icare
Insurance and Care NSW

Health Outcomes Framework for the NSW Workers Compensation and Motor Accident Injury/Compulsory Third Party Schemes: Consultation Paper

RESPONSE TO CONSULTATION PAPER SEPTEMBER 2020

Table of Contents

1 Executive Summary

icare welcomes the opportunity to provide comment on the State Insurance Regulatory Authority's (SIRA) Health Outcomes Framework for the NSW Workers Compensation and Motor Accident Injury/Compulsory Third Party Scheme: Consultation Paper (Framework Consultation Paper). icare strongly supports scheme changes that will support the transition of health care service provision within the workers compensation (WC) and motor accident injury/Compulsory Third Party (CTP) schemes to a value-based, evidence-based paradigm. We agree that there is a need for a consistent approach to health care delivery and outcomes across all systems and domains and we are keen to collaborate with SIRA in this transition.

icare considers that a well-designed health outcomes framework has a vital role within a value-based care model. In our opinion, the most benefit to scheme participants will be delivered by building on the extensive experience of the NSW government in designing and implementing outcomes frameworks[1] and aligning with the value-based approach advocated by NSW Health. In addition, the adoption of NSW Health's approach to health outcomes measurement could support seamless integration with the wide range of providers within the NSW health care system and enable comparative outcomes assessment. This is a vital step toward ensuring that personal injury scheme patients receive the same effective, evidence-based treatment, and the same quality of care as they would in the public or private health insurance systems.

icare will continue to advocate for and work with SIRA to ensure that there is the right operational environment and decision-making support in place across the system to deliver value-based care. Unless systemic issues and barriers to the value-based care model are addressed, it will remain challenging to make real progress on improving vital scheme metrics. Although progress has been made on some of the key priorities that emerged from SIRA's 2019 consultation on the regulatory policy that supports the provision of healthcare within the personal injury schemes, there is still a need to urgently progress a number of these fundamental reforms, especially within the broader workers' compensation ecosystem.

We appreciate that the Outcomes Framework Consultation Paper is an initial consultation piece and that key details of the proposed health outcomes framework are yet to be fully explored and resolved. Over the coming months, icare looks forward to working with SIRA to better understand important aspects of the proposal, in particular:

- roles and capacity of each of the key stakeholders within the framework
- agreement among scheme participants, including injured people, on the domains
- alignment of these domains with NSW Government approaches to outcomes measurement
- defining best outcomes and development of key metrics for measuring successful outcomes
- the role of the proposed health outcomes framework as a regulatory tool
- the detailed guidelines and other governance tools to support the outcomes framework
- continuity between the health outcomes framework and the regulatory requirements for health care that were the focus of the 2019 consultation
- consideration of how best to ensure consistency across the WC and CTP schemes
- integration and alignment of the framework with the various regulatory requirements
- detailed project planning and implementation strategies for policy development and stakeholder engagement.

As highlighted by the Insurance Council of Australia (ICA) managing providers, authorising them and monitoring their performance and effectiveness can only be done at a macro level (whole of scheme) and is the responsibility of the Scheme regulator[2]. Whilst it is clearly SIRA's role to lead the delivery of the health outcomes framework, in collaboration with all stakeholders, icare will actively contribute to its success.

Direct answers to the questions posed in the Framework Consultation Paper are at APPENDIX A.

---

[1] The Human Services Outcomes Framework, NSW Government; https://www.finance.nsw.gov.au/human_services

[2] A Best Practice Workers Compensation Scheme. Insurance Council of Australia, 21 May 2015; Finity Consulting Pty Ltd; https://www.insurancecouncil.com.au/assets/report/May%202015%20-%20a%20Best%20Practice%20Workers%20Compensation%20Scheme.pdf

2 Key Recommendations

icare request that SIRA consider the following recommendations:

Recommendation 1: Roles and responsibilities of the key stakeholders/scheme participants should be clearly defined and pathways for building stakeholder capacity and capability created. Delivery of outcomes objectives must be identified as part of the health outcomes framework design. This project piece should deal with:

- Accountability relationships between scheme participants (including people with injuries), and between these participants and SIRA.
- Plans for capability and capacity building for each scheme participant.
- Governance and engagement models (including clear terms of reference, timeframes and accountabilities) for policy development and program evaluation, to promote participation by a wide range of stakeholders in policy design and evaluation.
- Clarification of the role other parties (such as the Australian Health Practitioner Regulation (AHPRA) will play in supporting the health outcomes framework.

Recommendation 2: SIRA to provide detailed discussion/consultation papers on:

- Each of the health objectives and outcomes for each domain. icare has provided some detailed comments in this submission about the objectives and outcomes, and has identified some additional considerations for inclusion in the health outcomes framework.
- The proposed metrics for measuring success for these domains. Ideally, this paper will provide worked examples of how measures and approaches will be implemented through the health outcomes framework.

icare suggests that these are further developed through consultation with industry experts such as: NSW Health; Agency for Clinical Innovation; Clinical Excellence Commission; the Australian Commission on the Safety and Quality of Healthcare; the International Consortium for Health Outcomes Measurement (ICHOM), Choosing Wisely[3], and the Electronic Persistent Pain Outcomes Collaboration (ePPOC).

Recommendation 3: SIRA to provide further context about the proposed function of the health outcomes framework as a regulatory tool (i.e. whether it is a regulatory framework, or guidance framework). Best practice schemes encourage open participation and reporting against framework metrics by using mined data for scheme evaluation and improvement rather than enforcement.

Recommendation 4: SIRA to consult on a proposed policy development, stakeholder engagement and framework implementation plan, including the development of the detailed metrics, guidelines and other governance pieces that will support the health outcomes framework.

Recommendation 5: In releasing a health outcomes framework across personal injury, icare suggests:

- Where possible, alignment of both schemes (WC and CTP) to manage ongoing monitoring and reporting across schemes; and ensure healthcare can be both measured and delivered under the same framework.
- Introduction of specific outcome measures for healthcare services including Patient Reported Experience Measures and Patient Reported Outcome Measures, consistent with the approach adopted by NSW Health.
- The inclusion of appropriate outcome measures/metrics for those with severe and or chronic injuries and disability, for example with a wellbeing and Quality of Life focus in addition to a return to meaningful activity, which may or may not include work.
- Consideration of the impact of factors outside of health system control (e.g. social determinants of health) and further limitations within a compensable injury setting; where for important privacy reasons insurers are unaware of co-morbidities or other socioeconomic factors which can significantly impact return to health and return to work.

[3] Choosing Wisely Australia; https://www.choosingwisely.org.au/

- Increasing health literacy, for compensated patients, their families and insurers, and measure any achievements in this area, as this is key to framework implementation and improving health outcomes.
- Consideration of how the health outcomes framework can support and measure the inclusiveness, person centredness and cultural appropriateness of health care.

Recommendation 6: SIRA to continue to prioritise improvements in health care data collection and coding including:

- ongoing and regular access to Hospital Casemix Protocol data for insurers to validate services against invoices
- updating the Workers Compensation Insurer Data Reporting Requirements
- transitioning data coding from TOOCS (Australian Types of Occurrence Classification System) to ICD (International Classification of Disease)
- sourcing of data beyond what SIRA requires currently requires from insurers, and
- introduction of codes which capture all aspects of service provision (e.g. social supports, mediation and podiatry)

Recommendation 7: SIRA to take a staged and holistic approach to the implementation of the framework including:

- collaborating and consulting with key stakeholders (including clearly defining their roles and responsibilities)
- establishing a baseline for health care data through sourcing external data, and improved coding and data collection
- clearly defining the metrics of success and monitoring provider performance against these metrics, and
- a focus on communication, engagement, collaboration, and improvement activities to support the delivery of the health outcomes framework and progress towards the provision of value-based care.

3 Introduction

icare welcomes the opportunity to contribute to the State Insurance Regulatory Authority's (SIRA) consultation on a proposed Health Outcomes Framework (the Outcomes Framework) for the NSW Workers Compensation (NSW WC) and the Compulsory Third Party (CTP) schemes. In this context, icare primarily manages workers compensation and is also responsible for the lifetime care and support of those who have been severely injured on NSW's roads.

icare acknowledges SIRA for developing a foundational framework built on the critical premise that the workers compensation health framework will adopt value-based care, champion evidence-based care and support the delivery of a biopsychosocial model. We are also supportive of a framework that places customer centricity at the forefront.

icare recognises this consultation as a timely response to feedback received in relation to the SIRA's consultation on the *Regulatory Requirements for Health Care Arrangements in the NSW Workers Compensation and CTP Schemes conducted in 2019* (2019 Review). Like many of the respondents to last year's review, icare considers that the current scheme design does not fully support the delivery of value-based care[4]. We also agree with those submissions made during the 2019 consultation that highlighted the inconsistent approach to outcomes measurement. It appears there is broad support across the stakeholder group for the development of agreed scheme outcomes and metrics to support the transition to a value-based care model – or as SIRA has put it, a health care scheme for workers compensation and motor accident injuries where "every dollar spent delivers quality and value and optimises recovery". Value-based care is becoming increasingly recognised globally as a more effective approach to limiting unsustainable healthcare costs than traditional approaches[5].

During the next consultation phase, icare believes it would be most useful if SIRA could provide more detailed information about how the proposed health outcomes framework will fit within the wider healthcare reform piece. While progress has been made on some of reforms proposed in 2019, icare remains concerned that the current regulatory framework for health care does not adequately support the value-based care paradigm.

icare is committed to working with SIRA to implement the changes to the scheme that will provide the best opportunity to support injured workers to recover at work and/or return to work as soon as it is safe to do so, in order to protect their financial, emotional, physical and social well-being, and make it less likely that injuries will deteriorate into chronic conditions. Rather than repeat our earlier recommendations, we have attached a copy of our 2019 submission; these two submissions should be read side by side, since we consider that it is imperative that regulatory policy development should take place alongside the development of the proposed health outcomes framework.

[4] icare submission in response to the SIRA consultation on the regulatory requirements for health care arrangements in the NSW workers compensation and CTP schemes November 2019

[5] Soderlund, N et al. 'Progress Toward Value-Based Health Care – Lessons from 12 Countries', 6 June 2012; https://www.bcg.com/en-au/publications/2012/health-care-public-sector-progress-toward-value-based-health-care.aspx

4 Feedback on the Outcomes Framework

icare considers that a well-designed health outcomes framework has an important role within a value-based care model. In our opinion, the most benefit to scheme participants will be delivered by building on extensive experience of NSW government in designing and implementing outcomes frameworks[6] and aligning with the approach advocated by NSW Health. This will ensure that the program logic is well articulated and the complex interrelationships between the domains understood. This approach will identify the intended causal links between the activities and the short, medium and long-term outcomes. The various elements, and the causal links shown between them, articulate the theory of how change will happen. It is critical that this is undertaken prior to selection of metrics.

Adoption of the NSW Health approach to health outcomes measurement could support seamless integration with the range of health care service providers within the NSW Health system and enable comparative outcomes assessment across the entire health care system. This is a vital step toward ensuring that personal injury scheme patients receive the same effective, evidence-based treatment, and the same quality of care as they would in the public or private health insurance system.

icare supports SIRA's approach to include a range of domains recognising the importance of a whole person biopsychosocial approach to health care. icare also welcomes a framework that considers both return to work and return to health outcome measures. Whilst return to work is often considered a proxy for return to health this relationship is often complex. We recognise that health care providers undoubtedly have a key role to play in supporting successful recovery at work and return to work, and welcome an approach that will measure the health outcomes these health practitioners deliver. We also note that performance outcomes measure solely based on return to work rates could potentially disincentivise those healthcare providers working with people with severe injuries where recovery takes longer and may also require more expertise on the part of the healthcare provider to coordinate and manage return to work.

icare is supportive of the proposed outcomes framework domains and looks forward to working with SIRA and other stakeholder to clarify and expand definitions and understand how these might be measured. It is important that all key scheme participants agree on what "success" looks like, including for those with severe or chronic conditions, that there is agreement on the most important measures, and that interdependencies in the measures are well understood.

icare invites SIRA to consider how its proposed framework will align and integrate with the NSW Government Human Services Outcomes Framework1, the work being driven by ICHOM (the International Consortium for Health Outcomes Measurement), Choosing Wisely[7], ePPOC (the Electronic Persistent Pain Outcomes Collaboration) and the opportunity to collaborate with and learn from the NSW Health System, which is actively progressing a value-based care agenda and driving forward the introduction of Patient Reported Measures. Please refer to APPENDIX B where an overview is provided of approaches to outcome measurement that we suggest shapes the further development of the health outcomes framework as well as important factors for SIRA to consider when measuring health outcomes.

The Framework Consultation Paper provides a worthwhile starting point for discussion among all stakeholders. Delivering a comprehensive outcomes framework is an ambitious and important goal and it will be important for the success of the proposal that there is stakeholder buy in and ongoing support. While we appreciate that this is an early consultation, it is vital that icare, other insurers, injured persons and the wider stakeholder ecosystem are actively engaged in the development of framework fundamentals, including the identification of domains, outcomes and metrics.

This document includes specific commentary against each of the domains and highlights some of the issues to consider when finalising each domain and considering the development of metrics.

[6] Ibid (n1)

[7] Ibid (n4)

Furthermore, icare believes there is potential to further strengthen the health outcomes framework as follows:

- incorporate and operationalise the Health Benefits of Good Work (HBGW)
- understand and account for factors impacting health outcomes
- progress work on health literacy to assist with improving outcomes
- emphasise the holistic nature of wellbeing
- clearly articulate the approach to measurement within the framework.

Incorporate and operationalise the Health Benefits of Good Work (HBGW)

Whilst icare welcomes a framework that considers both return to work and return to health outcome measures, it is important the key messages regarding the HBGW[8] are embedded so as not to lead to any misconceptions that return to health is an antecedent to return to work. The HBGW rightly asserts the health benefits of returning to work as part of treatment and recovery. Whilst a return to health does not always lead to return to work, disability should not be barrier to achieving quality of life and meaningful engagement including employment.

A greater appreciation and understanding of how to operationalise the HBGW will greatly impact the ability to improve outcomes and therefore an important component of the health outcomes framework.

The framework could also acknowledge that a positive health outcome may not always result in a return to work (RTW) outcome. In some instances, a RTW metric could be considered a proxy outcome for a health outcome but this cannot always be assumed to be the case. Measuring health outcomes can provide an important independent measure of success. Currently, RTW is the only measure for 'success' and if not achieved, there is no way of knowing about other worker outcomes (e.g. volunteering in the community could be classified as a success under the new framework).

Disability should not be accepted as a barrier to achieving quality of life, and meaningful engagement including employment. Whilst the likelihood of unemployment is higher, many people work with significant disability, ill health and mental health issues.

Understand and account for the factors impacting health outcomes

The development of effective partnerships to address health problems is important because many of the determinants of health are outside the realm of health services.[9] The vast majority of factors that affect people's health sit outside the health system including:

- behavioural factors such as exercise, diet, smoking, and drug and alcohol consumption
- social factors, such as community connections and personal relationships
- self-sufficiency factors, such as education, employment and the ability to seek out other social services as needed
- environmental factors, such as pollution, housing and transport.

It is important to acknowledge, in developing a health outcomes framework, that whilst there are many factors outside of the health system control, further limitations exist within a compensable injury setting. For example, an insurer will only be able to review and capture health information related to the compensable injury itself; for important privacy reasons all other health information including co-morbidities, which could significantly impact return to health and return to work, are inaccessible

Some communities, in particular, Aboriginal and Torres Strait Islander peoples and people from culturally and linguistically diverse (CALD) backgrounds, are already known to experience greater difficulty navigating both the compensation and the health systems which could translate to poorer customer experience, a delayed recovery trajectory, and higher operational costs. How to better support these communities should be further explored.

[8] Australian and New Zealand Consensus Statement on the Health Benefits of Work. Position Statement, The Royal Australasian College of Physicians, 2011.

[9] 'A Framework for Building Capacity to Improve Health', March 2001, NSW Health Department; www.health.nsw.gov.au

This includes opportunities to increase cultural sensitivity and the translation of supporting materials and resources.

When someone has an injury on the roads or at work, they bring their personal health journey, including baseline health status and context with them including co-morbidities and risk factors which may have a significant impact on recovery and risk of re-injury.

Additionally, the relationship between return to health and return to work is not always directly correlated. In the context of the health outcomes framework it is possible that the injured person may receive timely, evidence based, appropriate high quality health care and still not return to work due to the many factors that impact RTW in a compensated system. There is evidence in the majority of studies that compensation status is negatively correlated with both treatment and treatment outcomes following workplace injury[10].

Further detail on the range of factors impacting individual health and wellbeing and return to health, particularly for compensated patients is provided at APPENDIX C.

Progress work on health literacy to assist with improving outcomes

NSW Health has identified patient education and health literacy as a key enabler for achieving the vision of value based care centred on what matters most to the patients[11]. Whilst the responsibility for building health literacy is shared across many government agencies, the health outcomes framework could be further strengthened by its inclusion.

The World Health Organisation define health literacy as “the ability of individuals to gain access to, understand and use information in ways which promote and maintain good health”[12]. Health literacy facilitates navigating the healthcare system and supports shared decision making about treatment and return to work which is likely to build optimism and empowerment, leading to a motivation to participate in treatment and return to work and the realisation of improved outcomes.

Whilst there is evidence that Australians assess their health literacy as positive[13], there is evidence of challenges in practical application. A 2006 survey[14], that assessed functional aspects of literacy such as understanding text, finding information in documents, and problem-solving capabilities, indicated that only 41% of adult Australians had a level of health literacy that would allow them to meet the complex demands of everyday life.

Increasing health literacy, for compensated patients, their families and insurers – and measuring it’s achievement – will be important for the success in implementing the framework and for improving health outcomes. Collaboration with scheme partners is needed to build a health literacy environment which enables people to access and understand health and services within the workers compensation context.

Emphasise the holistic nature of wellbeing

icare supports the inclusion of separate domains for physical and mental health, for wellbeing and for experience as this recognises the importance of a whole person biopsychosocial approach to health care.

[10] Peckmezian, T. ‘Improving health outcomes for people with workplace injuries: literature review for icare NSW’. Sydney; NPS MedicineWise, April 2019.

[11] Patient Reported Measures Framework; NSW Government; https://www.health.nsw.gov.au/Value/Pages/prm-framework.aspx

[12] ‘Health literacy’; World Health Organisation; https://www.who.int/healthpromotion/conferences/9gchp/health-literacy/en/

[13] ‘Australians feel positive about their health literacy’; Australian Bureau of Statistics; Media release, 29 April 2019; https://www.abs.gov.au/AUSSTATS/abs@.nsf/Latestproducts/4364.0.55.014Media%20Release1002018?opendocument&tabname=Summary&prodno=4364.0.55.014&issue=2018&num=&view

[14] Australia’s health 2018 (Chapter 4.3). Australian Institute of Health and Welfare, 20 June 2018; https://www.aihw.gov.au/reports/australias-health/australias-health-2018/contents/table-of-contents

SIRA has adopted a broad definition of health consistent with the World Health Organization definition as "the complete physical, mental, and social functioning of a person and not merely the absence of disease." In this definition, functioning as classified in the International Classification of Functioning, Disability and Health (ICF) is an essential component of health.

Functioning is as fundamental to wellbeing as health related quality of life (the individual's perceptions of how the life is going in health and health-related domains) is to overall quality of life.

icare encourage SIRA to strengthen the wellbeing domain and emphasise the holistic nature of wellbeing. Wellbeing is more than connection (social wellbeing) and work (purpose), it also includes financial wellbeing, spiritual, emotional wellbeing and safety and the social determinants of health. All have an impact on quality of life, health and recovery.

Clearly articulate the approach to measurement within the framework

icare welcomes the stated emphasis on metrics, evaluation and evidence base in the support of a health outcomes framework that is intended to drive value-based care in the personal injury schemes. icare will work with SIRA over the coming months to help develop metrics that will be most useful in providing the qualitative and quantitative data that will provide the best insights into scheme performance.

The current measures of outcomes in the NSW workers compensation system focus on return to work (RTW) measures and utilisation, and cost of treatment within the NSW WC and CTP schemes. icare submits that by also measuring outcomes with respect to health (the change in health), wellbeing (particularly for severely injured and those with chronic conditions), and experience (the quality of care) it will be possible to obtain more complete and nuanced information about how injured people experience the health care services provided under these schemes.

In this regard, icare believes there are a number of approaches to measurement that could be applied to the health outcomes framework, including:

- **Patient Reported Outcome Measures** (PROMs) including pain, functional improvement, disability, mental health.
- **Patient Reported Experience Measures** (PREMs) to obtain patients' views and observations on aspects of services they have received.
- **Goal achievement Measures**; as used in the NDIS where achievement of SMART (Specific Measurable, Achievable, Realistic and Timely) goals are assessed. This would require injured persons to have a comprehensive shared plan with agreed goals; Lifetime Care and Workers Care already have individual plans with defined goals.
- **Clinically validated outcomes**, including complications, reoperations, readmissions, and outcomes from physical and psychological assessments.
- **Work-related outcomes**, including time to return to work, sustainability of return to work.
- **Other outcomes**, including compliance and receipt of income compensation benefits.

Patient reported measures are already being used to report on patient experiences and patient outcomes across the wider healthcare system in Australia. icare strongly supports the use of these measures within the NSW WC and CTP schemes as they can be used to inform and improve the experiences and outcomes of injured workers, and those injured on NSW roads.

The framework can support measurement of provider performance and overall health outcomes can support this by making data integrity and accuracy an absolute priority and considering how this data can easily and regularly be shared with all relevant parties. To do this effectively SIRA needs to drive significant improvements in health care data collection and coding including:

- Ensure ongoing and regular access to Hospital Casemix Protocol data, sharing this with insurers to support improved outcomes
- Update the Workers Compensation Insurer Data Reporting Requirements to include additional pharmacy codes to capture specific information on drug type, dose, frequency, prescription costs and any other goods supplied by pharmacists

- Transition data coding requirements from TOOCS to ICD to allow for better identification of the nature and magnitude of injuries and to help put in place the procedures and treatments that support best practice, value-based care.
- Consider sourcing of data beyond what SIRA requires from insurers to assist with performance and risk management
- Introduction of codes which capture all aspects of service provision, for example social supports, mediation and podiatry.

5 Feedback on the Domains

icare is supportive of the proposed Domains outlined in the health outcomes framework, and looks forward to working with SIRA and other stakeholders to clarify and expand definitions and understand how these might be measured. It is important that all key scheme participants agree on what "success" looks like, including for those with severe or chronic conditions, that there is agreement on the most important measures, and that interdependencies in the measures are well understood.

We have provided feedback for each of the six domains, as well as detailed feedback against each of the proposed components.

Domain 1: Physical and Mental Health

Injured persons have good physical and mental health

The measurement of Domain 1 is complex when the myriad of factors impacting both access to health care and positive health outcomes are considered, along with the current poor state of health of many Australians. A summary of these factors is detailed in APPENDIX C.

Compensated patients take longer to recover; evidence shows that back and knee injuries in the workers compensation system are likely to take longer to recover than in the general community[15]. icare believes that regardless of how someone is injured – whether in the workforce, due to a motor vehicle accident or in their own time – the management of their injury should be the same.

There is some potential overlap with Domain 1 and Domain 3 and a consolidation may be possible / desirable.

Feedback on components:

- icare believes the description provided under *"1.1 Physical health is improved or maintained/ 1.2 Mental health is improved or maintained"* be clarified. The current definition could be interpreted in a number of ways and includes commentary on both return to health and return to work.
- It is recommended that a baseline and outcomes measure (such as PROMS) be established, to determine whether health has, for example, 'improved or maintained', and consideration also be given into defining resources, and measures for determining how services will be "tailored to the nature and extent of the injury".
- icare is of the opinion that it is also important to acknowledge that in some circumstances, there may be residual disability or impaired function (and this would be classified as optimal return to health).
- Harmful dependence on treatment and care could potentially include requests for surgery that may result in a further reduction in function and ongoing reliance on opioid medications or treatment.
- To support measurement of this domain, icare suggests that SIRA will need to develop new guidelines and strengthen those which currently exist. For example, WorkSafe Victoria, have a combination of policies and guidelines[16] which are evidence based, easy to read, and easy to follow. We note that SIRA have recently published guidelines[17] on medication management.

Domain 2: Injured person experience and accessibility

Injured persons have a positive health care experience and services are accessible in a timely manner

icare agrees that the experience of injured people and their access to healthcare has a key impact on health recovery. As outlined in APPENDIX C, there are many factors, both internal and external to the compensable system, that impact on this.

[15] De Moreas, VY et al; 'Workers' Compensation Status: Does It Affect Orthopaedic Surgery? A Meta-Analysis'. PLoS ONE, 2012.

[16] Information for Providers; WorkSafe Victoria; https://www.worksafe.vic.gov.au/information-for-providers

[17] 'Medication management in the NSW personal injury schemes: Better practice guide'; State Insurance Regulatory Authority.

It will be important to support injured people to separate out experiences of health care from other aspects of their experience with the compensation system e.g. dispute resolution. This can be supported by ensuring collection of information as close to the delivery of health care as possible. This domain presents an opportunity to extend the use of Patent Reported Experience Measures (PREMS) in the system.

SIRA may also wish to consider use of the Australian Hospital Patient Experience Question Set (AHPEQS)[18], developed by the Australian Commission on Safety and Quality in Health Care. It is based on the aspects of treatment and care that patients in Australian hospitals and healthcare services have said are most important to them and is used by hospitals and healthcare services to ask recent patients about their experiences of treatment and care.

icare acknowledges the important inclusion of the experience of families/carers in this domain. In health care, it is key that families are involved, particularly if there is a fatality and for other injuries as consented to by the injured person. Informed involvement of families and carers can have a significant impact on the persons' return to health and work. For example, fear surrounding re-injury and the commitment to following health care provider advice are greatly impacted by the views and understanding of both the injured person and their family/carers.

There is some potential overlap with Domain 2 and Domain 6 and a consolidation may be possible/ desirable.

Feedback on components:

- The definition for "*2.1 Injured persons and their families/carers are satisfied with treatment and care processes, including dispute resolution, and experience*" includes reference to both satisfaction with treatment and care (health care) as well as 'dispute resolution' (claims process). We recommend that the measure for this domain clearly articulates whether it is measuring health or insurance experience or both, noting that for health experience, there is the potential for use of the AHPEQS and PREMS.
- icare believes any measurement within this domain should occur as close as possible to the point of experience with the service.
- Item 2.2 "*Cost of healthcare services is aligned with market rates for industry peers*" does not appear to fit within this domain, and is repeated in Domain 4. We recommend renaming this to better match the following description: "*2.2 Services are accessible in the right place at the right time*".
- Additionally, the issue of timely access to treatment and care and access to evidence based service may be better addressed in Domain item 5.4, and include different elements which measure:
  - the timeliness of the service (according to who and which guideline) e.g. fast track to a surgical procedure rather than non-interventionist (leading practice) management may not be a good outcome.
  - time to treatment immediately post injury to identify any delayed access which could result in poorer outcomes and increased distress.
  - the impact of insurer targets on health outcomes. For example,
    - approval of treatment requests in complex scenarios may need more than 21 days
    - automatic approval of an AHRR within five days if the insurer does not respond (for requests made within three months of the injury) can limit the insurer's ability to properly review the request.
    - whether the service was evidence-based or aligned to best practice guidelines/ information.
  - the injured person's ability to navigate across the continuum of integrated health services (as this will be impacted by the support and coordination available from treating practitioners)
  - The availability of appropriate qualified providers and practitioners e.g. regional and remote areas may access issues, and not all providers will deliver care in a manner consistent with SIRA's requirements.
- With regard to 2.4 '*Healthcare is integrated, and transitions of care are facilitated effectively'*, we acknowledge that "hand overs" between team members and transitions between services present a potential risk in any healthcare system and there is no reason to believe this would be different for compensated patients.

[18] 'Australia Hospital Patient Experience Question Set'; Australian Commission on Safety and Quality in Health Care.

- Whilst implementation of secure electronic methods of submitting and sharing information among stakeholders has several benefits, integrated care would be best supported by a shared plan accessible, as needed, to all involved in care and treatment.
- We also believe there will be challenges in identifying appropriate measures for this domain due to its complexity. Please refer to Domain 6.2 which proposes a systemic approach to addressing this challenge by the introduction of a shared planning framework, with goal oriented SMART (Specific Measurable, Achievable, Realistic and Timely) objectives, supported by clinical assessments of progress and Patient Reported Outcome Measures.

Domain 3: Wellbeing

Injured persons attain high levels of wellbeing (e.g. return to work/ activities, connectedness, resilience and empowerment/ behaviours)

Delivering value-based care requires a whole person, biopsychosocial approach which considers the whole person taking into account not only the injury (biological or psychological) but also the personal / psychological factors and the social context that surrounds the injury[19]. icare suggests that consideration could be given to embedding assessment of social support at point of claim and subsequent need for social supports to aid recovery, this will be an important measurement to track improved wellbeing.

Whilst early intervention and the initial recovery period is clearly an important focus of the health outcomes framework and applicable to a significant proportion of the injured people supported by personal injury schemes, consideration also should be given to the inclusion of appropriate outcome measures / metrics for those with severe and or chronic injuries and disability. Outcome measures for this group will likely have a wellbeing and Quality of Life focus in addition to a return to meaningful activity, which may or may not include work.

There is some potential overlap with Domain 3 and Domain 1 and a consolidation may be possible/ desirable.

Feedback on components:

- Clearly defining 'timely manner' within the description of '*3.1 Injured persons return to work/activities in a timely manner'* will assist with measurement, and could be supported by an increased focus on the HBGW and recovery at work (assuming this domain encompasses return to work / meaningful activities as measures that support improved wellbeing).
- With regard to *"3.2 Injured persons are empowered to return to work/activities",* clarification would be helpful on whether this outcome encompasses the following:
  - increased self- efficacy
  - the return to work / pre-injury duties
  - return to other meaningful activities (e.g. as per agreed goals)
  - assessment of influencing behaviours to support RTW.
- icare believes it is critical that SIRA and insurers work together to actively engage / educate / provide information to employers around their duties / requirements as well as the benefits for recovery at work for the worker and on premiums / outcomes / work culture in order to achieve improvements in this and other domains.
- icare suggests SIRA investigate several approaches for measuring *"3.3 Social engagement, resilience and connectedness is maintained"* and the extent to which this outcome will measure the following characteristics of social engagement, resilience and connection. Some examples of measurement may include:
  - the quantum of social connections and participation in social activities
  - assessment of loneliness - and using the UCLA 3-item Loneliness Scale (Feelings of loneliness)
  - level of distress (e.g. The Kessler Psychological Distress Scale (K10)) which assesses psychological distress / depression / anxiety
  - self-assessed resilience and self-efficacy

[19] Waddell, G & Burton, A. 'Concepts of rehabilitation for the management of common health problems', 2004.

- overall quality of life (e.g. WHO-QOL-BREF (Overall quality of life /Perception of overall health /Physical Health /Psychological Health /Social relationships / Environment)).

Domain 4: Cost of Healthcare

Healthcare provided within SIRA's schemes is cost efficient

It is imperative that the health outcomes framework is designed to ensure it not only supports, but also drives appropriate practices from all involved in approval of and delivery of health care to injured people. This requires a common and clear understanding of what leading / value-based care practices are, and how to best provide this to injured people. Similarly, common understanding of low-value care services is equally important.

icare submits that regulatory reforms are required to ensure that the governance and funding framework for health care providers incentivises and aligns with the goals of value-based and evidence-based care. While the dominant "fee for service" payment model used to fund primary care in Australia (and in a modified form, public hospitals through activity-based funding) has advantages, concerns have been raised about over servicing, reduced quality and safety standards, fragmented care and cost shifting[20].

We consider that the following regulatory improvements are needed to achieve clinically efficacious and cost effective health care within the workers' compensation and motor vehicle accident /CTP schemes:

- Increasing controls for concurrent treatments within the allied health category, particularly physical therapies such as physiotherapy, chiropractic and osteopathy.
- Adjusting the limits for the number of services that do not require pre-approval and enhancing the Allied Health Recovery Request (AHRR) form will ensure comprehensive treatment plans, including outcome measures are defined early. The existence of pre-approved limits for allied health services are inconsistent with the principles of value-based care.
- Proactively addressing any concerns with providers regarding low value care or over servicing.

icare recognises that creating the policy settings for a pricing model that will attract providers to deliver improved outcomes as articulated in the health outcomes framework is a challenging task. However, the right funding model can:[21]

- reward providers for securing good outcomes that matter to the patient or consumer, therefore incentivising the exploration and deployment of new, better connected and integrated models of care that align providers and patients around shared goals
- increase market competition and depth, driving innovation and fresh investment
- support patient choice and participation in shaping their healthcare experience
- encourage providers to continuously improve quality and safety
- lead providers to optimise resource allocation and reduce waste
- shift the focus from the "here and now" to longer term "invest to save" thinking
- reduce health inequalities between social groups.

Personal injury jurisdictions in NSW operate on a fee for service model. However, this is not necessarily the best way of delivering value-based care to those who need it. If the NSW personal injury schemes are to truly place the injured person at the centre of care, using an evidence-based, best practice, outcomes-focused approach, the investigation of alternative healthcare funding models could usefully be considered.

[20] Efficiency in Health. Productivity Commission Research Paper April 2015. Australian Government.

[21] 'Funding for Value', 2018, Pricewaterhouse Coopers; https://www.pwc.com.au/publications/healthcare-funding-for-value.html

Feedback on components:

- icare believes there is a need for further clarification of the description relating to *"4.1 Healthcare provided within the WC and CTP schemes is cost efficient"* in order to better understand the outcome being sought. At its simplest, efficiency could be described as whether care was carried out in the most streamlined way, at least cost, and without delays.
- Clarification is required around whether *"4.2 Cost of healthcare services is aligned with market rates for industry peers"* refers to an outcome or an action to be achieved by addressing current fee schedules and indexation (such as providing greater transparency around the calculation of rates for allied health service provision).
- It would be useful to clarify the definition of the term "appropriate" within "*4.3 Level of healthcare services provided is appropriate".* The appropriateness of care is often framed as "did we do the right thing?", and this can only be measured against the evidence-based policy and guidelines generated in response to gaining clarity about what the right thing is to do. It will have the greatest impact if the condition is common, where it is known that actual practice varies considerably from the policy and where clinical opinion leaders are keen to collaborate[22].
- Finally, whilst approaches often seek to measure people receiving procedures inappropriately (low value care) icare believes it is equally important to know how many people who needed the procedure did not get it.

Domain 5: Safety and Quality of Health Care

Healthcare provided within the WC and CTP schemes is of high quality and is delivered safely

Assessing clinical performance should be routinely undertaken to review safety and quality of care. Measures should include:

- compliance with legislative, regulatory and policy requirements
- process indicators that have supporting evidence to link them to outcomes, and
- indicators of outcomes of care including patient reported outcome and experience measures.

icare believes the Australian Commission on Safety and Quality and Health Care's *Australian safety and quality framework*[23] should be used by healthcare providers in the NSW personal injury schemes, as it references key components required to achieve optimal outcomes and value-based care of injured people.

We note that SIRA is currently consulting on the "Revised Workers compensation guidelines for allied health treatment and hearing service provision"[24] which outlines the expectations and requirements for delivery of SIRA-approved allied health service providers. Section 1.4 of the revised guidelines provides information regarding the general expectations of allied health providers practicing within personal injury schemes. These expectations include adherence to the *Clinical Framework for the Delivery of Health Services*[25] to individuals with a compensable injury, as well as application of the principles of the health benefits of good work. However, icare is interested to better understand how a provider might deliver or operationalise these expectations, and how SIRA will monitor or enforce these expectations.

Clearly defining these expectations – and measures of success - will inform provider practice and ultimately drive better outcomes. For example, when considering the Clinical Framework principles examples of provider success could be as follows:

[22] Jencks, S.F & Wilensky, G.R. 'The health care quality improvement initiative- A new approach to quality assurance in Medicare'. JAMA; 1992.

[23] 'Australian Safety and Quality Framework for Health Care'; Australian Commission on Safety and Quality in Health Care.

[24] 'Workers compensation guidelines for allied health treatment and hearing service provision'; SIRA, 29 July 2020; https://www.sira.nsw.gov.au/__data/assets/pdf_file/0011/883613/Revised-workers-compensation-guidelines-for-allied-health-treatment-and-hearing-service-provision.pdf

[25] 'Clinical Framework for the Delivery of Health Services', Worksafe Victoria and the Transport and Accident Commission; June 2012

Principle	Examples of provider success criteria
1. Measure and demonstrate the effectiveness of treatment	Evidence of incorporate standardised and functional assessment measures in the AHRR to demonstrate progress in patient recovery
2. Adopt a biopsychosocial approach	Adherence to a standardised assessment tool as defined by SIRA
3. Empower the injured person to manage their injury	Distribution of health literacy brochure to workers as part of consultations
4. Goals are focused on optimising function and RTW	Evidence in file notes demonstrating provider is working with the worker, NTD, employer and others (e.g. surgeon) on a "shared treatment and return to work plan"
5. Treatment to be based on the best evidence available	Evidence of adhering to practices outlined in the Physiotherapy Evidence Database (PEDro[i26]) or other guidelines SIRA wishes to introduce to promote leading practice healthcare delivery

There is some potential overlap with this domain and domain 6 and a consolidation may be possible/ desirable.

Feedback on components:

- icare believes the measurement of "*5.1 Healthcare delivered is of high quality*" could be assessed through measurement of a range of health-related outcomes such as:
  - PROMS pain, physical function/disability, mental health and quality of life.
  - Clinically evaluated outcomes such as surgical complications, reoperations, and outcomes from physical assessments such as range of motion (ROM) tests.
- icare is in support of minimising low-value treatment. We believe this is fundamental to the transition towards a value-based model. As highlighted previously[27], the current NSW workers' compensation system allows for provision of low value care services, irrespective of the needs of the injured worker. To support this goal, it is important that the outcomes framework clearly defines the principles and goals of value-based care in a way that can be used to inform decisions regarding medical care in the context of the NSW WC and CTP schemes, and supported by the implementation of more robust guidelines, which can help reduce the incidence of delivery of low value care.
- icare interprets the goal within *"5.3 Treatment and care match the needs of injured persons"* to mean "what is the right thing to do", (or the effectiveness of treatment). To support this goal, icare recommends that SIRA implement operational guidelines which clearly outline how to assess and approve treatment within the NSW workers' compensation system.
- icare believes there needs to be an emphasis on the measurement of outcomes relevant to the injured person. These are not always as the system would expect. For example, the International Consortium of Health Outcomes Measurement (ICHOM) developed a "wheel" of factors that matter to the frail elderly. These factors contrasted sharply with the outcomes and performance measures tracked by most Australian providers.[28]
- To support the goal of *"5.4 Timely adoption of new evidence-based treatment and care options"*, icare recommends that SIRA develop guidelines regarding new and novel treatments so that insurers can appropriately respond to requests for treatments where there is limited evidence, or where there is no corresponding AMA/MBS code.

[26] Physiotherapy Evidence Database; https://www.pedro.org.au/

[27] Ibid (n5)

[28] Ibid (n21)

For example, there are increasing requests for medicinal cannabis, yet limited evidence to support its use. The Therapeutics Goods Administration (TGA) has published guidance documents for medicinal cannabis[29] which detail the lack of clinical evidence, acknowledging that in many cases there are very limited data from which to draw specific recommendations for treatment.

- icare believes the information relating to *"5.5 Towards zero serious incidents/adverse events"* may not be currently available to SIRA and insurers. To support this goal, icare recommends that SIRA undertakes the collection of Hospital Casemix Protocol data from hospitals as per Section 40B of the *Workplace Injury Management and Workers Compensation Act 1998* and share relevant data with insurers who fund these services. It will be important that this information is provided regularly so that it can be linked back to an individual claim and be acted on in a timely manner (e.g. on a monthly basis as for Private Health Insurers).
- icare is in support of *"5.6 Information is collected and used to drive healthcare activities"* and agrees that there is a need to increase the level of health-related data in the current system. We have previously made a number of recommendations in this regard.[30] Further clarification is required as to how this intent would be measured: e.g. is the measure related to completeness of data sets or how the information is used to influence health care delivery.

Domain 6: Healthcare provider capability, deliver and experience

Healthcare providers within the WC and CTP healthcare ecosystem are engaged, integrated and provide value

icare believes that SIRA should consider implementing a more robust clinical governance framework to protect the safety of individuals within both the NSW workers compensation and CTP schemes, by ensuring all healthcare providers have clearly defined skills, qualifications, experience and performance expectations to perform their roles. It will be important to build provider competency, through ongoing training, and clarifying operational expectations.

icare welcomes the current consultation on the "Revised Workers compensation guidelines for allied health treatment and hearing service provision" Guidelines[31] as a demonstration of SIRA's intent to strengthen existing guidelines and introduce a more robust approval process for allied health and hearing service providers. We believe, however, that in order to deliver value-based care, and a financially sustainable scheme, a broader view around approval and accreditation must be taken.

The current approval and accreditation model implemented by SIRA is limited to a small number of allied health care providers and does not cover the vast majority of medical and health care providers delivering services within NSW workers' compensation system. icare believes SIRA should consider extending approval and accreditation to any medical and allied health service providers who deliver services under section 60(1) of the *NSW Workers Compensation Act 1987* (the 1987 Act). We think that this approach would implement the intent of section 60 (2A)(b) of the 1987 Act, which stipulates that the employer is not liable to pay the cost of any treatment or service if provided by a person who is not appropriately qualified[32] to give or provide the treatment or service.

Whilst the majority of healthcare providers supporting injured people in the personal injury schemes are not subject to SIRA approval, many are subject to professional registration e.g. Australian Health Practitioner Regulation Agency (AHPRA) registration for medical practitioners and the Australian Association of Social Workers for Social Workers.

[29] Medical cannabis – guidance documents; TGA; https://www.tga.gov.au/medicinal-cannabis-guidance-documents#guidance-docs

[30] Ibid (n5)

[31] Ibid (n24)

[32] Appropriately qualified" is defined in the Act as "approved or accredited by the Authority".

SIRA's recent engagement with AHPRA[33] and the Healthcare Complaints Commission (HCCC) to clarify roles and accountabilities has been a positive step in supporting effective provider management, and has strengthened SIRA's monitoring of health practitioners through a new agreement with AHPRA whereby SIRA is able to access AHPRA's registration database.[34]

Consideration will also need to be given to non-registered practitioners (e.g. speech therapists, audiologists, massage therapists, and naturopaths) who impact health outcomes, as well as those providing attendant care or personal care services. icare believes that there is a need to implement a complimentary layer of governance mechanisms within the context of the NSW personal injury schemes to enable a more responsive and timely means of managing the performance of non-registered practitioners within the scheme where the actions of these practitioners could place injured people at risk from harm and adverse health outcomes. Increased regulatory scrutiny and transparency will enable people with injuries 'choice' of high quality providers, proactively decreasing scheme risks.

icare would also support scheme changes that would ensure that the most severely injured and those with chronic conditions are cared for by specialist providers with advanced skills who have demonstrated capabilities. Ideally, these changes would mean that there would be clear regulatory guidance about:

- the types of providers qualified to work within the scheme;
- accreditation, training and ongoing governance of all healthcare providers in the scheme;
- the services that attract payment, and in what combinations; and
- the expected outcomes of treatment.

There is some potential overlap with this domain and domains 4 and 5 and a consolidation may be possible/ desirable.

Feedback on components:

- With regard to "6.1 High quality healthcare providers are attracted and retained",
  - icare supports this goal and notes the importance of transparency in relation to outcomes being achieved by healthcare providers within the scheme. Consideration should be given to the following challenges for achieving this outcome:
    - how might SIRA best attract health care providers in remote and regional areas to apply for SIRA approval?
    - how might SIRA work with local health systems to increase the availability of practitioners?
    - how might SIRA strengthen approval processes (e.g. to ensure that practitioners are meeting the Clinical Service Delivery Standards)?
    - How could SIRA best support the measurement of outcomes (e.g. inclusion of expectation of a PROM as part of an AHRR submission)?
  - icare believes, however that a clear definition of what constitutes a "high quality healthcare provider" is required, and we suggest that the Clinical Framework for the Delivery of Health Services,[35] could provide a useful framework. Suggested success measures are provided in Domain 4.
  - Regarding "*6.2 Clinician and staff wellbeing, development, and engagement is improved or maintained*", icare is of the opinion that further clarification is required in regard to the stated role of insurers, claim managers and employers in managing the wellbeing and development of clinicians and health care staff. This would generally be the responsibility of health care organisations and individual practitioners (e.g. through self-management or clinical supervision arrangements). icare does not consider this an appropriate role for the insurer.
  - SIRA approval could include a requirement for the healthcare practitioner to have supervision in place.

[33] Australian Health Practitioner Regulation Agency; 18 November 2019; https://www.ahpra.gov.au/

[34] SIRA Bulletin - Issue 6, issued 17th June 2020

[35] Ibid (n25)

- At an organisational level, icare believes that healthcare provider practices/organisations should be responsible for:
  - credentialing and defining scope of clinical practice
  - clinical education and training
  - performance monitoring and management
  - whole-of-organisation clinical, and safety and quality education and training.
  - at an individual level, icare believes that any clinician providing services should be required to:
    - maintain, where appropriate, unconditional health professional registration
    - maintain personal professional skills, competence and performance;
    - comply with professional regulatory requirements and codes of conduct; and, monitor personal clinical performance.
- icare believes "*6.3 Providers integrate and collaborate*" is an important aspirational goal and could be supported through development of systems and structures to support greater health care provider collaboration. There is an opportunity to work with the health system stakeholders to determine the most effective way to achieve this. Consideration should also be given as to how to facilitate the effective contribution of Workplace Rehabilitation Providers and employers to these plans.
- icare suggests that further definitional clarification is needed to understand the "*6.4 Healthcare providers are capable and exhibit desirable behaviours*" component, particularly around what the desirable behaviours might look like in this context and how they might be measured. For example, this could include a competency-based approval and accreditation process. At present, there is a lack of a consistent methodology for measuring outcomes by providers, aside from cost and utilisation, so it is not possible to determine whether providers are delivering good outcomes at a scheme level. This must be resolved if we are to monitor whether providers are delivering value-based care and ensuring optimal outcomes for workers.

6 Feedback on the implementation plan

The success of any framework relies upon the effectiveness of its' implementation. As the Regulator, SIRA has the opportunity – and powers – to lead the implementation of the health outcomes framework in collaboration with stakeholders, in order to yield a number of benefits including:

- An aggregate view of system performance and behaviour through collation of feedback from insurers and providers. This can inform discussions with key stakeholders, and effect change in a way that individual insurers or providers could not.
- A holistic approach with SIRA establishing relationships with peak bodies and professional associations to gain traction in delivering the health outcomes framework.
- Access to, and maintaining "big data" to better understand services within the schemes (noting that SIRA is able to gather and access data and information under section 40B of the Workplace Injury Management and Workers Compensation Act 1998) that insurers and other stakeholders cannot, and
- A consistent and systematic approach to benchmarking across all insurers and providers, irrespective of the system or scheme they work within.

icare supports the development of a clear implementation plan, which focuses on:

- collaborating and consulting with key stakeholders (including clearly defining their roles and responsibilities)
- establishing a baseline for health care data
- clearly defining the metrics of success and monitoring provider performance against these metrics, and
- taking a staged approach to delivering transformation.

In commenting on the implementation plan, we have referred to concurrent activities that will support the delivery of value-based care. We encourage SIRA to continue to work with stakeholders to address systemic issues and barriers which may impede on transition to the value-based model.

Collaborate with key stakeholders prior to, during and post implementation

Stakeholder Collaboration and Consultation

It has been acknowledged that widespread adoption of value-based care requires openness, trust and strong collaboration and partnerships between all healthcare stakeholder groups[36], hence icare emphasises the importance of a highly collaborative approach in the development and implementation of the health outcomes framework. Any collaboration must involve a whole system consultation which includes scheme stakeholders such the people with injuries, their families and carers, the community, clinicians, health care organisations (including peaks and professional bodies) insurers, and employers across NSW.

Consulting and collaborating with various stakeholders throughout the process will enable SIRA to establish a current baseline, as well as identify the key pain points and levers for change. Currently, there is insufficient information to know what is and isn't working in delivering improved health outcomes within the schemes, and hence, icare welcomes the public consultation on the framework as part of Horizon 1 activities.

icare notes there are other important stakeholders such as Workplace Rehabilitation Providers and other community organisations who are not mentioned in this framework but also have a key role in achieving health and return to work outcomes. We recommend that they too are included as part of the overall stakeholder consultation process.

[36] Kimpen, J; 'Here's how to make 'value-based healthcare' a reality'; 12 Feb 2019; https://www.weforum.org/agenda/2019/02/here-s-how-to-make-value-based-healthcare-a-reality/

Defining roles and responsibilities

All participants in the system have a role to play in supporting a shift towards value-based care, and for this to happen, the roles and responsibilities of each stakeholder within the system need to be clearly defined and then empowered to deliver on the responsibilities of that role.

For simplicity, clarity and transparency, the role of each stakeholder and their responsibilities could be defined via a matrix and made public. This drives joint accountability amongst all stakeholders to deliver on their remit. An example of such a matrix can be found in Appendix D.

As an insurer, icare is required to comply with various legislative and regulatory policy architecture, such as SIRA's Standards of Practice[37] principles which articulate the core outcomes that should drive insurer claims administration and conduct at various points in the life of a claim. In developing this health outcomes framework, it is critical that SIRA consider how it will integrate and align with the various regulatory requirements. This is an issue that should be addressed early through targeted stakeholder consultation.

Establish a baseline for health care data

Data capture for Workers compensation insurance claims is typically more aligned to insurance metrics, such as return to work (RTW) measures, as well as cost and frequency of treatment, and currently, there is little to no visibility over the medical management of workers compensation claims, such as specific allied health interventions, hospital stays, discharge times and surgery duration.

Workers compensation does not operate independently of the wider health ecosystem. Introducing a methodology for healthcare data and coding, such as ICD-10, enables SIRA and insurers the opportunity to not only create baseline metrics for healthcare providers working within the schemes, but also an opportunity to measure the impact of treatments and services delivered against those working within the broader healthcare landscape.

As previously suggested to SIRA, icare believes there is also value in introducing Patient Reported Measures (PRMs) for use with injured workers and participants within the NSW personal injury scheme. These measures are already being used to report on patient experiences and patient outcomes across the wider healthcare system in Australia.

When used at an individual level, PRMs can be used to obtain patients' views and observations on aspects of health care services they have received. When used aggregately within the workers compensation and CTP schemes, however, this information can help inform and improve the overall experiences and outcomes of injured workers, and those injured on NSW roads.

Define outcomes and metrics of success for monitoring provider performance

Outcomes and metrics of success

icare notes the stated intent for a phased approach to the implementation of metrics. Whilst it is acknowledged that the priority is on ensuring the key elements of the health outcomes framework are well articulated, and the complex interrelationships between the domains understood, we believe the framework will benefit from additional detail around how the specific measures for the dashboard will be selected in Horizon 1.

To date, there is no consistent method of measuring outcomes by providers, aside from cost and utilisation. Of greater concern is the lack of visibility about whether providers are delivering good outcomes at a scheme level. This must be resolved if SIRA is to monitor whether providers are delivering value-based care and ensuring optimal outcomes for workers.

[37] Ibid (n2)

Early intervention and the initial recovery period are clearly an important focus of the health outcomes framework and we agree that this focus is applicable to a significant proportion of the injured people. However, consideration could also be given to the inclusion of appropriate outcome measures/metrics for those with severe injury (Traumatic Brain Injury, Spinal Cord Injury, Amputations, Burns, Blindness) or chronic injury (treatment and care need after 5 years) and for those Health Care providers who work with these people. People with significant / long term chronic conditions and disability as a result of their accident/injury will require treatment and care for a substantial period of time to maintain the quality of life achieved during the initial recovery phase. Outcome measures for this group should have a wellbeing and quality of life focus as well as return to meaningful activity and work.

It is often said that "what gets measured gets managed", or at least attracts greater focus and management attention. Any area that becomes a focus for measurement will become the area where most energy is expended. In identifying the success metrics, SIRA must ensure that the most important measures are selected and will drive the most important changes in the system. icare therefore, strongly recommends further collaborative work occur, to carefully guard against the introduction of any additional undesired behaviours or incentives into the system. When determining which metrics should be introduced, icare recommends the following principles:

- It is the right metric for driving optimal behaviour and value-based outcomes
- It is clear, objective, and not open to interpretation.
- Where possible, there is consistency and transparency in the calculation of the metric
- The metrics are publicly available, so that workers, insurers and other stakeholders can make informed decisions and drive enhanced accountability.
- They must account for the needs of specific cohorts of injured people - consider particularly those with severe and chronic conditions
- Outcomes are measured at individual health care provider, health care service, and health care system levels
- The metrics support comparison with the wider healthcare system and potentially other jurisdictions

icare believes that by clearly setting metrics and outcomes that matter and defining expectations such as timing of collection and reporting, improvements in overall provider practice are anticipated, and better outcomes more likely to be achieved within the schemes.

Provider performance

icare believes that SIRA, as the Regulator, is best placed to manage provider performance for WC NSW and CTP.

The Insurance Council of Australia (ICA) has indicated that managing providers, authorising them and monitoring their performance and effectiveness can only be done at a macro level (whole of scheme) and is the responsibility of the Scheme regulator[38]. If concerns are raised about the quality of practice of a service provider (such as over-servicing, or biased reports), they should use this information, along with practice peer reviews, to assess the service provider's practices, and counsel the provider, initiate a complaint to the relevant professional body, and/or prevent that provider from operating in the scheme.

Whilst establishing a dashboard for reporting/collection will be important for compliance and building a culture of greater accountability and governance, icare cautions against developing a framework with onerous reporting commitments that creates additional process and financial risks to the schemes. As such, icare recommends that where possible, performance be measured as part of services delivered to the worker, for example, digital payments data capture, electronic delivery, use of standardised templates or SIRA driven reviews.

[38] Ibid (n3)

Take a Staged Approach to Delivering Transformation

While transitioning to a more value-based approach offers significant benefits, it will also represent a substantial change for all parties involved in the system. icare suggests SIRA consider adopting PwC's staged approach to transforming to a value-based model[39]. The key stages of the model are outlined below:

Stage 1: Establish the case for change

icare recommends that SIRA actively promote the case for change with all stakeholder groups, particularly influential peaks and professional bodies, health care providers and those funding the services.

Stage 2: Build integrated datasets

Data is a fundamental enabler of transformation and this is a significant gap in the personal injury schemes. PwC suggests that "*Any organisation looking to shift to a value-based care approach will need access to a single, integrated, data feed to support the transformation across clinical, operational and financial aspects. This will also require a fit-for-purpose underlying IT infrastructure.*"[40]

Stage 3: Understand the concerns of the injured person

Better value care is ultimately about better outcomes for injured persons and better value for the taxpayer and policy holders and ensuring sustainable compensation schemes. Injured people play an important part in achieving this change by articulating the outcomes that matter to them and sharing feedback about their experiences. SIRA's ability to effectively engage people with injuries and their families/carers will depend on ensuring that they understand the case for moving towards value-based care.

Stage 4: Select pilot cohorts

Global research and citations can only go so far in demonstrating the benefits of value-based models in the local environment, SIRA must also consider the need to conduct pilots in the NSW Personal injury schemes. In acknowledging the person-centric nature of value-based care, these pilots should treat the whole person not just a single aspect of their health needs. They should also include primary care, pharmacists, NGOs and private and public health providers.as well as social support providers.

Stage 5: Evaluate, evaluate, evaluate

A comprehensive evaluation framework should be agreed prior to starting any pilot. This should allow for ongoing monitoring and feedback while implementation is "in flight", to support the aforementioned flexible learning systems.

Stage 6: Scale successful pilots

Once successful pilots have been identified, the next challenge is to scale these pilots to larger geographical areas or adapt them for adjacent patient cohorts. This process should include sponsorship from senior leaders to help remove siloed behaviours, eliminate complexity, and listen and respond to concerns raised by system stakeholders.

There will also be a need for additional funding and resources to help scaling-up programs succeed; leadership and clinical champions in each new organisation or treatment area; and the establishment of comprehensive change management programs and well-resourced central project management offices.

Other useful steps suggested by PwC[41] are to create networks and alliances at all levels to support horizontal scaling (expansion and replication) and to continuously monitor progress and complete evaluations to ensure there is a positive feedback cycle as programs grow.

[39] Ibid (n21)

[40] Ibid (n21)

[41] Ibid

Implementation timeline

In practice, the detailed implementation plan can only be confirmed once success measures and outcomes (including associated metrics are clarified) are finalised. It is difficult to assess the implementation plan without the metrics, however in the interim, there is opportunity for SIRA to progress icare's previous recommendations4 which will assist in the delivery of value-based care, and enable insurers and health care providers access to resources, tools, and training to support the actions required to deliver better services and outcomes.

HORIZON 1: Transparency, standardisation and consistency across schemes (0-6 months)

Commitment to a value-based care approach to achieving outcomes in the compensated systems is a welcome yet significant shift for the schemes. It is therefore imperative that this is managed as a part of a significant change agenda and supported by comprehensive stakeholder engagement and a clear communication plan.

In this critical phase SIRA will need to engage and be guided by key stakeholders. It is important that SIRA work collaboratively with other human services agencies and regulatory bodies, particularly NSW Health and the Australian Health Practitioner Regulation Agency (AHPRA) to leverage existing frameworks. SIRA may choose to seek out the key learnings and pitfalls already faced by others in the development of outcomes frameworks, such as the work undertaken by government agencies in developing the *NSW Human Services Framework*, and the work being undertaken by NSW health and the electronic Persistent Pain Outcomes Collaboration (ePPOC). Further detail is provided at Appendix B.

icare believes this horizon should focus on identifying the 'quick wins' and addressing urgent improvements to deliver value-based care. We believe the following activities are critical:

- Development of a comprehensive stakeholder engagement plan recognising the importance of collaborative development and buy in to a significant change in the system.
- Establish a comprehensive communications plan to clearly articulate the case for change.
- Further collaborative development of the Framework taking on board feedback from the consultation and considering opportunities to further strengthen the Framework as outlined previously.
- Immediate action to support value-based care and improve decision making, including replacement of the "reasonably necessary" definition for assessing and approving medical treatments and delivery of training to support new and strengthened policies and guidelines.
- Address low value care by strengthening approval processes for health care practitioners and addressing known concerns about outcomes and performance.

Prior to developing the metrics, including those in the initial dashboard, it is important to first get clarity about the desired outcome to be achieved and how success will be measured. A critical activity in this first horizon is to make an assessment about what can and what cannot be measured based on existing information held by SIRA.

HORIZON 2 Enhanced healthcare data (6-24 months)

icare support that with the paucity of information currently available, research will be required. However, there is opportunity to build on existing information within the wider health ecosystem to support the delivery of value-based care and build on soundly based decision making, however note that this alone will be unlikely to deliver improved health outcomes in the short term or potentially even the medium term.

icare suggests the following activities are critical during this horizon and recommend that SIRA:

- set clear expectations for all in order to start effectively engaging and guiding the industry
- lead extensive engagement with the health and insurance industry as well as employers and injured persons and their families
- develop guidelines building on evidence base and clinical frameworks in relation to treatment with time frames for recovery
- address the "reasonably necessary" test and other potential barriers to value-based care
- address issues with fees and billing practices as per icare's previous recommendations[42]

[42] Ibid (n5)

- undertake a review of existing national and international health literacy principles and strategies and leverage this information to develop a plan for building health literacy amongst injured people in NSW to further support value-based care interventions.
- Prioritise material for translation into other languages to assist those from CALD backgrounds
- Explore the opportunity to pilot innovative funding models as outlined in icare's previous submission[43] with associated performance measures including PROMs. This could include:
- outcomes-based payments model
- bundled payments
- incentivised payments scheme
- patient choice bundled care
- building PROMS into the Allied Health Recovery Request (AHHR).

HORIZON 3 (> 2 years)

At this point the scheme should be in position to establish and evaluate a number of innovative funding models and new models of care to deliver improved outcomes.

[43] Ibid

7 Appendices

Appendix A: Response to Framework Consultation Paper Questions

Question	Response
1. How can the health outcomes framework be most effectively used to improve health outcomes and the value of healthcare expenditure?	icare considers that a well-designed health outcomes framework has a vital role within SIRA's vision of delivering a value-based care model within the workers compensation and motor accident injury/Compulsory Third Party schemes. It has the opportunity to set clear expectations for all key stakeholders in providing timely value-based treatment, and offering care to workers during their recovery journey whilst maintaining cost efficiencies. Aligning such expectations across all scheme participants, particularly if within a regulatory framework (as opposed to a guide), would be crucial to the success of the framework. It is also an important starting point for outlining what value looks like, and will help drive clearer expectations, processes and consistency between schemes and healthcare providers operating within the schemes. In our opinion, the most benefit to SIRA's scheme participants will be delivered by leveraging the extensive experience of the NSW government in designing and implementing outcomes frameworks[44] and aligning with the value-based approach advocated by NSW Health. In addition, the adoption of NSW Health's approach to health outcomes measurement could support seamless integration with the wide range of providers within the NSW health care system and enable comparative outcomes assessment. This is a vital step toward ensuring that personal injury scheme patients receive the same effective, evidence-based treatment, and the same quality of care as they would in the public or private health insurance systems. Please refer to recommendations 1-7, and Sections 4 and 5 of our report.
(For scheme participants)Is the outcomes framework useful to you/your organisation in clarifying the vision and direction for healthcare in the WC and CTP schemes?	icare believes that the stated vision and direction of the health outcomes framework is clear. We acknowledge SIRA for developing a foundational framework built on the critical premise that the workers compensation health framework will adopt value-based care, champion evidence-based care and support the delivery of a biopsychosocial model. We are also supportive of a framework that places customer centricity at the forefront. icare strongly supports scheme changes that will support the transition of health care service provision within the workers compensation and motor accident injury/Compulsory Third Party schemes to a value-based, evidence-based paradigm. We agree that there is a need for a consistent approach to health care delivery and outcomes across all systems and domains and we are keen to collaborate with SIRA in this transition. In order to realise this vision and direction for healthcare within these schemes, icare would like to highlight the importance of the implementation, and operationalisation of this framework to ensure all participants are clear on their roles and actions required of them. We appreciate that the Framework Consultation Paper is an initial consultation piece and icare looks forward to working with SIRA and key stakeholders over the coming months so that key details of the proposed health outcomes framework are fully outlined, explored and resolved.

[44] The Human Services Outcomes Framework, NSW Government. https://www.finance.nsw.gov.au/human_services

	Please refer to recommendations 1-7 and Sections 4 to 6 of our report.
3 (For scheme participants) Will the outcomes framework influence your approach to healthcare in WC and/or CTP? And if so, when and how?	icare believes the framework will be useful in guiding outcomes and influencing a value-based approach to delivering healthcare services within our schemes. The vision and direction outlined in the health outcomes framework is consistent with icare and our Claims Service Providers, and we acknowledge the positive contribution that health care practitioners make to the well-being of our community in NSW, including helping injured people return to life and employment. icare is optimistic that once the health outcomes framework incorporates outcome measures, such as Patient Reported Measures (PRMs) it will be possible to clearly measure value-based care and also support/ influence quality improvement initiatives (as providers are able to compare outcomes achieved). It is important, however, that SIRA also influence participants in the achievement of this vision, through the creation of clear guidelines and other supporting materials to direct and regulate practices. Please refer to recommendations 1-7 and Sections 4 to 6 of our report.
4 What can WC and CTP scheme participants (insurers, health practitioners, claimants, employers) do to help advance the vision of value-based care in the schemes?	Whilst icare supports the need for a well-designed outcomes framework, we continue to advocate for urgent reform to the regulatory policy environment for health care to ensure that there is the right operational environment and decision-making support in place across the system to deliver value-based care. icare believes that delivering value-based case within the schemes will rely upon all stakeholders to work collaboratively towards achieving this goal. We encourage SIRA to coordinate and lead this change, and to use their Regulatory powers to provide the support mechanisms required to empower and enable all key stakeholders to work toward this common goal. Our detailed response above outlines a number of actions which stakeholders could adopt and implement to help advance the delivery of value-based care in the schemes. Additionally, our submission to SIRA's consultation paper regarding Healthcare arrangements[45] also highlights additional areas which could further support this. Please refer to recommendations 1-7 and Sections 4 to 6 of our report.
5 Are there areas where you believe SIRA should focus its implementation efforts to best promote achievement of value-based care?	Like many of the respondents to last year's review, icare considers that the current scheme design does not fully support the delivery of value-based care[46] and have provided a number of recommendations to support this. Rather than repeat our earlier recommendations, we have attached a copy of our 2019 submission[47]; these two submissions should be read side by side, since we consider that it is imperative that regulatory policy development should take place alongside the development of the health outcomes framework.

[45] icare submission in response to the SIRA consultation on the regulatory requirements for health care arrangements in the NSW workers compensation and CTP schemes November 2019

[46] Ibid

[47] icare submission in response to the SIRA consultation on the regulatory requirements for health care arrangements in the NSW workers compensation and CTP schemes November 2019

	icare encourages SIRA to consider how its proposed framework will align and integrate with the NSW Government Human Services Outcomes Framework[48]the work being driven by ICHOM (the International Consortium for Health Outcomes Measurement), Choosing Wisely [49], ePPOC (the Electronic Persistent Pain Outcomes Collaboration) and the opportunity to collaborate with and learn from the NSW Health System, which is actively progressing a value-based care agenda and driving forward the introduction of Patient Reported Measures. icare believes that optimal implementation of this health outcomes framework comprised of ongoing collaboration with stakeholders throughout the journey, clearly establishing baseline healthcare data, defining outcome metrics, and introducing a staged approach to transformation, will set up the delivery of value-based care. icare has proposed detailed feedback in this submission about suggested areas of focus. Please refer to recommendations 1-7 and Section 6 of our report
6 Do you have any comments on the implementation plan?	The Framework Consultation Paper provides a worthwhile starting point for discussion among all stakeholders. Delivering a comprehensive health outcomes framework is an ambitious and important goal. The success of the proposal relies on stakeholder buy in and ongoing support. While we appreciate that this is an early consultation, it is vital that icare, injured persons, health care providers and the wider stakeholder ecosystem are actively engaged in the development of framework fundamentals, including the identification of domains, outcomes and metrics. Communication in the lead up to implementation of this framework will be crucial to embed the vision across the schemes and all stakeholders, including employers in the private and public sector. In providing feedback on the implementation plan, we have made reference to concurrent activities that will support the delivery of value-based care. We encourage SIRA to remain focused on addressing systemic issues and barriers which may impede on its delivery. icare believes that in doing so, this will enable SIRA to realise the sought-after improvements in outcomes for the schemes. Please refer to recommendation 7 and Section 6 of our report.

[48] The Human Services Outcomes Framework, NSW Government; https://www.finance.nsw.gov.au/human_services

[49] Choosing Wisely Australia; https://www.choosingwisely.org.au/

Appendix B: Approaches to Outcomes Measurement

icare suggests that SIRA consider how to ensure the Framework builds on the considerable work already underway to develop an approach to outcome measurement across NSW government and particularly within the NSW Health System.

icare invites SIRA to consider how its proposed framework will align and integrate with the NSW Government Human Services Outcomes Framework[1] the work being driven by ICHOM (the International Consortium for Health Outcomes Measurement), Choosing Wisely[2], ePPOC (the Electronic Persistent Pain Outcomes Collaboration) and the opportunity to collaborate with and learn from the NSW Health System, which is actively progressing a value-based care agenda and driving forward the introduction of Patient Reported Measures.

Whole of Government Approach to outcomes measurement

The development of effective partnerships to address health problems is important because many of the determinants of health are outside the realm of health services[1]. The vast majority of factors that affect people's health sit outside the health system including:

- behavioural factors such as exercise, diet, smoking, and drug and alcohol consumption
- social factors, such as community connections and personal relationships
- self-sufficiency factors, such as education, employment and the ability to seek out other social services as needed
- environmental factors, such as pollution, housing and transport.

Neither the insurance system or even the health system has the resources to become involved in all aspects of a person's life, however, there is an opportunity to work more closely with other human services agencies, health services, local councils and non-governmental organisation (NGOs) to play a greater role in influencing determinants of health and to better understand patient needs, desires and expectations.

There is an opportunity to align the health outcomes framework to the NSW government's Human Services Outcomes Framework (HSOF)[1] which provides a common set of population-level wellbeing outcomes and indicators for NSW government and non-government agencies. The seven wellbeing domains were designed by agencies and NGOs and informed by a review of national and international research on what determines a person's wellbeing. The seven outcome domains are Safety, Home, Health, Education and Skills, Economics, Social and Community and Empowerment.

The HSOF aims to:

- support NSW Government agencies and NGOs to adopt an outcomes-focused approach in human services design, delivery and evaluation
- be a resource for government agencies and NGOs to work together to achieve better results using the best-available evidence of what works
- facilitate collaboration and opportunities for working together
- help identify programs and services that have the greatest impact.

The NSW Government is committed to an outcomes-focused approach to human services. Whilst the HSOF is not mandatory, and there is no associated reporting requirement, agencies and NGOs are encouraged to use the Framework to support the design, delivery and evaluation of the services they deliver.

Collaboration in this way could prove invaluable to assess worker specific and work-related outcomes and enable benchmarking for example to measure and explain differences between people with the same injury that are compensable and non-compensable.

Approach adopted by Family and Community Services (FACS)

FACS is applying the HSOF to its policies, programs and services using a capabilities approach proposed by the 1998 Nobel Prize winning economist Professor Amartya Sen[3]. This approach views the role of government as an enabler of its people[4]. It does not guarantee the achievement of outcomes but rather the development of capabilities that enable people to realise the outcomes they value[5]. Long-term wellbeing outcomes are a function of multiple factors, including families, communities, other services and people themselves[6].

National Disability Insurance Scheme (NDIS)

The NDIS has identified a number of factors that affect outcomes for people with a disability and have developed a number of domains for adults, which take into account the individual participant as well as their family:

Participant Domains	Family Domains
1. Choice and control 2. Daily activities 3. Relationships 4. Home 5. Health and wellbeing 6. Lifelong learning 7. Work 8. Social, community and civic participation	9. Families have the support they need to care. 10. Families know their rights and advocate effectively for their family member with disability. 11. Families are able to gain access to desired services, programs and activities in their community. 12. Families have succession plans. 13. Parents enjoy health and wellbeing.

NSW Health Patient Reported Measures Framework

In NSW a range of local initiatives and broader programs already use PRMs. Building on these foundations, NSW Health has developed a Patient Reported Measures Framework to guide how they will use PRMs to move to value-based healthcare. The framework will help align existing initiatives and platforms, so we can use PRMs across the system to give patients a greater say in their care.

The Patient Reported Measures (PRMs) Program is part of the NSW Health Integrated Care strategy and can be applied within a State compensation scheme setting. The program aims to "enable patients to provide direct, timely feedback about their health-related outcomes and experiences to drive improvement and integration of healthcare across NSW."[7]

PRMs include:

- Patient-Reported Experience Measures (PREMs) can be collected through qualitative and quantitative approaches and are used to obtain patients' direct feedback including their views and observations on aspects of health care services they have received to drive improvements. This includes their views on "the accessibility and physical environment of services…and aspects of the patient-clinician interaction (such as whether the clinician explained procedures clearly or responded to questions in a way that they could understand)".[8]
- Patient-Reported Outcome Measures (PROMs) capture patients' perspectives on how their condition and its treatment impacts their life, including their health and wellbeing. A patient-reported outcome is 'any report of the status of a patient's health condition that comes directly from the patient, without interpretation of the patient's response by a clinician or anyone else'.[9]
- Standardised and validated tools measure patient outcomes, including quality of life or symptoms related to a specific disease or condition. This information can be used for care planning and decision-making, to provide timely person-centred care and ensure referrals are appropriate and based on identified patient needs. Some PROMs specifically measure a combination of physical, mental and social aspects, collectively known as health-related quality of life (HRQL), while others evaluate single dimensions of health, for example, physical activity.[10]

- There is a multitude of validated PROMs to choose from and the appropriate selection of a validated tool for the measurement of specific patient population characteristics, conditions or symptoms requires careful consideration. The ACI PRMs program staff provide expert advice to sites, services and systems as to the choice of PROMs. The initial selection of validated PROM question sets was informed by consultations with experts, literature reviews, and testing in appropriate clinical settings.
- The PROMIS-29 (generic Quality of Life tool) is being recommended across care settings and clinical priority areas in NSW Health as the core PROM. The PROMIS-29 Profile measure assesses pain intensity using a single 0–10 numeric pain rating item and seven health domains using four items each: physical functioning, fatigue, pain interference, depression, anxiety, ability to participate in social roles and activities, and sleep disturbance.

The Australian Commission on Safety and Quality in Healthcare highlight that are three general types of PROMs [11]:

- Generic PROMs measure aspects of health that are common to most patients. For example, the Medical Outcomes Study short-form health status survey (known as the SF-36) is a PROM that measures health-related quality of life suitable for use across most patient populations.
- Condition-specific PROMs have questions that directly relate to specific health conditions and their associated treatments. For example, some PROMs enable patients to report the severity of the symptoms.
- Population-specific PROMs apply to specific service sectors or segments of the population.
- PROMs capture patient's own opinions on the impact of their condition, and its treatment, on their life. Questionnaires are therefore usually designed to focus on one or more specific elements of a patient's well-being.

We know these outcomes are measurable and reportable, with the Australian Bureau of Statistics Patient Experience Survey (PES) using this information to report annually on patient experiences of health care services (in general) in Australia.[12] Further information on the current use of PRMs in Australia, and the information already available for use, is published by the Australian Commission on Safety and Quality in Health Care (ACSQHC).[13] The ACSQHC recommends dimensions that should be considered when selecting PROMs[14] and have published a *Patient Reported Outcome Measures Literature Review*[15] which outlines the importance of the use of valid, reliable and appropriate instruments for outcomes measurement.

When considering implementing PROMs and PREMs, SIRA can consider if they are:

- meaningful to consumers and clinicians
- not burdensome or duplicative: aim for high response rates
- interpreted with appropriate level of tentativeness; and not trump other forms of knowledge
- support collaborative working
- standardised for injury type to enable benchmarking against providers
- aligned to measures being used by NSW Health e.g. PROMIS 29.

icare supports the use of PRMs to help inform and improve the experiences and outcomes of injured workers and motorists in NSW. PRMs will not only help determine and inform the appropriateness and safety of care but can also inform and guide selection of high performing healthcare providers.

The International Consortium for Health Outcomes Measurement (ICHOM)

PROMs are being used to realise the potential of value-based healthcare at an international level. The International Consortium for Health Outcomes Measurement (ICHOM) is defining Standard Sets of PROMs and supporting their implementation and use for international comparison. Each Standard Set contains a standardised list of health outcomes that matter most to patients, measures of those outcomes, and time points for measurement.

For valid comparison, ICHOM also standardizes case mix variables. When developing a Standard Set, they bring together a multidisciplinary group of patient representatives, leading physicians and clinical registry leaders to prioritize a core set of outcomes, which take into consideration outcomes from different treatments.

Through the implementation of these Standard Sets, you can begin to measure, analyse and improve outcomes achieved in the delivery of care. ICHOM are continually reviewing their published Standard Sets.

As an example, a group of leading physicians, measurement experts and patients have developed the ICHOM Standard Set for Low Back Pain,[16] which is their recommendation of the outcomes that matter most to patients with low back pain as shown in Figure 1 below. ICHOM urge all providers around the world to start measuring these outcomes to better understand how to improve the lives of their patients.

Figure 1: ICHOM Standard Set for Low Back Pain

Measurement points for the ICHOM Low Back Pain Standard Set:

1. Includes operative mortality, nerve root injury including cauda equina, deep wound infection, pulmonary embolus, wrong site procedure, vascular injury, dural tear, other, and need for rehospitalisation.
2. Tracked via the Oswestry Disability Index (ODI)
3. Tracked via the Numeric Pain Rating Scale (NPRS)
4. Tracked via the EuroQol-5D (EQ-5D).

Choosing Wisely

Choosing Wisely[2] is a global social movement seeking to improve the safety and quality of healthcare. Originating in the US in 2012, Choosing Wisely is active in 20 countries, including at least one-third of Organisation for Economic Cooperation and Development (OECD) countries. Facilitated by NPS MedicineWise, Choosing Wisely Australia launched in April 2015. Led by Australia's health professional colleges, societies and associations, Choosing Wisely Australia challenges the way we think about healthcare, questioning the notion 'more is always better'.

The case for addressing low-value healthcare in Australia is compelling. Nearly one-third of total health expenditure in Australia could be deemed wasteful[17] and potentially expose consumers to unnecessary risk and harm.

Choosing Wisely seeks to reduce the incidence of patients not receiving the right care by supporting a culture shift in how we think about healthcare. Specifically, Choosing Wisely encourages conversations between patients and health professionals about what tests, treatments and procedures are truly needed. Intentionally health profession-led, the initiative provides a platform for both health professionals and consumers to take a leadership role in influencing change.

A significant cross-section of Australia's health professional colleges, societies and associations are identifying healthcare practices that warrant scrutiny. Using the latest evidence and drawing on the expert opinion of their members, they develop lists of recommendations around tests, treatments and procedures that should be questioned. In turn, health services are using these recommendations to address unnecessary interventions in hospitals.

Choosing Wisely Australia has adopted a multifaceted approach to evaluation, including process and impact indicators. Process evaluation is conducted to assess levels of reach and engagement among target audiences. Impact evaluation assesses the awareness, attitudes and practice of health professionals and consumers with regard to tests, treatments and procedures, as well as the success of partnerships with participating medical colleges, societies and health service members. A recent report[18] highlighted positive increases in:

- positive changes to attitudes and awareness
- reduction in rates of use of low–value services.

Notably the Royal Brisbane and Women's Hospital introduced 130 initiatives that address low-value approaches, including embedding Choosing Wisely into its performance framework.

Electronic Persistent Pain Outcomes Collaboration (ePPOC)

ePPOC is a program which aims to improve the quality of outcomes and services for people experiencing chronic (persistent) pain. It is an initiative of the Faculty of Pain Medicine and was established in 2013 with funding from the NSW Ministry of Health.

It involves specialist pain services collecting a standard set of information to measure outcomes for their patients as a result of treatment. Pain services use the information to triage, monitor and plan treatment for individual clients, and also send non-identifiable information to ePPOC for analysis. The results of these analyses are fed back to participating services every six months, allowing pain management services to assess their results, and compare their patients, services and outcomes to other pain management services. ePPOC also uses the information collected by services for national benchmarking and to develop a coordinated approach to research into the management of chronic pain in Australasia.[19]

Participation is available to pain management services throughout Australia and New Zealand and over 90 adult and paediatric services are now members.

The key functions of ePPOC are to facilitate the collection of standardised data from pain management services, analyse and report these data, use the data for benchmarking, and promote research into areas of importance in pain management.

Benchmarking is an important function of ePPOC as it:

- allows definition of what best practice, or success, looks like
- enables comparison of performance between services
- identifies reasons for variation between services
- allows identification of practices and processes that result in superior outcomes, and
- drives implementation of best-practice care.

The information collected and benchmarked covers the clinical domains relevant to people experiencing persistent pain, including pain severity, interference of pain in daily activities, depression, anxiety, stress and cognitive impact, along with medication use, work status and productivity. Outcomes at the patient level are clearly defined in terms of clinically meaningful change. At the level of the service, outcomes are shown as the proportion of people who improved on each domain, and compared to other participating services and the clinical benchmark.

ePPOC are currently in year 2 of a 3 year program, working with WorkSafe Victoria the Victorian Transport and Accident Commission, to define best outcomes for injured people with persistent pain. Measures being used to determine a good outcome include pain severity; pain interference with life; depression and anxiety; opioid use; pain self-efficacy and work productivity.

Australian Physiotherapy Association (APA) National Pilot – PROMS

The National Association of Physiotherapists is currently undertaking a national pilot in collaboration with 'myscoreit'.

The APA have chosen knee conditions (all) as the condition type and have selected the following PROMs:

- Knee Injury and Osteoarthritis Outcome Score (KOOS)[20]
- International Knee Documentation Committee (IKDC Questionnaire)[21]

Participating practices were identified through an EOI process and there have been a significant number of applicants, including practices in NSW. Practice data will be de-identified.

The UK Chartered Society of Physiotherapy (CSP) actively encourages Physiotherapists to utilise PROMs to demonstrate measurable improvements in the clinical outcomes of their patients as part of daily practice to support the development of optimal strategies.[22]

"The use of patient-reported outcome measures (PROMs) is set to rise in physiotherapy. PROMs provide additional 'patient-centred' data which is unique in capturing the patient's own opinion on the impact of their disease or disorder, and its treatment, on their life. Thus, PROMs are increasingly used by clinicians to guide routine patient care, or for the purposes of audit, and are already firmly embedded in clinical research."[23]

References (Appendix B)

1. A Framework for Building Capacity to Improve Health *NSW Government; https://www.finance.nsw.gov.au/human_services*
2. Choosing Wisely Australia. *https://www.choosingwisely.org.au/*
3. Sen A. Human Rights and Capabilities. *Journal of Human Development*. 2006;6(2).
4. Alkire S. Subjective Quantitative Studies of Human Agency. *Social Indicators Research.* 2005.
5. Nussbaum M. Creating Capabilities: The Human Development Approach. *Belknap Press of Harvard University Press.* 2011.
6. Hobson BF, S. Applying Sens capabilities framework to work family balance within a European context: theoretical and empirical challenges. *Edinburgh: University of Edinburgh, Publication and Dissemination Centre.* 2009.
7. Patient reported measures. *Agency for Clinical Innovation (ACI), 2019; https://www.aci.health.nsw.gov.au/nhn/health-professionals/tools-and-resources/patient-reported-measures*
8. Saltychev M, Eskola M, Laimi K. Lumbar fusion compared with conservative treatment in patients with chronic low back pain: a meta-analysis. *Int J Rehabil Res.* 2014;37(1):2-8.
9. Guidance for industry – patient-reported outcome measures: Use in medical product development to support labeling claims. . *Food and Drug Administration; US Department of Health and Human Services.* 2009.
10. Fayers PMD. Quality of life – the assessment analysis and interpretation of patient-reported outcomes. *John Wiley & Sons Ltd.* 2007.
11. Zaina F, Tomkins-Lane C, Carragee E, Negrini S. Surgical versus non-surgical treatment for lumbar spinal stenosis. *Cochrane Database Syst Rev*. 2016(1):CD010264.
12. Patient Experiences in Australia: Summary of Findings, 2018-19. *Australian Bureau of Statistics; 2019; https://www.abs.gov.au/ausstats/abs@.nsf/mf/4839.0*
13. Moreno P, Boulot J. [Comparative study of short-term results between total artificial disc prosthesis and anterior lumbar interbody fusion]. *Rev Chir Orthop Reparatrice Appar Mot.* 2008;94(3):282-288.
14. Sansoni J. Health Outcomes: An Overview from an Australian Perspective. Australian Health Outcomes Collaboration. *Australian Health Outcomes Collaboration, Australian Health Services Research Institute, University of Wollongong.* 2016.

15. Williams K Sansoni K, Morris D, Grootemaat P, Patient-reported outcome measures: Literature review. *ACSQHC; 2016; https://www.safetyandquality.gov.au/wp-content/uploads/2017/01/PROMs-Literature-Review-December-2016.pdf*
16. Furlan AD, van Tulder M, Cherkin D, et al. Acupuncture and dry-needling for low back pain: an updated systematic review within the framework of the cochrane collaboration. *Spine (Phila Pa 1976).* 2005;30(8):944-963.
17. Join the conversation. Promoting better conversations about the appropriate use of medical tests, treatments and procedures *Choosing Wisely Australia NPS MedicineWise.* 2017.
18. Qaseem A, Wilt TJ, McLean RM, Forciea MA, Clinical Guidelines Committee of the American College of P. Noninvasive Treatments for Acute, Subacute, and Chronic Low Back Pain: A Clinical Practice Guideline From the American College of Physicians. *Ann Intern Med.* 2017;166(7):514-530.
19. Tardif HB, M.; Quinsey, K; Bryce, M; White, .; Blacklock, J; and Eagar, K. Electronic Persistent Pain Outcomes Collaboration Annual Data Report 2018. *Australian Health Services Research Institute; https://ro.uow.edu.au/ahsri/1026*
20. Roos EM, Roos HP, Lohmander LS, Ekdahl C, Beynnon BD. Knee Injury and Osteoarthritis Outcome Score (KOOS)--development of a self-administered outcome measure. *J Orthop Sports Phys Ther.* 1998;28(2):88-96.
21. Anderson AF, Irrgang JJ, Kocher MS, Mann BJ, Harrast JJ, International Knee Documentation C. The International Knee Documentation Committee Subjective Knee Evaluation Form: normative data. *Am J Sports Med.* 2006;34(1):128-135.
22. Patient reported outcome measures – how do you use patient-reported outcome measurement in routine musculoskeletal outpatient physiotherapy practice?; 2014; *Chartered Society of Physiotherapy; http://www.csp.org.uk/professional-union/practice/evidence-base/patient-reported-outcome-measures*
23. Kyte DG, Calvert M, van der Wees PJ, ten Hove R, Tolan S, Hill JC. An introduction to patient-reported outcome measures (PROMs) in physiotherapy. *Physiotherapy.* 2015;101(2):119-125.

Appendix C: Factors impacting health, wellbeing and return to health / work

Measuring outcomes is complex and fraught with challenges. When considering outcomes at an individual level it is also important to consider the personal factors and environmental factors which will impact on return to health, wellbeing, return to function and return to life and work. Families and social support structures have a significant impact on outcomes achieved. For example, education of families about the appropriate care for someone with low back pain is likely to support the injured person following this treatment plan and thereby improve outcomes.

Aboriginal and Torres Strait Islander peoples, socio-economically disadvantaged people, and those living in rural and remote locations experience much poorer health than the rest of the NSW population.[1]

Behavioural risk factors impacting health

The Australian Burden of Disease Study (ABDS) 2015 found that 38% of the disease burden in Australia could have been prevented by eliminating exposure to risk factors such as tobacco use, overweight and obesity, and dietary risks.[2] The 5 risk factors that caused the most disease burden in 2015 were tobacco use (responsible for 9.3% of total burden), overweight and obesity (8.4%), dietary risks (7.3%), high blood pressure (5.8%) and high blood plasma glucose (including diabetes) (4.7%).[3]

Smoking remains the leading cause of preventable disease and death in NSW. A total of 60,249 hospitalisations were attributed to smoking in NSW in 2017-18, which was approximately 2.0% of all hospitalisations. The rate of hospitalisations attributable to smoking increased in both Aboriginal males and Aboriginal females in the period between 2001-02 and 2011-12. In recent years, the rates have remained stable. A total of 6,631 deaths were attributed to smoking in NSW in 2017, which was 12.6% of all deaths in 2017.[4]

In addition, the level of risky alcohol consumption has emerged as a serious issue for both individuals and the wider community.[5]

In 2019, 55.2% of adults aged 16 years and over were overweight or obese in NSW. The risk of developing chronic disorders increases with increasing levels of excess weight.[6] This will likely impact considerably on recovery.

In assessing mental health status, data from surveys has reported that:[7]

- 17.7% of adults aged 16 years and over experienced high or very high levels of psychological distress, as estimated from the 2019 NSW Adult Population Health Survey (self-reported using Computer Assisted Telephone Interviewing or CATI).
- 12.8% of adults aged 18 years and over in NSW experienced high or very high levels of psychological distress, as estimated from the 2017-18 Australian Health Survey (interviewer-administered questionnaire).
- Overall suicide rates dropped in NSW between 1997 and 2007 but have increased since this time. In 2017, 868 people died by suicide and males accounted for around 77.6% of these deaths. In 2018-19, there were 7,018 hospitalisations of NSW residents for intentional self-harm. Females accounted for 62% of these hospitalisations.
- The least socioeconomically disadvantaged adults had lower levels of psychological distress than the overall adult population in NSW. The proportion of adults reporting high and very high levels of psychological distress has remained fairly stable over the last decade.

Social determinants of health

There is international and local recognition that social and economic factors play a significant role in determining health and wellbeing.[8,9,10] There is widespread recognition that factors such as income, education and employment have a significant influence on morbidity and mortality.[11] These factors are known as socio-economic determinants of health. Socioeconomic status influences the differential health outcomes of groups in society expressed as rates of disability, chronic disease and use of the health system.[8] This is particularly relevant in the current climate, with the impacts of COVID-19 seeing the official Australian unemployment rate hit 7.4% In June - the highest it's been since 1998.[12]

The ABDS reported that the lowest socioeconomic group experienced total burden 1.5 times as high as the highest group. It was also found that 32.5% of the disease burden could have been avoided if they experienced the same rate as the highest group.[13]

Rural and remote impacts on health

Data from the 2016 Survey of Health Care for people living in rural and remote areas revealed that people living in Remote/Very remote areas experience poorer access to a range of health services than people in Major cities, and that people living outside Major cities experience less sharing of information between health care providers than their city counterparts.[14] Remote and very remote areas experienced total burden 1.4 times as high as major cities.[13]

Among Australians aged 45 and over who visited a GP in the past year, those living in rural and remote areas were less likely than others to have a usual GP or place of care. Not having facilities nearby was a barrier to seeing a specialist and having a medical test.

People reported decreasing information sharing between health providers as remoteness increased. Participants living in Remote/Very remote areas were less likely than people living in other areas to indicate that their usual GP or place of care seemed informed of their follow-up needs after they had seen a health professional for their physical, emotional or psychological health, visited a specialist or had been admitted to hospital.[13]

Health of Aboriginal and Torres Strait Islander Peoples

Aboriginal and Torres Strait Islander people experience greater levels of poor health and a much greater prevalence of chronic disease than other Australians. These communities are heavy users of the healthcare system and access health services from a range of providers including Aboriginal Medical Services (AMS).

The latest Closing the Gap report published in 2020[15] sadly confirms that the target to close the life expectancy gap by 2031 is not on track. The life expectancy target is measured using the Australian Bureau of Statistics (ABS) estimates of life expectancy at birth, which are available every five years.

In 2015–2017, life expectancy at birth was 71.6 years for Indigenous males and 75.6 years for Indigenous females. In comparison, the non-Indigenous life expectancy at birth was 80.2 years for males and 83.4 years for females This is a gap of 8.6 years for males and 7.8 years for females.[15]

Life expectancy is an overarching target, which is dependent not only on health, but the social determinants (such as education, employment status, housing and income). Social determinants are estimated to be responsible for at least 34 per cent of the health gap between Indigenous and non-Indigenous Australians. Behavioural risk factors, such as smoking, obesity, alcohol use and diet, accounted for around 19 per cent of the gap.[16]

A framework synthesis primarily aimed to identify the challenges faced by Indigenous peoples attempting to access care identified issues relating to both the social and cultural determinants of health which hampered Indigenous patients', their families' and communities' from accessing primary health care services. Poverty was a prominent social determinant of health issue with some Indigenous peoples finding it difficult to afford either transportation to, or the costs of, obtaining services. This review also found that a lack of basic communication infrastructure within communities such as telephones prevented access to health care guidance and advice.[40]

Health of Culturally and Linguistically Diverse Populations

Australian Bureau of Statistics (ABS) data shows considerably lower levels of health literacy among people from CALD backgrounds.[18] Effective communication of health information is essential for improved health literacy. There are a range of reasons that influence the effective communication of health information and prevent health information being understood. These include English language proficiency, literacy in first language, lack of access to requisite skills and resources to access certain health information, and differences in cultural perceptions of health.

In NSW the most commonly spoken languages in the home other than English were:[19]

- Mandarin (3.4%)
- Arabic (2.9%)

- Cantonese (2.0%)
- Vietnamese (1.5%)
- Greek (1.2%).

The NSW Health *Plan for Healthy Culturally and Linguistically Diverse Communities* 2019-2023[20] notes that culture plays a huge part in a person's understanding of health. Culturally specific stigma may be related to particular illnesses, and home-country experiences vary in terms of exposure to and acceptance of ideas such as shared decision making and enhancing the role of the individual in their own health management. This can affect the engagement of CALD background consumers in Australia towards these concepts.

CALD patients generally felt the standard of health care in Australia was better than in the countries they had come from and they felt relatively safe when receiving health care in Australia. Health issues are often interpreted and treated differently in different communities. The extent to which service providers understand and respond to these cultural differences can affect the level of community engagement with the healthcare system.

Culture influences how consumers define health and illness and how they perceive and respond to health information. It affects how healthcare is sought, how symptoms are described, how treatment options are considered, and whether treatment will be chosen and adhered to.[21] Cultural beliefs and expectations and lack of proficiency in English can lead to issues with accessing mainstream services, including primary healthcare, preventive health, community health, acute, subacute and mental health services.[45]

Impact of comorbidities

Comorbidity and multimorbidity are often defined as the co-existence of two or more long-term medical conditions. Comorbidity and multimorbidity have been shown to be associated with adverse health outcomes, such as poor quality of life, disability, psychological problems and increased mortality.

For example, comorbidities such as diabetes can impact rates of wound healing[46] and can significantly increase the risk of postoperative complications,[47] which may lead to delayed recovery and greater health care-related costs.

In older people, comorbidity is well known to predict many adverse health outcomes,[25] including the onset of additional health problems[49,50] functional impairment[51-55] progressive loss of mobility,[56,57] hospitalizations[35] mortality,[53,59] anxiety or depressive symptoms[51,60] and unfavourable self-assessed health status.[38]

Comorbidity is a common problem in the general community, but it is even more common in patients presenting in primary care settings and most common in specialist services.[61,62] There is ample evidence from epidemiological surveys that treatment seeking is significantly increased where comorbidity is involved.[63-65]

Less is known about the types of comorbidities affecting specific health outcomes after minor to moderate road or work trauma. A recent study[44] looked at the types of comorbidities affecting specific health outcomes after minor to moderate road trauma and found that comorbidities such as arthritis, chronic back pain, other chronic pain, depression and anxiety significantly increase the odds of poorer health postinjury, regardless of the time since injury.

Regular screening of risk factors, including comorbid conditions may help identify people with injuries who are likely to have poorer outcomes, thereby enabling the implementation of interventions to optimise health outcomes despite the presence of comorbidities. This can be challenging in the workers compensation system where important privacy requirements and legislation limits insurers to health information directly related to the compensated injury.

The relationship between compensation status and health outcomes

A systematic review[45] which explored the effect of financial compensation on health outcomes following musculoskeletal injury found strong evidence of an association between compensation status and poorer psychological function; and legal representation and poorer physical function. There was moderate evidence of an association between compensation status and poorer physical function; and legal representation and poorer psychological function.

However, there was limited evidence of an association between compensation status and increased pain as this was dependent on the outcome measured. Nonetheless, no studies reported an association between compensation related factors and improved health outcomes.

A meta-analysis found that workers' compensation patients have a two-fold increased risk of an unsatisfactory outcome compared with non-compensated patients after spinal surgery. This association was consistent when studies were grouped by country or procedure.[68]

Other studies have corroborated these findings reporting that in patients who undergo orthopaedic surgical procedures, those receiving Workers' Compensation experience a two-fold greater risk of a negative outcome compared to non-compensated patients.[47] When considering any surgical intervention, the odds for an unsatisfactory outcome in compensation patients was 3.8.[48]

A recent study[71] which investigated preoperative factors found that patients receiving compensation with or without depression/depression risk were more likely to have poor outcomes following spinal surgery. Patients involved in legal consultation, workers compensation, or other insurance claim related to their back problem were 3 times more likely to experience poor leg pain and 3.4 times more likely to experience overall pain. Worse health-related quality of life on the physical and mental component scores were associated with increased odds of poor leg pain outcome.

Similarly, the NPS MedicineWise literature review[50] which evaluated the relationship between workers' compensation status and the treatment, management, and outcomes for musculoskeletal workplace injuries found that although compensated patients do typically experience improvements following treatment of their injuries, the extent to which they do so is limited in comparison to their non-compensated peers. There is evidence in the majority of studies that compensation status is negatively correlated with both treatment and treatment outcomes following workplace injury.

Differences in patient management or treatment between Workers' Compensation patients and their comparator included longer operative times, more presurgical clinic visits and more discretionary surgeries for traumatic injuries. In addition, Workers' Compensation patients had a decreased likelihood of receiving surgery after the first visit and an increased likelihood of receiving medications, electrodiagnostic testing and magnetic resonance imaging over the course of their care. For outcomes, postoperative pain was generally higher in patients with a Workers' Compensation claim than those without, although this varied with the site of injury. Factors with a potential role in explaining or modulating the impact of compensation status on health outcomes included baseline differences in patients and differences in compensation schemes. Studies that compared baseline characteristics among patients with and without Workers' Compensation found some differences for age, gender, weight, smoking status, education, and employment.

There are a number of potential causes which may contribute to poorer outcomes that have been implicated in the literature. These include the:[51]

- psychosocial environment of the injured worker at the time of injury, or after the time of injury (e.g. low job satisfaction, poor social networks, workplace not prepared for RTW program).
- psychosocial vulnerability
- initial response to claimants by insurers
- management on initial treatment
- handling of case management by insurers or treating doctors
- number and type of medical examinations
- length of time away from work.

Differences in perceived fairness/injustice leading to poorer outcomes have also been demonstrated. Associations between compensable injury, pain and disability was attributable to lower self-efficacy and higher perceptions of injustice in an Australian cohort study.[74] In motor vehicle accident claimants, lawyer involvement and medical assessments were significantly associated with poorer perceived fairness. Overall perceived fairness was positively associated with health outcome after adjusting for demographic and injury.[75]

The relationship between disability and work

Data from the AIHW[54] reports that 48% of working-age (aged 15–64) people with disability are employed, compared with 79% without disability. People aged 15-64 with disability are 2 times as likely to be unemployed as those without disability.

It is of concern that the employment rate for people with disability has risen from 8% since 2003, while the rate for people without disability has been steady. The report further found that 1 in 10 employed people aged 15-64 with disability are underemployed, and 3 in 10 employed people aged 15-24 with disability want to work more hours.

Using data from the 2011-2012 National Health Survey (NHS) component of the Australian Health Survey (AHS), 62% of working age Australians with a mental illness were employed, compared to 80% of those without a mental illness. Nationally, employment rates for this group decreased slightly from 64% in 2007-08 to 62% in 2011-12. The data also showed that many working age Australians with a self-reported mental illness (32%) are not participating in the labour force compared to 17% without a mental illness.[55]

A major driver of employment participation rates among people with a mental illness is severity of disorder. A report by the Organisation for Economic Cooperation and Development (OECD) showed that 49% of people with a severe disorder were employed, compared to 72% with a moderate disorder, and 81% with a mild or no mental disorder.[56]

References (Appendix C)

1. Source NSW State Health Plan. Towards 2021 © NSW Ministry of Health 2014 SHPN (ODG) 140065ISBN 978-1-74187-977-3.
2. Annual Report 2018-19. *Australian Institute of Health and Welfare.*
3. Burden of disease, Australia's health 2020. *Australian Institute of Health and Welfare.*
4. Smoking attributable deaths, NSW 2000 to 2018. *HealthStats NSW.* 2020.
5. Alcohol drinking in adults, NSW 2002 to 2019. *HealthStats NSW.* 2020.
6. Overweight and obesity in adults, NSW 2002 to 2019. *HealthStats NSW.* 2020.
7. High or very high psychological distress in adults, NSW 2003 to 2019. *HealthStats NSW.* 2020.
8. Wilkinson RaM, M Social Determinants of Health: The Solid Facts. . *World Health Organization,.* 1998.
9. For richer, for poorer, in sickness and in health. *Royal Australasian College of Physicians.* 1999.
10. Health Policy and Inequality. Canberra: Occasional Papers Unit. *Commonwealth Department of Health and Aged Care.* 1999.
11. Dixon J. Health Inequities Research Collaboration Framework. *National Centre for Epidemiology and Population Health, Australian National University.* 1999.
12. Australia Unemployed Persons 1978-2020 Data.
13. Australian Burden of Disease Study 2015: Interactive data on disease burden. *Australian Institute of Health and Welfare.*
14. Survey of Health Care: selected findings for rural and remote Australians. *Australian Institute of Health and Welfare.* 2018.
15. Closing the Gap Report 2020. *Commonwealth of Australia, Department of the Prime Minister and Cabinet.*
16. Aboriginal and Torres Strait Islander Health Performance Framework 2017 Report. *Australian Health Ministers' Advisory Council.* 2017.
17. Davy C, Harfield S, McArthur A, Munn Z, Brown A. Access to primary health care services for Indigenous peoples: A framework synthesis. *Int J Equity Health.* 2016;15(1):163.
18. Cultural and Indigenous Research Centre Australia. Consumer health information needs and preferences: perspectives of culturally and linguistically diverse and Aboriginal and Torres Strait Islander people. *ACSQHC.* 2017.
19. Multicultural NSW. *NSW Government; https://multicultural.nsw.gov.au/*
20. NSW Plan for Healthy Culturally and Linguistically Diverse Communities: 2019-2023. © NSW Ministry of Health 2019 SHPN (HSP) 180903 ISBN 978-1-76081-053-5 (print) 978-1-76081-054-2 (online).
21. Andrulis DB, C. Integrating Literacy, Culture, and Language to Improve Health Care Quality for Diverse Populations. *American Journal of Health Behaviour.* 2007;31.
22. Shanley C, Boughtwood D, Adams J, et al. A qualitative study into the use of formal services for dementia by carers from culturally and linguistically diverse (CALD) communities. *BMC Health Serv Res.* 2012;12:354.
23. Endara M, Masden D, Goldstein J, Gondek S, Steinberg J, Attinger C. The role of chronic and perioperative glucose management in high-risk surgical closures: a case for tighter glycemic control. *Plast Reconstr Surg.* 2013;132(4):996-1004.
24. Loewenstern J, Kessler RA, Caridi J. Diabetes Comorbidity Increases Risk of Postoperative Complications in Traumatic Thoracic Vertebral Fracture Repair: A Propensity Score Matched Analysis. *World Neurosurg.* 2019;121:e792-e797.
25. Gijsen R, Hoeymans N, Schellevis FG, Ruwaard D, Satariano WA, van den Bos GA. Causes and consequences of comorbidity: a review. *J Clin Epidemiol.* 2001;54(7):661-674.
26. Gabriel SE, Crowson CS, O'Fallon WM. Comorbidity in arthritis. *J Rheumatol.* 1999;26(11):2475-2479.

27. Seeman TE, Guraln k JM, Kaplan GA, Knudson L, Cohen R. The health consequences of multiple morbidity in the elderly. The Alameda County study. *J Aging Health.* 1989;1(1):50-66.
28. Berkanovic E, Hurwicz ML. Rheumatoid arthritis and comorbidity. *J Rheumatol.* 1990;17(7):888-892.
29. Dunlop DD, Manheim LM, Song J, Chang RW. Arthritis prevalence and activity limitations in older adults. *Arthritis Rheum.* 2001;44(1):212-221.
30. Rozzini R, Frisoni GB, Ferrucci L, et al. Geriatric Index of Comorbidity: validation and comparison with other measures of comorbidity. *Age Ageing.* 2002;31(4):277-285.
31. Verbrugge LM, Lepkowski, J. M., & Imanaka, Y. Comorbidity and its impact on disability. *The Milbank Quarterly.* 1989;67.
32. Verbrugge LM, Lepkowski JM, Konkol LL. Levels of disability among U.S. adults with arthritis. *J Gerontol.* 1991;46(2):S71-83.
33. Guralnik JM, Ferrucci L, Balfour JL, Volpato S, Di Iorio A. Progressive versus catastrophic loss of the ability to walk: implications for the prevention of mobility loss. *J Am Geriatr Soc.* 2001;49(11):1463-1470.
34. Guralnik JM, LaCroix AZ, Abbott RD, et al. Maintaining mobility in late life. I. Demographic characteristics and chronic conditions. *Am J Epidemiol.* 1993;137(8):845-857.
35. Elixhauser A, Yu, K., Steiner, C., & Bierman, A. S. . Hospitalization in the United States, 1997 (AHRQ Publication No. 00-0031; HCUP Fact Book No. 1). *Agency for Healthcare Research and Quality.* 2000.
36. Charlson ME, Pompei P, Ales KL, MacKenzie CR. A new method of classifying prognostic comorbidity in longitudinal studies: development and validation. *J Chronic Dis.* 1987;40(5):373-383.
37. Crabtree HL, Gray CS, Hildreth AJ, O'Connell JE, Brown J. The Comorbidity Symptom Scale: a combined disease inventory and assessment of symptom severity. *J Am Geriatr Soc.* 2000;48(12):1674-1678.
38. Borim FS, Neri AL, Francisco PM, Barros MB. Dimensions of self-rated health in older adults. *Rev Saude Publica.* 2014;48(5):714-722.
39. Callaly T, Trauer T, Munro L, Whelan G. Prevalence of psychiatric disorder in a methadone maintenance population. *Aust N Z J Psychiatry.* 2001;35(5):601-605.
40. Wittchen HU. What is comorbidity--fact or artefact? *Br J Psychiatry Suppl.* 1996(30):7-8.
41. Bijl RV, Ravelli A. Psychiatric morbidity, service use, and need for care in the general population: results of The Netherlands Mental Health Survey and Incidence Study. *Am J Public Health.* 2000;90(4):602-607.
42. Kessler RC, Aguilar-Gaxiola, S., Andrade, L., Bijl, R., Borges, G., Caraveo-Anduaga, J. J., DeWit, D. J., Kolody, B., Merikangas, K. R., Molnar, B. E., Vega, W. A., Walters, E. E., Wittchen, H.-U., & Ustun, B. Mental-substance comorbidities in the ICPE surveys. *Psychiatrica Fennica.* 2001;32.
43. Proudfoot H, Teesson M, Australian National Survey of Mental H, Wellbeing. Who seeks treatment for alcohol dependence? Findings from the Australian National Survey of Mental Health and Wellbeing. *Soc Psychiatry Psychiatr Epidemiol.* 2002;37(10):451-456.
44. Samoborec S, Simpson P, Hassani-Mahmooei B, et al. Impact of comorbidity on health outcome after a transport-related injury. *Inj Prev.* 2020;26(3):254-261.
45. Murgatroyd DF, Casey PP, Cameron ID, Harris IA. The effect of financial compensation on health outcomes following musculoskeletal injury: systematic review. *PLoS One.* 2015;10(2):e0117597.
46. Cheriyan T, Harris B, Cheriyan J, et al. Association between compensation status and outcomes in spine surgery: a meta-analysis of 31 studies. *Spine J.* 2015;15(12):2564-2573.
47. de Moraes VY, Godin K, Tamaoki MJ, Faloppa F, Bhandari M, Belloti JC. Workers' compensation status: does it affect orthopaedic surgery outcomes? A meta-analysis. *PLoS One.* 2012;7(12):e50251.
48. Harris I, Mulford J, Solomon M, van Gelder JM, Young J. Association between compensation status and outcome after surgery: a meta-analysis. *JAMA.* 2005;293(13):1644-1652.
49. Hebert JJ, Abraham E, Wedderkopp N, et al. Preoperative Factors Predict Postoperative Trajectories of Pain and Disability Following Surgery for Degenerative Lumbar Spinal Stenosis. *Spine (Phila Pa 1976).* 2020.
50. T P. Improving health outcomes for people with workplace injuries: literature review for iCare NSW, April 2019. *NPS MedicineWise.* 2019.
51. Compensable Injuries and Healh Outcomes *The Royal Australasian College of Physicians,* 2001.
52. Giummarra MJ, Baker KS, Ioannou L, et al. Associations between compensable injury, perceived fault and pain and disability 1 year after injury: a registry-based Australian cohort study. *BMJ Open.* 2017;7(10):e017350.
53. E bers NA, Collie A, Hogg-Johnson S, Lippel K, Lockwood K, Cameron ID. Differences in perceived fairness and health outcomes in two injury compensation systems: a comparative study. *BMC Public Health.* 2016;16:658.
54. People with disability in Australia. *Australian Institute of Health and Welfare.* 2019.
55. National Mental Health Report 2013. Indicator 1a: Participation rates by people with mental illness of working age in employment: general population. *Australian Government The Department of Health.*
56. Sick on the Job. *Organisation for Economic Co-operation and Development.* 2011.

Appendix D: Example stakeholder roles and responsibilities matrix

The table below is an example of a matrix for defining stakeholder roles and responsibilities in the implementation of the health outcomes framework:

RESPONSIBILITIES	ROLES				
	SIRA	Health industry / Peak Body and Association	Injured person, their families/ carers	Employers	Insurers
Co-ordinate an agile implementation approach	X	X			X
Drive collaboration	X				
Learn from approaches adopted by others in developing outcomes framework and ensure program logic is articulated and the complex interrelationships between the domains understood	X				
Address the systemic issues and barriers to value-based care	X	X		X	X
Provision of appropriate education /training / resources/ engagement of all stakeholders	X				
To capture new information and evidence during the implementation phase to help inform whether the implementation plan requires refinement or adjustment.	X	X			
Agree alignment to the conceptualised desired outcomes and the end point.	X	X	X		
Create a comprehensive stakeholder engagement and communications plan prior to releasing and finalising the Framework.	X	X	X	X	x
Define service and outcome metrics	X	X	X	X	X