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ON **SAFETY** AND **QUALITY** IN **HEALTH CARE**

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A better way to care

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Patient Journey and Tracer Methodologies: Literature review

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Preface

This preface was written by the Australian Commission on Safety and Quality in Health Care (the Commission) to provide context and background to the report which follows, *Patient Journey and Tracer Methodologies: Literature review*. The Commission contracted the University of Technology Sydney (UTS) to prepare the literature review, as part of the review of the Australian Health Service Safety and Quality Accreditation (AHSSQA) Scheme.

Background

The Commission's role is to lead and coordinate national improvements in the safety and quality of health care. The Commission works in partnership with the Australian Government, state and territory governments and the private sector to achieve a safe and high-quality, sustainable health system. In doing so, the Commission also works closely with patients, carers, clinicians, managers, policymakers and healthcare organisations.

The Commission developed the National Safety and Quality Health Service (NSQHS) Standards in consultation with the Australian Government, state and territory governments, technical experts and stakeholders. They aim to protect the public from harm and to improve the quality of health service provision.

To become accredited, health service organisations must pass assessments to show they have implemented the NSQHS Standards. The assessments are conducted by independent accrediting agencies, approved by the Commission, as part of the AHSSQA Scheme. However, state and territory regulators and chief executives of health service organisations have raised concerns about several aspects of the accreditation process.

The Commission is undertaking a review to update and improve the accreditation process. In May 2017, the Commission contracted four literature reviews to provide an evidence base to inform the Commission's review of the AHSSQA Scheme. The reviews explored the potential use of the following methods to improve the veracity of health service organisations:

- Attestation by a governing body
- Short-notice and unannounced surveys
- Patient journey and tracer methodologies
- Safety culture assessment.

The report that follows this preface presents the findings of a literature review that explored the potential use of patient journey and tracer methodologies as part of health service organisation accreditation.

Key findings

The key findings of the report on patient journey and tracer methodologies (hereafter referred to as 'patient journey methodologies') are discussed according to the evidence of its effectiveness and considerations for its use in the AHSSQA Scheme.

Evidence of effectiveness

The authors found very little research comparing the effectiveness of patient journey methodologies to conventional assessment methods during accreditation of health service organisations. Despite this, the authors did report on a number of potential benefits of using patient journey methodologies during the accreditation of health service organisations, as

well as a number of issues that would need to be considered prior to inclusion in the AHSSQA Scheme.

Considerations for use

Compared to conventional methods of accreditation, patient journey methodologies may have the following benefits:

- They allow effectiveness and efficiency of clinical processes to be assessed across a health service organisation, compared with conventional methods that may only assess clinical processes within specific wards or departments
- They provide more accurate evaluation of safety and quality issues at transitions of care
- They enhance the efficiency of the assessment process, as they can take place as 'real-time' analyses of patient or product transitions; this is in contrast to the review of paperwork commonly used with conventional methods, which highlight processes retrospectively
- They fit well within a value system that promotes patient-centred care, which aligns with the focus of the NSQHS Standards and has the potential to gain support from health professionals.

The authors of the report also identified a number of issues that would need to be resolved before patient journey methodologies could be incorporated into the AHSSQA Scheme. These include:

- The limited applicability of patient journey methodologies, which cannot evaluate services against all health service standards
- The frequency of assessments, which would need to be determined
- How patient journey methodologies could be used to adequately represent the scope of the health service organisation
- How the methodologies could be applied to assessment of Local Hospital Networks (known as Local Health Districts, Local Health Networks or other terms depending on the state or territory), or other bodies which include multiple health service organisations
- What training and resources health service organisations and accrediting agencies would need to implement patient journey methodologies.

Conclusion

It would be important to address these issues before determining whether there is a role for patient journey or tracer methodologies as part of the AHSSQA Scheme, and what this role might be.

There is empirical evidence of the effectiveness of patient journey and tracer methodology in health care. This evidence suggests further consideration may be warranted of how these methodologies could be included in accreditation processes. Therefore there is scope for further exploration of whether patient journey or tracer methodology could be included in the AHSSQA Scheme, and the ideal design for this inclusion.

The evidence available was insufficient to allow clear conclusions on whether patient journey or tracer methodologies had the potential to enhance the effectiveness of the AHSSQA Scheme.

The evidence indicated that patient journey or tracer methods may be insufficient to completely replace conventional surveys.

The Commission agrees with the authors' conclusion. Specifically, there is limited empirical evidence on the effectiveness of patient journey methodologies compared to conventional methods in assessing health service organisations against a set of health service standards. However, there are indications that this methodology has the potential to be usefully applied to the AHSSQA Scheme and to obtain stakeholder support.

Further research is needed to confirm whether patient journey methodology should be included in the AHSSQA Scheme, including:

- Whether patient journey methodologies would replace conventional surveys or whether both types of assessment would be undertaken
- In what situations patient journey methodologies would apply
- The standards patient journey methodologies would assess
- How patient journeys would be selected to ensure adequate representation of the health service organisation
- How patient journey methodologies would be applied across a conglomerate health service organisation such as a Local Hospital Network
- How health service organisations and other stakeholders would be consulted and engaged to ensure ongoing support for the AHSSQA Scheme should changes be implemented
- What training and resources would need to be developed to support implementation of patient journey methodologies.

Next steps

The Commission will consult with stakeholders including regulators, health service organisations and accrediting agencies on the potential to include patient journey and tracer methodology as part of the AHSSQA Scheme. The consultation will also consider the ideal design for inclusion of these assessment methods.

Updates to the AHSSQA Scheme are planned to be put into practice for the commencement of accreditation of health service organisations to the second edition of the NSQHS Standards in January 2019.

PATIENT JOURNEY AND TRACER METHODOLOGIES: LITERATURE REVIEW

THE AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

University of Technology Sydney

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EXECUTIVE SUMMARY

This report presents the findings of a systematic literature review on patient journey surveys and tracer methodologies in healthcare accreditation. The study was conducted by the Centre for Health Services Management, Faculty of Health, University of Technology Sydney (UTS) for the Australian Commission on Safety and Quality in Health Care (the Commission). The review sought to collate and review evidence on the potential for these methods to enhance the effectiveness and efficiency of healthcare accreditation in Australia.

The literature search was conducted in two phases. Phase 1 sought empirical, peer-reviewed studies on patient journey surveys and tracer methodologies in healthcare accreditation in Medline, CINAHL, Embase and Scopus. The search yielded 27 unique results, of which only three were eligible for inclusion in the systematic review. Phase 2 sought grey literature and studies on the patient journey and tracer methodologies beyond the accreditation context. In addition to the databases utilised in Phase 1, the Phase 2 search also reviewed TRIP Pro, Netting the Evidence and Google Scholar for grey literature. The Phase 2 search yielded an additional 16 resources, including method guides developed by the Joint Commission and Accreditation Canada.

The review found significant interest in the use of patient journey survey and tracer methodologies in accreditation, but few empirical studies. The limited peer-reviewed studies available reported potential benefit from employing these methods in accreditation, and general support for their use from surveyors and healthcare organisations. However, survey reliability was not assessed and concerns were raised about implementation issues, including time, access, cooperation, information availability and context appropriateness.

Outside the accreditation context, there was sound empirical evidence of the effectiveness of these methods in quality improvement and their efficiency as analytical tools. Unlike traditional quality assessment tools which evaluate facilities vertically,

patient journey and tracer methods support horizontal analysis – across rather than within departments or disciplines. This provides a more representative insight into the patient experience, and facilitates process mapping. Significantly, the use of patient journey methodologies can provide important symbolic support for the principles of patient-centred care.

The review concludes that despite evidence of the effectiveness and efficiency of patient journey survey and tracer methods in quality improvement generally, there is limited evidence of their appropriateness for accreditation programs. This impedes strong conclusions from being reached about their potential to enhance Australian accreditation processes. The breadth of their use in healthcare more broadly and their utilisation by the lead United States and Canadian accreditation agencies suggest, however, that these methods can play a role in quality improvement via accreditation. The nature and scope of this role requires further deliberation.

1.   INTRODUCTION

In May 2017, the Australian Commission on Safety and Quality in Health Care (the Commission) requested the Centre for Health Services Management (CHSM), Faculty of Health, University of Technology Sydney to complete three literature reviews on the following issues to assess their potential to enhance the effectiveness and efficiency of healthcare accreditation in Australia in general, and the Australian Health Service Safety and Quality Accreditation (AHSSQA) Scheme in particular:

- Attestation by a governing body
- Short-notice and unannounced survey methods
- Patient journey and tracer methodologies.

The UTS team that completed these reports included: Dr Reece Hinchcliff (CHSM), Dr Miriam Glennie (CHSM), Professor Joanne Travaglia (CHSM), Mr David Carter (CHSM and Faculty of Law, UTS), Ms Lisa Billington (CHSM and Faculty of Law, UTS), and Dr Deborah Debono (CHSM).

The project findings are presented in three separate reports. This is the third report of the three-part compendium. It first presents a background section that contextualises patient journey survey and tracer methods, and how these contrast with the conventional survey methods predominantly used in Australian healthcare accreditation programs. The report then summarises the literature search strategy utilised, before synthesising prominent empirical and thematic findings identified in order to expose the most critical policy-relevant implications.

This project shows that due to the limited peer-reviewed evidence regarding these two methods, strong conclusions cannot be reached about their utility in comparison to survey methods currently used within Australian accreditation programs. However, peer-reviewed and other information positioned outside the context of healthcare accreditation provide knowledge to inform the potential application of the patient journey survey and tracer methods within accreditation programs.

2. BACKGROUND

Accreditation programs are implemented in Australia and internationally with the aim of monitoring and improving healthcare organisations' performance against evidence-based quality and safety standards (Greenfield et al., 2015a). The AHSSQA Scheme is the most influential element of the accreditation landscape in the Australian health system (Australian Commission on Safety and Quality in Health Care, 2016).

While accreditation programs are commonplace in Australia and internationally, the evidence-base supporting their effectiveness and efficiency remains contested (Hinchcliff et al., 2012). This is due to the twin challenges of using experimental study designs to evaluate interventions like accreditation that operate at a system level, and holistically deducing the associated costs and benefits that are dispersed across the healthcare system (Hinchcliff et al., 2013b; Saut and Berssaneti, 2017). The AHSSQA Scheme has not yet been evaluated in a scientifically-robust way, but early indications suggest a positive influence. The Scheme also receives considerable support from Australian healthcare stakeholders (Greenfield et al., 2015a).

Beyond the AHSSQA Scheme, a major concern about accreditation is its inherent logistical burden for health professionals, organisations and regulatory bodies (Brubakk et al., 2015). Qualitative research has shown that some Australian healthcare stakeholders believe the process of preparing for on-site surveys is unnecessarily time-consuming and cumbersome, reducing the time available for clinicians to provide high quality care for their patients (Hinchcliff et al., 2013b).

Accreditation agencies and government departments have attempted to address such concerns by funding large research projects aiming to optimise accreditation through evidence (Braithwaite et al., 2011). In Australia, a major research focus of the accreditation field has been on examining and improving surveying practices (Greenfield et al., 2008; Greenfield et al., 2009; Greenfield et al., 2013; Greenfield et al., 2016). This is understandable when the highly visible and potentially subjective nature of surveying

processes is considered (Debono et al., 2017; Greenfield et al., 2009; Hinchcliff et al., 2016).

Most examinations of accreditation surveys have assessed how to best implement conventional survey methods (Greenfield et al., 2008; Greenfield et al., 2009; Greenfield et al., 2013; Greenfield et al., 2015b; Greenfield et al., 2016). The standard survey method involves a team of external assessors conducting an on-site inspection of organisational performance against a predefined set of quality and safety standards, for which specific evidence is to be prepared by organisations in advance, then provided to assessors both prior to and during the on-site inspections.

While the principles underlying the standard surveying method are accepted as sound, healthcare stakeholders in Australia and internationally have explored opportunities to design surveys in different ways to enhance their effectiveness and efficiency. Two innovative survey methods that have been trialled and implemented over the past decade are patient journey and tracer methods (Dubiel, 2006). Both these methods are sufficiently similar to discuss them as a single type of surveying approach.

Patient journey surveys are defined as "an assessment, made by surveyors shadowing the sequential steps of a patient's clinical care, of the processes in an organisation that guide the quality and safety of care delivered" (Greenfield et al., 2012a: 495). Patient journey surveys can be viewed most accurately as a sub-type of the tracer methodology. The tracer method involves surveyors shadowing a consumer and/or retrospectively analysing the sequential steps of either a consumer's clinical care processes via a review of patient progress notes, or a type of healthcare product (e.g. blood sample, clinical equipment) (Siewert, 2017). Tracer methods, including patient journey surveys, are used internationally to identify discrepancies between the expected and actual levels of quality and safety within a health service organisation (Azami-Aghdash and Mohammadi, 2013).

Tracer methods offer a number of benefits, such as enhanced surveyor ability to assess the integration of separate care processes within an organisation (Azami-Aghdash and Mohammadi, 2013). They also offer the potential to promote a consumer-centred ethos across the health system, and within accreditation programs themselves (Siewert, 2017). It is likely that the growing prominence of integrated and patient-centred care within health policy and professional discourse (Menichetti et al., 2016) makes the characteristics of tracer methods highly attractive.

Despite these benefits, research and policy commentators have noted the relatively weak evidence-base supporting the effectiveness of these methods within the context of accreditation (Greenfield et al., 2007). As is true in relation to all potential accreditation reforms, the challenge for accreditation stakeholders is to deduce how these survey methodologies could best be utilised within existing accreditation programs and processes to maximise their positive impacts, while limiting negative influences.

3.   METHODS

The literature search for this project was conducted in two phases. Phase 1 employed a conventional systematic search strategy that was designed to identify relevant peer-reviewed journal papers that would be most likely to contain reliable evidence on the topics of interest. The Phase 1 search parameters were selected based on a scoping review of key documents, discussions with the Commission, the pre-existing subject matter expertise of the project investigators, and database search trials with the Medical Librarian at UTS. The search terms were:

- patient journey and survey* or method*
- tracer method*
- product realisation

Each of these subject matter terms were searched in combination with the following context-specific terms:

- Accreditation OR
- 'Joint Commission on Accreditation of Healthcare Organizations' OR
- 'Joint Commission'

Searches of the bibliographic research databases most commonly used in health-related systematic literature reviews (i.e. Medline, CINAHL, Embase, and Scopus) were conducted using the above terms. Search results were reviewed for eligibility using the following inclusion criteria, agreed to by the Commission:

- English language
- Published 2000 – 2017, inclusive
- Focused on accreditation, as applied to healthcare organisations i.e. not professional credentialing
- Empirical research i.e. studies involving literature reviews or primary data.

Phase 2 of the search strategy consisted of an environmental scan of grey literature (e.g. government and accreditation agency reports), and other resources relating to the

two methods, both within and beyond the domain of accreditation. This decision was made due to the limited amount of directly relevant literature that was initially identified, and the need to maximise capture of all broadly relevant literature that could uncover information of practical relevance to the accreditation of health service organisations in Australia.

The Phase 2 search was conducted in three stages; stage one involved reviewing the reference lists of articles identified in Phase 1. Stage two consisted of a manual search of the websites of prominent Australian and international organisations associated with healthcare accreditation: Australian Commission on Safety and Quality in Health Care; Australian Council on Health Care Standards; International Standards Organisation; Joint Commission; Joint Commission International; Accreditation Canada; and European Co-operation for Accreditation. Stage three involved database searches on survey method terms only (i.e. without reference to accreditation) in Medline, CINAHL, Google Scholar, TRIP Pro, Netting the Evidence and Google.

The peer-reviewed and grey literature identified was screened by one of the project investigators, with follow-up discussions among the project team to collaboratively define final inclusions for the review. Once detailed summaries of the relevant peer-reviewed journal papers identified through the Phase 1 search were completed, the decision was made to conduct a narrative synthesis of key themes raised in the broader body of literature obtained through the Phase 2 search. This method has been employed previously in accreditation-related literature reviews to elucidate findings of potential relevance to policy and other healthcare stakeholders (Hinchcliff et al., 2012).

The narrative synthesis was conducted by two project investigators, independently, then collaboratively via ongoing discussions and reflections on the collected literature. This approach reduced the risk of individual bias confounding the findings, which strengthened the validity of the study.

4. RESULTS

4.1 OVERVIEW

Of the 27 unique records initially identified and screened through database searching in Phase 1, only three met the inclusion criteria (see Figure 1). The exclusions were largely due to articles not concerning original research (e.g. opinion pieces), and not being situated specifically within the context of healthcare accreditation.

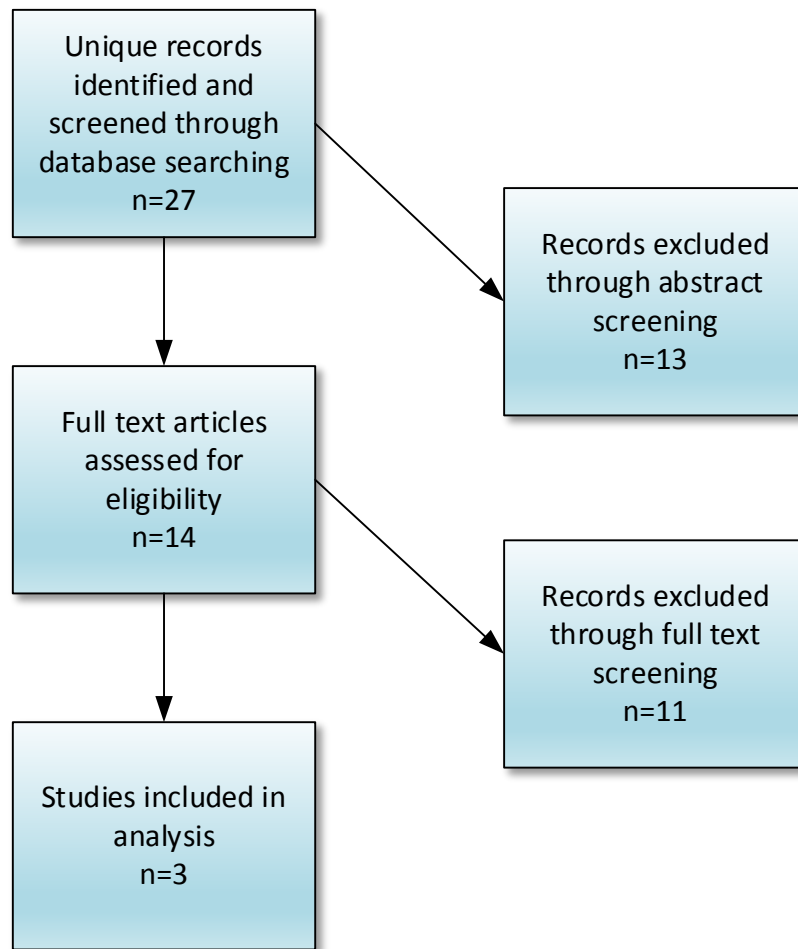**Figure 1: Screening process for Phase 1 search results**

Critical analysis of the policy-relevant findings reported by the two most scientifically robust studies identified (Bouchard and Jean, 2016; Greenfield et al., 2012a) are presented in section 4.2 of the results. In the context of this report, the term 'robust' refers to either interventional studies (e.g. case control studies), or mixed-method

studies with large sample sizes that accurately represent the populations of interest (e.g. accreditation surveyors, healthcare professionals directly involved in accreditation preparation processes). The remaining paper identified in the Phase 1 search was a descriptive case study detailing one hospital's experience preparing for their first tracer accreditation survey in the USA (Thurber and Read, 2008). While offering insights into how the method could be implemented in Australia, the paper did not report evidence about the actual utility of the tracer method, resulting in its exclusion from the first section of the results.

The articles that did not meet the review's eligibility criteria nonetheless show that there is significant interest in preparation for tracer and patient journey survey methods in accreditation. There are numerous editorials, opinion pieces and letters to the editor describing how healthcare organisations can prepare for accreditation assessment through this method (see for example: Azami-Aghdash and Mohammadi, 2013; DeLorenzo, 2005; Friedman, 2004; Murphy-Knoll, 2006a; North et al., 2009; Richards, 2007; Siewert, 2017; Thompson et al., 2008). Some authors presented narratives of their own personal experiences of tracer methods as either part of the accreditation process (Magnarelli, 2005) or in preparation for an accreditation survey (Dubiel, 2006).

The Phase 2 search yielded 16 relevant resources related to tracer methods, including preparatory guides developed for healthcare organisations by accreditation agencies, and case studies detailing the method's application in non-accreditation contexts within healthcare. While the narrative synthesis of items collated in the Phase 2 search highlighted important themes and issues for consideration by the Commission, it did not identify any empirical evidence evaluating the effectiveness of the two survey methods in accreditation. For this reason, these resources have been cited in the narrative synthesis presented in section 4.2 below, but were not tabulated in the same fashion as the Phase 1 results.

4.2   PEER-REVIEWED EVIDENCE

Of the three peer-reviewed papers that met the Phase 1 inclusion criteria, the most recently published (Bouchard and Jean, 2016), while applying a mixed-method rather than interventional study design, still provides an excellent resource from which to elicit policy-relevant information. It offers the most extensive range of information that could guide considerations regarding the potential value of innovative survey methods being incorporated within healthcare accreditation programs in Australia. This is partially due to the detailed descriptions and exploration of how the tracer survey method in Canada is implemented (Bouchard and Jean, 2016). The Greenfield et al. (2012b) paper reports the results of an earlier Australian trial of the relative effectiveness of patient journey surveys, as opposed to the usual survey methods used in Australian accreditation programs. These two sources provide the strongest evidence regarding tracer methods in accreditation. As such, the methods, findings and implications of these studies are analysed in detail below.

The Accreditation Canada program is one of the oldest and largest in the world. It is based around a four-year cycle that involves one organisational assessment against accreditation standards by peer-surveyors (i.e. health professionals practicing in other organisations) (Bouchard and Jean, 2016). A form of the tracer method has been used for this purpose since 2008, which was adapted from that developed by the Joint Commission (JC). Implementation information on the JC's use of the method can best be identified via a recent non-empirical paper (Siewert, 2017). The tracer method process used in the Accreditation Canada program involves eight key steps (Bouchard and Jean, 2016):

1. Review the priority processes, as identified in preceding organisational self-assessments

2. Identify the documents needed to provide evidence

3. Review charts and files

4. List people and places that need to be seen

5. Determine questions to ask, which can be drawn from a central bank available to surveyors

6. Discuss findings with team during surveyors' information exchange

7. Rate performance against criteria

8. Write comments for the organisation

As noted by Bouchard and Jean (2016) the decision by Accreditation Canada to introduce the tracer method was not evidence-based, and there remains a lack of empirical data supporting the method. The discrepancy between the Accreditation Canada program aiming to promote evidence-based healthcare organisational practices, while employing a non-evidence-based assessment methodology, is cited as the primary motivation for the study (Bouchard and Jean, 2016). This issue is equally of significance for considerations about accreditation survey reform in Australia. It is vital for accreditation programs to not only advocate, but also demonstrate, an evidence-based ethos.

Using a mixed-methods design, the study by Bouchard and Jean (2016) was based upon a detailed evaluation framework, which involved collecting data via an online questionnaire completed by Accreditation Canada surveyors. The questions covered a broad range of issues related to the effectiveness and efficiency of the tracer method, as applied within the Accreditation Canada program. The quantitative and qualitative data were analysed using descriptive statistics and thematic analysis methods, respectively.

The results of this study identified several issues of relevance for consideration of the tracer method in general. Overall, there was considerable support for the method among study participants, who perceived it as an effective tool for collecting useful, credible and reliable information to assess organisational compliance with accreditation standards (Bouchard and Jean, 2016). However, a range of implementation barriers were also identified.

The main barrier uncovered concerned the perceived lack of adequate time being available during surveys to conduct tracers effectively (Bouchard and Jean, 2016). This

factor was seen to have a flow-on effect, as surveyors reported that time restrictions often lead to low-quality tracers being implemented. The evidence used to make decisions largely consisted of the perspectives of staff from the healthcare organisation being assessed, rather than independent analysis of clinical records and other sources of objective data. Some surveyors proposed that this resulted in virtual, synthetic tracers as opposed to authentic, observation-based tracers (Bouchard and Jean, 2016). Clearly, when applied in this way, tracer methods are open to bias and gaming by healthcare organisations and their staff. As such, the Canadian study indicates that tracer methods may not in themselves completely resolve the question of how to improve the veracity of accreditation survey processes.

The specific accreditation standards against which the tracer method assessments are applied in Canada were also highlighted as an impediment to its implementation (Bouchard and Jean, 2016). Standards focused on the physical environment, planning and service design, population health, and clinical leadership were viewed by surveyors as being the least appropriate for assessment by the tracer method, due to logistical issues (Bouchard and Jean, 2016). Tracer methods may thus be most effective when used to assess specific accreditation standards, rather than an entire suite. As one of the study participants stated *"too much emphasis is put on the tracers: they are just one tool to use, and it is good to have a framework to assess care processes, but they are not usually appropriate for administrative areas"* (Bouchard and Jean, 2016: 15).

Inadequate knowledge of tracer methods and requirements among clinical staff can also impede effective implementation as surveyors rely on staff input and guidance in implementation. Ill-prepared or ill-informed staff may be unable to support surveyors in tracer method application (Bouchard and Jean, 2016). A final critique levied by the Canadian study was the lack of consistent interpretation of the purpose and application of the tracer method among healthcare organisations and surveyors (Bouchard and Jean, 2016). Despite noting that Accreditation Canada provides training and resources to promote consistent views of the tracer method, some surveyors believed this was both inadequate and ineffective (Bouchard and Jean, 2016).

Overall, the key findings of the Canadian study suggest that the principles underlying use of tracer methods within accreditation assessments are sound, but the application of such methods can be impeded by logistical and education-related factors. Carefully defining and communicating the focus and scope of tracer methods within accreditation programs would be essential for effective implementation. The study authors also noted that tracer methods, like all other evaluation processes, should comply with several key principles, including appropriateness (i.e. suitability for the specific type of assessment), credibility (i.e. being capable of producing valid, defendable assessment decisions), and feasibility (i.e. also to be efficiently implementable in practice) (Bouchard and Jean, 2016). These dimensions can provide foci to inform rational decision-making regarding the relative utility of different survey methods within accreditation programs in Australia.

Despite the range of policy-relevant insights offered by this paper, which have been synthesised above, it is important to reiterate that it did not involve any comparison of the tracer to other accreditation survey methods. It does not therefore provide strong evidence on whether the tracer method is preferable to the conventional type of survey method applied in Australian healthcare accreditation programs. Nonetheless, the range of highly insightful reflections expressed by the authors illuminate the main issues that need to be considerations of the likely effectiveness and feasibility of tracer survey methods in Australian accreditation.

The second source of direct evidence regarding the effectiveness of tracer or patient journey survey methods within healthcare accreditation programs comes from a 2009 Australian trial of the latter method (Greenfield et al., 2012a). The trial findings were outlined in a report identified in the Phase 2 search results (The Australian Council on Healthcare Standards, 2009), as well as a more refined, peer-reviewed journal paper (Greenfield et al., 2012a) developed using the same findings. The trial was conducted by a team involving accreditation agencies, government regulatory bodies, and researchers. Funded by the Commission, it aimed to evaluate whether the patient

journey survey method should be incorporated within Australian hospital accreditation programs (The Australian Council on Healthcare Standards, 2009).

A random, stratified sample of 18 healthcare organisations was included in the trial, but data was ultimately only collected from 17 organisations. The trial involved the patient journey survey method being applied in parallel with the usual survey method used by the Australian Council on Healthcare Standards (ACHS), one of the largest healthcare accreditation agencies nationally. The patient journey survey method used in the trial only assessed healthcare organisations against 40 of the normal set of 45 ACHS accreditation criteria (Greenfield et al., 2012a). Criteria relating to the assessment of both access and information management systems were reduced into two separate, single criteria. This allowed surveyors to focus primarily on the clinical aspects of care. Additionally, criteria related to governance delegation practices were excluded as these were believed to be hidden from patients' journeys within a healthcare organisation (Greenfield et al., 2012a).

More details on the design and implementation of the particular patient journey survey approach employed are outlined in the paper and report that outline the trial results (Greenfield et al., 2012a; The Australian Council on Healthcare Standards, 2009). The outcome of assessments made (i.e. the number of criteria against which healthcare organisations were deemed to have gained either Little Achievement, Some Achievement, Moderate Achievement, Extensive Achievement and Outstanding Achievement, as per the usual scale used in ACHS survey processes) using the patient journey and normal survey methods were equivalent on nearly three quarters of the total number of criteria assessed across the trial sites (Greenfield et al., 2012a). Of the remaining quarter of criteria assessed, the patient journey survey method produced lower assessments (i.e. where healthcare organisations were awarded a lower rating of achievement) around 90% of the time (Greenfield et al., 2012a). This variation caused discrepancies in the decision of whether organisations met the accreditation threshold, with the patient journey survey method consistently resulting in more negative conclusions (Greenfield et al., 2012a).

Qualitative research was embedded within the trial, involving 40 questionnaires with healthcare organisation staff and accreditation surveyors involved in the trial. It identified that of the total number of discrete comments provided, most (n=253 comments, 60%) indicated that participants held neutral views on the utility of the patient journey survey method, but there were twice as many positive than negative views provided (27% vs. 13%) (Greenfield et al., 2012a). The method was not seen to be inconvenient to implement, and participants viewed it as adding value to normal accreditation survey processes (Greenfield et al., 2012a). Despite these positive perspectives, 18 representatives of the healthcare organisations involved in the trial, who participated in a subsequent telephone interview with the trial project team, proposed that patient journey surveys could be implemented more effectively in the future by providing clearer instructions to surveyors and the healthcare organisations being assessed (Greenfield et al., 2012a).

While the patient journey survey method used in the trial was standardised, providing explicit guidelines to the accreditation surveyors and healthcare organisations involved, it is important to note that the evidence produced by trials of this kind are specific to the particular model of survey method employed, along with the implementation procedures. For example, the trial involved the patient journey survey method assessing organisations against only 40 of the 45 ACHS criteria. The surveyor training processes used were also specific to the trial, and the organisations involved did not represent the full diversity of Australian hospitals and other healthcare organisations. This means that the evidence of effectiveness produced by such trials cannot be generalised to estimate the effectiveness of alternative models of the same survey methods applied in other healthcare contexts. Nonetheless, the key issues highlighted through the experience and impacts of such trials can inform policy decisions and the design of future trials.

The research team that conducted the Australian trial concluded that the patient journey survey method is a useful tool to complement, rather than replace, conventional accreditation survey processes. The method's capacity to provide insights

into clinical care criteria from a patient perspective (e.g. 'systems for ongoing care of the consumer/patient are coordinated and effective') was particularly emphasised (Greenfield et al., 2012a). It was also proposed to produce reasonable support from healthcare professionals, despite there being some concerns that accreditation agencies provided insufficient education and training to the trial organisations and surveyors regarding its operation (Greenfield et al., 2012a). A critical implication is that while it is important to deduce the relative validity of innovative, compared to conventional survey methods, it is equally important to systematically determine the types of standards that are assessed more effectively by different methods. A detailed analysis of the assessment ratings for each of the criteria included in the trial are outlined in the published trial report (The Australian Council on Healthcare Standards, 2009).

The peer-reviewed literature alone does not suggest that conventional accreditation survey methods should be replaced in Australia. However, it does indicate that patient journey survey and tracer methods can provide some benefits, and are likely to gain at least moderate support among healthcare stakeholders (Bouchard and Jean, 2016; Greenfield et al., 2012a). The two methods require a considerable amount of surveyor and healthcare organisation education and training to facilitate effective implementation. Sufficient time must also be allocated during on-site surveys to ensure the methods accomplish their objectives using appropriate data, such as consumers' clinical progress notes, rather than relying purely on verbal information offered by organisation staff (Bouchard and Jean, 2016; Greenfield et al., 2012a). All key details of the three peer-reviewed papers that met the Phase 1 inclusion criteria are summarised in Table 1.

Table 1: Peer-reviewed papers regarding patient journey survey, tracer and product realisation methods in accreditation (n=3 Phase 1 results)

Author, Year/ Country	Aim	Accreditation Program	Accreditation Survey Details	Study Design/Method	Sample	Summary of Key Findings	Practical Implications
Bouchard, 2016 Canada	To assess the quality of tracer method and identify its strengths and weaknesses.	Accreditation Canada	The tracer method has been used by Accreditation Canada since 2008	Mixed method survey	468 surveyors	The tracer method was perceived as an effective tool for collecting useful, credible and reliable information to assess compliance with program standards and priority processes. The main weaknesses identified were the time constraints faced by surveyors and management's lack of cooperation during the evaluation of tracers.	The tracer method engenders strong philosophical support among accreditation stakeholders. However, this is balanced against the practical challenges of applying the method effectively within the limited timeframes available during surveys. Surveyors perceived tracer methods' utility as being dependent on the specific types of issues being assessed. The tracer method used by Accreditation Canada focuses on products/items, as well as patients, and involves two elements: tracers for individual patients; and tracers for administrative purposes.

Author, Year/ Country	Aim	Accreditation Program	Accreditation Survey Details	Study Design/Method	Sample	Summary of Key Findings	Practical Implications
Greenfield, 2012 Australia	To evaluate the effectiveness of utilising the patient journey survey (PJS) method in healthcare accreditation processes.	Australian Council on Healthcare Standards	Four-year cycle, involving self-assessment, organisation-wide survey, and periodic review.	Randomized trial of the PJS method in parallel with the current accreditation survey (CAS).	17 acute healthcare organisations	The PJS method was not as comprehensive as the CAS method for accreditation assessment. In matched assessments the majority of items were rated lower by the PJS method than by the CAS. PJSs were shown to be appropriate for assessing mandatory clinical criteria, but were less effective for assessing corporate and support criteria. The two methods diverged in their final assessments of which organisations met the accreditation threshold. Participants endorsed the use of PJSs within accreditation processes.	The PJS method may be a complement to, but is not a substitute for, existing accreditation methods. At the time of the study, there seemed to be significant stakeholder support for the use of the PJS method in AUS.
Thurber, 2008	To present a descriptive case study outlining how a US hospital	Joint Commission	Tracer method introduced for first time within the usual triennial	Descriptive case study.	One US hospital	A systematic education plan was undertaken over a 12 month period to prepare for the tracer method survey.	The educational plan outlined in detail within this paper provides an excellent template that the

Author, Year/ Country	Aim	Accreditation Program	Accreditation Survey Details	Study Design/Method	Sample	Summary of Key Findings	Practical Implications
	developed and implemented a comprehensive educational plan to prepare all staff members for the (at that time) new tracer method.		survey				ACSQHC could use in their organisational guides to facilitate preparation for tracer method surveys. The introduction of tracer methods requires organisations to undertake significant, medium-long term educational strategies with their workforce to prepare adequately.

4.3 THEMATIC SYNTHESIS OF RELATED AND GREY LITERATURE

When broader literature on patient journey survey and tracer methods is considered, it appears that different forms of these methods can encourage improved performance in healthcare organisations. The support they produce is demonstrated most obviously by the use of tracer methods within the accreditation programs of Accreditation Canada since 2008 and the Joint Commission in the USA since 2004 (Murphy-Knoll, 2006b), and their use as a quality improvement tool in a variety of Australian healthcare environments (ACI Intellectual Disability Network, 2015).

The narrative synthesis of the literature identified in the Phase 2 search uncovered the four main themes listed below, which are outlined in the remainder of the results section, along with their implications for healthcare accreditation programs in Australia:

1. Facilitation of process mapping for quality improvement
2. Efficiency as an analytical tool
3. Promotion of patient-centred care.

4.3.1 Facilitation of process mapping for quality improvement

By tracing the patient or product journey throughout a healthcare facility, tracer methods illustrate the effectiveness and efficiency of transitions across and interactions between clinical processes, as well as clinical disciplines and departments. This has led to the method receiving considerable support in several countries, including the USA (Siewert, 2007). By focusing on transition points, this method can support process analyses to identify areas of risk, inefficiency and redundancy (Ben-Tovim et al., 2008).

Traditional surveys mostly inspect healthcare facilities *within* each department or clinical process (i.e. vertically), rather than *across* these areas or processes (i.e., horizontally), which is not representative of the pathway through which patients encounter healthcare facilities, nor through which products are managed. As a result, traditional survey methods are weak in the identification and solution of problems resulting from poor overall design of clinical processes and disconnections between stages of the patient journey (Ben-Tovim et al., 2008). Recognising this weakness in

traditional methods, tracer methods have been employed to advance quality improvement at both department and organisational levels. This has most commonly been applied in the context of tracing individual consumer pathways across hospital departments, and extended examples of how this occurs within the Joint Commission accreditation program in the USA are available (Siewert, 2007). Some examples of how tracer methods have been operationalised in Australian healthcare contexts are provided below. Patient journey methods were a core element of a substantial quality improvement program conducted in the 2000s by the NSW Agency for Clinical Innovation (ACI) on clinical process redesign in a range of contexts (Ben-Tovim et al., 2008). Patient journeys were used to facilitate process mapping and identify areas for improvement or elimination. A range of internal resources have been developed within program sites as a result of research learnings. Electronic patient journey boards, for example, were developed in the Central Coast Local Health District to collate patient information to facilitate multidisciplinary hand-overs aimed at sustaining patient safety and co-ordination of care (Agency for Clinical Innovation (ACI), 2014). These boards are interactive touch screens with direct data feeds from electronic medical records and patient administration records, including clinical, financial and demographic information. The following outcomes were identified by ACI on their website as accruing from this system (Agency for Clinical Innovation (ACI), 2014):

- Accuracy in documenting care types leads to greater efficiency in the application of Activity Based Funding (ABF)
- Multidisciplinary planning reduces length of stay through early identification of delays to transfer of care plans
- Helps to streamline referral to the appropriate community based services determined by the patient's residential address within the local government area boundaries (patients who live outside these boundaries are highlighted on the EPJB display)
- Reduces delays for NSW Ambulance by preparing patients on time for pickup

- Provides organisational overview of the volume and responsiveness of pathology, medical imaging and allied health services and the opportunity to review demand and activity.

ACI has developed a range of resources such as a 'How to' guide and descriptions of patient journeys in different contexts (e.g. rehabilitation), as well as published research reports on high-risk patient groups such as those with an intellectual disability. The figure below illustrates some of the advantages and disadvantages of observational and facilitated data collection for process mapping. Although relating specifically to process mapping, the method features presented in the figure relate similarly to the tools used to enable the tracer methodology as applied through prospective observation, as opposed to retrospective analysis via facilitated sessions. The information presented in the figure highlights the benefits and costs of approaching the implementation of process mapping in these two different ways (i.e. prospective observation versus retrospective analysis via facilitated sessions), and could inform decisions regarding the best approach to implementing tracer methods within the context of accreditation programs.

	Observation	Facilitated session
Use	- Difficult process - Limited understanding of a process	- Stakeholder engagement - Rapid process review
Strengths of approaches	- Provides a greater understanding of what is happening in this process - Limits the opportunity for steps to be forgotten	- Quicker - Allows process owners to understand each other's role in the process
Lead by:	Someone external to the process	A facilitator or the project manager
Resource intensity:	Resource intensive only for the process observer	Resource intensive for all process owners

Figure 2: Types of process maps (Agency for Clinical Innovation (ACI), 2015: 1)

In an analysis of the ACI program methodology, Ben-Tovim et al., (2008) highlighted some of the barriers to enacting learnings from patient journey analyses. Firstly, they can highlight inefficiencies in clinical processes that would be contested in application,

such as nurses ordering x-rays for suspected fractures. They highlight that cross-divisional conflict can occur as divisions blame problems on other groups. Engagement with all relevant clinical and administrative staff is necessary to mitigate potential conflict and ensure professional groups develop mutual understandings of each other's perspectives and challenges (Ben-Tovim et al., 2008).

The ACI application of patient journey methodologies demonstrates the unique contribution it provides to quality improvement initiatives by enabling process analysis. Patient journey and tracer methods could play a complementary role to conventional accreditation surveys to support assessment of horizontal quality assurance in addition to traditional vertical assessments of healthcare facilities.

4.3.2   Efficiency as an analytical tool

Patient journey methods are efficient tools for process analysis and risk identification. This is because retrospective studies (i.e. analyses of consumer or product transitions after they have occurred) analyse existing patient and administrative data, while prospective studies (i.e. 'real time' analyses of consumer or product transitions) require limited planning, as they follow the natural course of practice. Some empirical, peer-reviewed papers were identified during the Phase 2 search that illustrate the application of retrospective, but not prospective, tracer methods for these purposes.

Two studies (Khanna et al., 2017; Sibbritt et al., 2006) used patient files and administrative data to assess weaknesses in emergency department operations. One of these, Khanna et al. (2017), used retrospective administrative data to analyse patient journeys in emergency departments (EDs) in four major or large metropolitan hospitals in Queensland. The study aimed to identify bottlenecks in ED patient flow to support compliance with the federally mandated National Emergency Access Target (NEAT). This target designated discharge or transfer times of less than four hours for 90% of all ED patients. Retrospective patient journey analysis identified departure delay (i.e. time spent moving a patient out of emergency care) as the primary contributor to poor performance against NEAT. Simulations could be conducted on patient journey data to

identify what impact particular delay reductions would have on NEAT performance to help establish hospital specific targets.

Another study (Perimal-Lewis et al., 2016) provides an example of the application of retrospective file analysis of patient journeys to identify risk factors associated with in-hospital location for a high-risk patient group across a major metropolitan hospital in South Australia. The authors analysed the patient journey from admission to discharge or external facility transfer of 6,367 patients with dementia or delirium. They found that patients admitted to wards other than those specialising in their primary health issue (due to insufficient availability) had higher mortality rates 48 hours post-admission than those successfully admitted to the specialising ward (OR: 1.973, 95% CI: 1.158–3.359, $p = 0.012$), as well as longer ED stays (OR: 1.068, 95% CI: 1.057–1.079, $p = 0.000$) and delays receiving discharge summaries (OR: 1.754, 95% CI: 1.492–2.061, $p = 0.000$).

These studies demonstrate that patient journey analysis of existing patient and administrative data can provide an efficient method through which to identify risk factors associated with adverse patient or system outcomes. Such analysis could be performed internally by organisations pre-accreditation to identify potential breaches of accreditation standards. However, while not discussed within the literature, there could be additional opportunities post-accreditation surveys to identify factors contributing to areas of poor performance uncovered during accreditation surveys (i.e. use as a follow-up tool to analyse and address transition-related problems contributing to poor accreditation results).

4.3.3 Promotion of patient-centred care

The use of patient journey methods provides an important symbolic contribution to healthcare evaluation systems by prioritising the experiences and perspectives of the consumers for whom these facilities exist. Patient-centred care has been defined as *"The experience (to the extent the individual patient desires it) of transparency, individualization, recognition, respect, dignity, and choice in all matters, without*

exception, related to one's person, circumstances, and relationships in health care" (Berwick, 2009: W560). Collecting primary data directly from patients facilitates the contribution of patient voice to accreditation processes and provides recognition of the uniqueness of each patient's circumstances.

Patient narratives can also be collected to construct whole–of-system patient journeys across longer time frames (Wright et al., 2016). Such exercises allow analysis of patient journeys across the lifecycle, and varying levels of healthcare and different healthcare services. Targeting of high-risk patient populations more likely to suffer adverse outcomes resulting from health status and location can be of particular benefit. The collection of data from carers in retrospective patient narratives can also capture a voice that may otherwise be missed in patient journey analysis.

Demonstrating the feasibility of this approach, ACI conducted a patient journey research project with individuals with intellectual disabilities and their carers (ACI Intellectual Disability Network, 2015). Narratives were collected about patients' experiences of health services across the lifecycle to elucidate barriers and enablers to health service access.

5. DISCUSSION

Healthcare accreditation is commonplace in Australia and internationally (Braithwaite et al., 2012). Its continued presence in health systems shows the support it receives among influential healthcare stakeholders, which is unlikely to dissipate in the near future. Indeed, the influence and resilience of accreditation is aptly illustrated by the key role of the AHSSQA Scheme within the Australian health system (Australian Commission on Safety and Quality in Health Care; Greenfield et al., 2015a).

There is little doubt that the effectiveness of an accreditation program is predicated upon its utilisation of effective and reliable approaches to surveying (Greenfield et al., 2010; Greenfield et al., 2013; Hinchcliff et al., 2013b). The Commission and regulatory bodies worldwide have shown strong desire to design, implement and evaluate enhancements to existing survey methods (Hinchcliff et al., 2013a). However, despite the gradually increasing volume of evidence on this topic, the design and operation of a universally applicable, best-practice method of accreditation surveying remains elusive (Greenfield et al., 2007).

The relatively limited empirical evidence identified in this report was produced in specific regulatory contexts, in relation to particular accreditation programs (Bouchard and Jean, 2016; Greenfield et al., 2012a). For this reason, it is not possible to generalise the available evaluation evidence to the current accreditation environment in Australia. However, key principles underlying the evaluation evidence are likely to have resonance across different healthcare policy contexts. Furthermore, as accreditation is just one type of third-party quality inspection regime (Flodgren et al., 2016), insights can also be elicited from research concerning other forms of third-party inspections to inform policy considerations regarding surveying methods and other accreditation components.

Based on the available evidence, it can be concluded that the conventional survey method remains indispensable to accreditation programs due to its capacity to assess standards that relate to aspects of health care that are not visible during patient

journeys'(Bouchard and Jean, 2016; Greenfield et al., 2012a). Nonetheless, there are benefits provided by tracer and patient journey survey methods of assessment. Such benefits are largely derived from their capacity to examine healthcare quality and safety from both a patient and systems-thinking perspective (ACI Intellectual Disability Network, 2015; Azami-Aghdash and Mohammadi, 2013; Ben-Tovim et al., 2008; Bouchard and Jean, 2016; Greenfield et al., 2007; Greenfield et al., 2012a). In this sense, the methods may offer valuable philosophical, as well as practical benefits, for accreditation programs.

Due to the increasing global focus on patient-centred care, the implicit promotion of this ethos via patient journey survey methods may be viewed particularly positively by accreditation and broader healthcare stakeholders. Yet while some commentary from policy and professional stakeholders advocates for the adoption of these approaches in healthcare accreditation programs in Australia and internationally, there are also concerns that the evidence-base supporting its effectiveness and efficiency is relatively weak (Greenfield et al., 2007).

The implementation processes and experiences of the Joint Commission (Siewert, 2017) and Accreditation Canada (Bouchard and Jean, 2016) demonstrate how tracer methods can be designed and implemented in practice. This does not in itself justify their incorporation into Australian accreditation programs. There is a pressing need to rigorously examine the available evidence on tracer and patient journey survey methods, and this literature review provides a useful resource to assist further investigations.

The standards against which patient journey survey and tracer methods assess is a key question that requires additional consideration. While not discussed in the literature, the frequency with which they are undertaken is a further issue to be explored. The scope and representativeness of the patient journeys selected for assessment using these methods are additional issues to address. How the methods could be applied to

accreditation assessments of local health districts, or other conglomerate entities, presents a further angle of inquiry.

When judging the potential usefulness of innovative survey methods, it is vital to appreciate the range of factors involved and make decisions based on a holistic understanding. A new survey method can only be effective if surveyors and healthcare organisations are adequately trained in its use, and the standards and evidentiary requirements to meet them are feasible (Bouchard and Jean, 2016; Greenfield et al., 2012a). Therefore, reforming survey methods would necessitate careful consideration, and subsequent actions, in relation to the impacts on its other elements. Likewise, changes to other elements of an accreditation would require analysis of how it could influence the operation of innovative survey methods.

Such issues could be debated and addressed collaboratively by Australian healthcare stakeholders representing policy, industry, health practitioner and research groups, and by incorporating input from accreditation experts in countries that have implemented different accreditation survey methods. As has been noted in the literature, multi-stakeholder consultation and collaboration increases the likelihood of generating well-designed and mutually acceptable approaches to accreditation programs (Hinchcliff et al., 2014). A collaborative approach would be particularly vital because of the lack of irrefutable evidence regarding patient journey survey and tracer methods, as identified in this report.

6.   CONCLUSION

Despite using a systematic and thorough search strategy, this literature review identified limited evidence regarding patient journey survey and tracer methods, as applied within accreditation programs. This impedes strong conclusions from being reached about their potential to enhance the effectiveness and efficiency of the healthcare accreditation programs in Australia. Nonetheless, key issues regarding the design, implementation and impacts of these methods were elicited from the healthcare and broader literature identified and synthesised in this report.

Due to the capacity of patient journey surveys and tracer methods to assess healthcare quality and safety from a patient's perspective, while also addressing the linkages between different functional areas within healthcare organisations, these methods warrant further investigation. The project team's synthesis of the available literature illustrate that there are valuable opportunities for follow up research to help determine whether and how to best incorporate some form of patient journey survey or tracer methods within the existing approach to assessment used in Australian healthcare accreditation programs.

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