have shown more positive staff and consumer views towards accreditation than other regions. This may reflect differences in health systems, organisational culture, surveying methods or the role of staff and patients in different regions. While these studies provide useful insights, it may be appropriate to give more weight to the results of studies in Australia and other countries deemed to be most comparable.

Quality

Ambiguity around what constitutes 'quality' in healthcare (WHO, 2003) is demonstrated by the wide range of metrics used to assess quality within the literature on accreditation (Hinchcliffe et al, 2012). At least 65 studies into accreditation reported quality as an outcome measure although lack of consistency in how this is measured limits opportunities to collate results (Hinchcliff et al, 2012).

Studies in Australia and the USA demonstrate a positive association between accredited facilities and several indicators of quality such as adherence to guidelines and protocols (Braithwaite et al, 2010; Schmaltz, 2011). Infection control performance is also positively associated with accredited facilities (Sekimoto et al, 2008; Mumford et al, 2015). Other indicators of quality such as good leadership and organisational culture also show a positive association with accredited facilities in Australia (Braithwaite et al, 2010).

Accreditation is able to measure predefined quality indicators at a point in time. Meeting such quality indicators may not provide assurance of a minimum standard of performance in the longer term (Beaulieu and Epstein, 2002), however there is little alternative suggestion of how this could be delivered.

Improving the health of populations

Patient outcome measures

Internationally, patient outcome measures represent a gap in our understanding of the role that accreditation plays in the quality and safety of health care with only nine studies considering patient outcomes as an outcome in accreditation research (Hinchcliff et al, 2012).

Due to difficulty in attributing patient level outcomes to a multifaceted accreditation process, several indicators considered as 'quality' metrics such as guideline adherence and clinical performance are often a proxy for patient outcomes within the literature (Hinchcliff et al, 2012). While such proxies are often used in both research and practice, the positive association between adherence to guidelines and accredited facilities may not translate to patient outcomes (Chandra et al, 2009).

More direct clinical outcomes are considered in the literature. The link between improved patient outcomes and accreditation can be demonstrated across a range of clinical areas although many of the studies are based on sub-specialties rather than being hospital-wide, such as a reduction in mortality within USA accredited trauma centres (DeBritz and Pollak, 2006).

At hospital level, facilities in Denmark with consistently low compliance to the accreditation process have significantly higher 30 day mortality rates and longer times spent in hospital compared to facilities with high accreditation compliance (Falstie- Jensen et al, 2018).

A study from the USA showed lower rates of unexpected readmissions post-surgery in some procedures at accredited facilities although no significant difference in others (Menachemi et al, 2008). Similarly, differences in mortality and hospital readmission between accredited and non-accredited facilities show either a limited positive association favouring accredited facilities, or no significant association at all (Litchman, 2011).

Variation in rates of adverse effects of medical procedure (complication rates) between accredited and non-accredited facilities in the USA (Griffith, 2018) suggests that accreditation does not have an influence on standardising care or improving patient safety. Evidence from Australia supports this with a range of complication rates from 2.9-16.6% (Duckett et al, 2018).

Cost effectiveness of health care

Healthcare providers have concerns regarding the costs of accreditation (Doyle and Grampp, 2008). However, a lack of evidence in relation to the cost effectiveness of accreditation is recognised as a significant gap in the knowledge base (Brubakk et al, 2015; Hinchcliff et al, 2013). A 2015 review of studies considering costs and/or benefits found only 21 papers including three in an Australian setting (Mumford et al, 2015). The Australian

papers are nine, 23 and 36 years old respectively (Braithwaite et al, 2010; Gleeson and Fairbrother, 1996; Duckett, 1983).

The return on investment for accreditation costs has been challenged. For example, an Australian study indicated that the cost of accreditation was high yet showed little impact on clinical improvements (Fairbrother and Gleeson, 2000).

The basis of any economic appraisal is a set of clearly defined costs and outcomes which are used consistently across studies (Drummond et al, 2005). Whist Australia has led some of the recent work in this area, including efforts to develop a standard baseline of costs and outcomes (Mumford et al, 2015), outputs of this are not yet reflected in the evidence base.

Costs

In Australia, hospital accreditation costs around 0.1% of the acute public hospital budget (Mumford et al, 2015) and whilst there are limited comparators, a study in Ireland suggests accreditation costs 0.29% of a hospital's budget (Doyle et al, 2008). The cost for hospitals is greater in those years when inspections take place and in relative terms is more expensive for smaller facilities. This compares with an estimated 1.1% of total administration costs for general practice in Australia (Mumford et al, 2013).

Existing literature measures accreditation costs in different ways and there is, as yet, no consensus on which costs should be measured (Mumford et al, 2015). Costs attributed vary and may include only those related to the accreditation visit which are often budgeted for separately (Hinchcliff et al, 2012). This may enable cost quantification but risks reinforcing a perception that accreditation is a separate 'event' and not part of ongoing quality improvement and patient safety initiatives (Duckett et al, 2018).

Intangible costs such as workforce stress associated with preparing for accreditation have also been recognised as important considerations in evaluation (Productivity Commission, 2003) but have not been captured in studies considering cost benefits (Mumford et al, 2015; Zarkin et al, 2006)

Benefits

The benefits of accreditation are often poorly described and consolidation of expected benefits would support monetisation of accreditation and allow for cost effectiveness to be assessed (Hinchcliff et al, 2013; Mumford et al, 2015). Efforts at defining benefits have been made (ACHS, 2010) and examples of benefits are given (ACSQH, 2017).

If the benefits of accreditation, beyond compliance, are not made clear, the immediacy of the aforementioned intangible costs such as increased stress and the diversion of efforts and resources from frontline care (Mumford et al, 2015) may risk clouding positive views of accreditation (Hinchcliff et al, 2012)

Suggestions for reducing costs and preparation time associated with accreditation, such as short notice surveys (Hinchcliff et al, 2017), have shown early promise and may be a step towards encouraging a culture of maintaining standards beyond an accreditation visit

(Queensland Health, 2018). However, without well evidenced and widely accepted benefits, accreditation may promote a culture of compliance rather than improvement (Duckett et al, 2013; Alkhenizan et al, 2012) and reinforce some of the staff scepticism that exists (Alkhenizan et al, 2012).

Workforce

As with patients the perception of accreditation by healthcare staff is similarly inconclusive and shows variation by professional groups across the 38 studies which considered this in the 2012 review (Hinchcliff et al, 2012).

A Saudi Arabian study amongst nurses in a single hospital found a significant improvement in their perception of patient care and overall safety in accredited hospitals (Al Awa et al, 2011) whilst a larger study across 60 health units staff in Egyptian primary care showed staff felt that accreditation improved performance (Al Tehewy et al, 2009). A 2011 Lebanese study covering a range of professional groups in over sixty hospitals showed that patient safety was perceived to be higher in accredited hospitals (El Jardali et al, 2011).

However a study in the USA highlights staff concerns that accreditation is a resource intensive process which does not allow scope to target improvement efforts at organisational or locally determined priorities (McMillen et al, 2008). Similarly an Australian study has shown that senior staff view accreditation as a time-consuming process that adds little value in terms of patient care (Fairbrother and Gleeson, 2000). Australian radiologists also feel that the process increased workload without improving quality (Verstraete, 1999).

Despite the variation in perceptions of accreditation across professional groups, overall staff were supportive of the accreditation process and feel it supports patient safety although there were consistent concerns across professional groups in relation to the perceived additional work and costs involved (Alkhenizan and Shaw, 2012; Hinchcliff et al, 2013).

Staff participation also shows an association with staff perception. Accreditation is valued more when staff are aware of its purpose and are involved in the accreditation process (Greenfield et al, 2011). Accreditation is more likely to be viewed as a bureaucratic burden when staff are not directly involved in its delivery (Paccioni and Sicotte, 2008). This may suggest that the culture surrounding accreditation in a facility may impact on staff perception of its value

What does this mean for policymakers?

Healthcare accreditation is embedded in health systems worldwide and the literature indicates a number of positive associations with this approach relating to quality, patient satisfaction and outcomes. Whilst accreditation costs have been cited as a concern it must be accepted that the costs of any process of quality assurance in a large healthcare sector will be considerable.

Given the cautionary tone advised in interpreting measures relating to accreditation (Brubakk et al, 2015) and the scale and cost involved (Schmaltz et al, 2011; Mumford et al, 2013) further evidence is required to understand the value of accreditation.

Alternative approaches to providing quality assurance and supporting quality and safety improvements have been suggested (Duckett et al, 2018; Greenfield et al, 2012) although it remains unclear how the effectiveness of these would be compared to the existing accreditation process.The inability of current literature to demonstrate high value from healthcare accreditation does not equate to demonstrating evidence of low value.

Any policy decisions relating to accreditation may find the following considerations which emerged from the evidence useful.

Accreditation cannot be a panacea

Whilst accredited healthcare facilities vary considerably in size and scope of work, each represents a complex system and accreditation itself is a complex intervention which attempts to assess multiple indicators at a point in time.

Challenges in assessing complex interventions are well documented in this field (Brubakk et al, 2015) and beyond (Datta and Petticrew, 2013; Craig et al, 2008).

Suggestions that accreditation is ineffective (Brubakk et al, 2015) or has simply failed (Duckett et al, 2018) do so without a clear and consistent metric for measuring success and failure as well as suffering from the same lack of comparator when considering if accreditation in Australia has succeeded. The literature suggests that investigating 'does it work' is unwise and efforts would be best placed in establishing which aspects serve a useful purpose which can allow benefits to be maximised (Brubakk et al, 2015).

Accreditation cannot simply be judged as a stand-alone entity, especially regarding any effect it may have on patient outcomes. Healthcare accreditation effectiveness is to a large extent determined by the effectiveness and appropriateness of the standards, guidelines and protocols it assures against. Accreditation cannot guarantee complete safety of a healthcare facility as is true of any 'point in time' approach. However, it can be a positive indication of an organisation's safety culture (ACHS, 2017).

Healthcare changes and so must accreditation

Healthcare is in constant change in order to meet consumer needs and defined priorities. Changes in populations, technology and new research also combine to ensure that the care delivered will change, even if subtly, on a regular basis. Any tool for assuring and improving healthcare must therefore also be flexible and responsive. It is recognised that accreditation may help or hinder changes in healthcare and should be adaptive enough to ensure its contribution is positive (Braithwaite et al, 2018).

Change for the sake of change may be unwise. The benefits of accreditation may become more apparent only when and if the process was changed. However, the way care is delivered is changing and a facility-based accreditation program will need to ensure it supports efforts to build care based around the consumer journey and from a patient perspective, regardless of the care provider or facility.

Similarly, the challenges facing health systems challenges are not static. Changes in diseases patterns which have seen the greatest burden of disease shift towards non-communicable disease and rapid developments in technology have necessitated changes within healthcare and changes, both internal and external will continue.

Climate change, for example, is considered by some to be one of the 21st century's greatest threats and opportunities to the health systems (Costello et al, 2009; Watts et al, 2015). Increasingly, private and public organisations are recognising their responsibility to reduce their impact upon the environment and manage the physical and transition risks associated with climate change (Hutley and Hartford-Davis, 2019; Dibley et al, 2019; Deputy Governor Debelle, 2019). Accreditation may need to reflect the role of healthcare facilities in meeting these challenges and others in the future.

Culture is a recurring theme

Organisational culture in healthcare is both difficult to measure and indicative of an environment supporting patient safety to deliver improved outcomes along with greater staff and patient satisfaction (Braithwaite et al, 2017; Department of Health UK, 2015). Culture and leadership are positively associated with accreditation and this may present an opportunity to expand on a bi-directional relationship between culture and the principal means of driving quality and safety in healthcare.

An organisation which involves staff in the accreditation process, welcomes challenge and budgets for associated activities as part of core business is likely to be different from one which does not. The breadth and sheer size of workforce in Australian healthcare is a considerable resource (AIHW, 2017). It would seem possible to use accreditation as a means of developing and supporting a culture of safety and quality through them.

In order to do this, accreditation must be valued by staff and as such, the value must be clearly defined and relevant. Using a research-based approach to develop a common narrative on what constitutes value, such as that set out by the quadruple aim, may support this in addition to providing a consistent lens through which to gauge value relating to interventions such as accreditation.

Opportunities and challenges

The 2018 review of the Australian Health Service Safety and Quality Accreditation (AHSSQA) Scheme has identified a number of strategies that aim to address many of the challenges faced by the accreditation process; and that have been highlighted in this health policy brief. These strategies target deficiencies in the assessment process, the assessment team, the use of data, regulatory oversight, communication of assessment outcomes and resources and support for health services (ACSQHS, 2018).

Evaluating the outcomes of these revised processes will be necessary to safeguard the reliability of health service organisation accreditation processes and make available the evidence of its value to the health system and organisations.

Key reading

- Australian Commission on Safety and Quality in Health Care. National Safety and Quality Health Service Standards. 2nd ed. Sydney: ACSQHC; 2017.

  2nd edition of the healthcare accreditation standards which are used to award accreditation in Australia. In use from January 2019.

- Brubakk K, Vist GE, Bukholm G, Barach P and Tjomsland O. (2015). A systematic review of hospital accreditation: the challenges of measuring complex intervention effects. *BMC Health Services Research*. 15:280.

  A 2015 systematic review recognising the challenges of assessing complex interventions such as accreditation. Only one study (Salmon et al, 2003) is referenced in the current brief, but some discussion of excluded studies and the evidence base in general is considered.

- Berwick DM, Nolan TW and Whittington J. (2008). The Triple Aim: care, health, and cost. *Health Affairs*, 27(3): 759–769

  First paper acknowledged to outline the healthcare triple aim; improving the experience of care, improving the health of populations, and reducing per capita costs of health care upon which the concept of 'value' in this paper is based.

- Duckett S, Jorm C, Moran G and Parsonage H. (2018). Safer care saves money: How to improve patient care and save public money at the same time. Grattan Institute.

Grattan Institute is an independent think-tank focused on Australian public policy This paper discusses how safe healthcare saves the system money and includes a section on accreditation. The authors suggest accreditation has 'failed' and propose a new model for future implementation.

- Hinchcliff R, Greenfield D, Moldovan M, Westbrook JI, Pawsey M, Mumford V, Braithwaite J. (2012). Narrative synthesis of health service accreditation literature. *BMJ Quality and Safety.* 21(12): 979–91.

  Narrative review considering 122 papers. Includes quality assessments of those papers included and summarises outcomes into groups such as patient satisfaction.

- Braithwaite J and Westbrook J, Strengthening organisational performance through accreditation research: the ACCREDIT project. Viewed on 5th March 2019. https://www.mq.edu.au/research/research-centres-groups-and-facilities/healthy-people/centres/australian-institute-of-health-innovation/our-projects/the-accredit-project

  The Australian Institute of Health Innovation (AIHI) at Macquarie University has a long standing research program into health services accreditation research. The *Accreditation Collaborative for the Conduct of Research, Evaluation and Designated Investigations through Teamwork* (*ACCREDIT*) was a five year study, conducted July 2010 – June 2015 and provides a number of Australia specific research papers.

- Review of the Australian Health Service and Quality Accreditation Scheme. ACSQHC; 2018. Viewed 8th May :

  A comprehensive review that identifies improvements to the assessment process that will be phased in with the implementation of the updated standards (from January 2019).

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