

Healthcare Review Final Report

State Insurance
Regulatory Authority
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1. Introduction

1.1 Background

Healthcare expenditure in the State Insurance Regulatory Authority (SIRA) regulated personal injury schemes accounts for over \$1 billion annually¹. In late 2018, scheme performance monitoring activity highlighted escalating healthcare costs, particularly in the NSW workers compensation (WC) scheme, without a corresponding improvement in the return to work rate.

In response to this, SIRA commenced a fundamental review of healthcare ('the Healthcare Review') in May 2019 across the NSW WC and Compulsory Third Party (CTP) personal injury schemes. The aim of this review was, in line with SIRA's legislative objectives², to promote the efficiency, effectiveness and viability of the schemes. Specifically, the review was designed to:

- Determine how SIRA can better measure, monitor, control, supervise and regulate healthcare in the schemes, and its outcomes
- Examine a value-based approach to healthcare, including how SIRA can measure success in delivering value
- Deliver, through SIRA's regulatory powers, a financially sustainable, integrated healthcare approach across two systems, with improved health and return to work outcomes for people injured in workplaces and on the road.
- Identify and address the causes of any increasing medical costs that have not been associated with corresponding improvement in outcomes for injured people.

The Healthcare Review comprised a preliminary assessment, followed by a program of targeted reviews that spanned five dimensions across the WC and CTP schemes. The dimensions, objectives and outcomes of the Healthcare Review are outlined in Figure 1 (over page).

At the commencement of the Healthcare Review³, SIRA identified key areas of healthcare expenditure which are the most significant payment categories by value (cash flow) to inform the definition of healthcare expenditure for the healthcare review. These include hospital (private and public) and ambulance, surgery and diagnostics, attendance (medical and like treatment) and allied health. Throughout the Healthcare Review, SIRA expanded the definition to include domestic, personal and nursing care as one of SIRA's focus areas.

Unless otherwise stated, in this Report, healthcare expenditure has been defined to include the following payment categories: ambulance, allied health, medical and investigation, diagnostics and therapeutic procedures, surgery, hospital services (both public and private) and domestic, personal and nursing care. This does not include other payment categories which may be considered as healthcare or healthcare-related under a broader definition such as (but not limited to) dental, hearing aids, modifications to the home or vehicle, pharmaceuticals or rehabilitation.

¹ This expenditure figure is based on the broad definition of healthcare. This broad definition differs from the definition of healthcare expenditure used within this report, which includes the following payment categories: ambulance, allied health, medical and investigation, diagnostics and therapeutic procedures, surgery, hospital services (both public and private) and domestic, personal and nursing care.

² *State Insurance and Care Governance Act 2015 No 19*

³ Based on preliminary analysis undertaken by SIRA on 13 May 2019

Figure 1: Dimensions, objectives and outcomes of the Healthcare Review

	Dimensions	Objectives	Outcomes
Preliminary assessment	1 Understanding health care costs and outcomes in the schemes	<ul style="list-style-type: none"> Identify the trends and drivers of current results, and areas where action will have the most impact 	<ul style="list-style-type: none"> Determined the areas of highest cost growth, and the drivers behind the cost growth
	2 Enhanced data collection, analysis and reporting	<ul style="list-style-type: none"> Better measurement of scheme trends and performance, and better reporting and analysis Enable measurement of the relative performance of SIRA schemes and their participants 	<ul style="list-style-type: none"> Developed metrics and dashboard for improved monitoring and reporting of trends, performance and outcomes
Targeted review	3 Stronger supervision, compliance and enforcement, and improved clinical quality	<ul style="list-style-type: none"> Participants in SIRA schemes understand their regulatory obligations and comply with them Identify instances of non-compliance and ensure there are consequences Identify and correct gaps in SIRA's regulatory response Ensure injured workers and road users get evidence-based care 	<ul style="list-style-type: none"> Performed analysis of key areas of leakage Publication of regulatory activities and enforcement action taken Published revised guidelines and regulatory requirements for providers
	4 Reviewing fee regulation	<ul style="list-style-type: none"> Structure fee regulation to drive improved quality of health care and health outcomes 	<ul style="list-style-type: none"> Performed review and benchmarking of fee schedules against comparator schemes to determine differences in fees and fee structures
	5 Implementing a value-based care approach	<ul style="list-style-type: none"> Examine a value-based approach to healthcare, including how SIRA can measure success in delivering value 	<ul style="list-style-type: none"> Conducted customer experience surveys Commenced analysis on the prevalence of low value care

1.2 Purpose & structure of this report

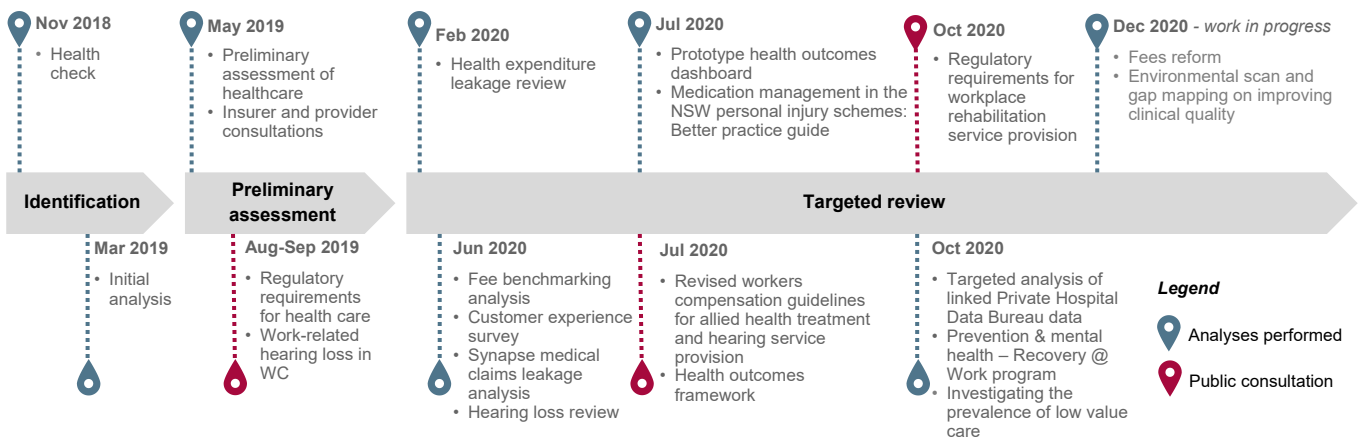
This is the final report issued as part of the SIRA Healthcare Review. It provides an overview of the work underpinning the Healthcare Review and summarises the key findings and themes identified throughout the Healthcare Review.

This report signals the formal conclusion of the Healthcare Review and discusses the required shift towards value-based care and immediate next steps including implementation of SIRA's health outcomes framework to deliver a financially sustainable, integrated healthcare approach across the two schemes, with improved health and return to work outcomes for people injured in workplaces and on the road.

2. Work underpinning the Healthcare Review

The Healthcare Review commenced in 2019 with a preliminary assessment of healthcare-related expenditure. SIRA initially shared the key findings of this preliminary assessment in consultations with insurers, healthcare providers and as part of its public consultation on the regulatory requirements for healthcare. In response to feedback received through its consultations, SIRA undertook a series of further targeted reviews in specific focus areas. Figure 2 provides an overview of the preliminary assessment, targeted reviews and broader stakeholder engagement performed as part of the Healthcare Review since March 2019.

Figure 2: Timeline of work performed



In response to the key findings, themes and stakeholder consultations throughout the Healthcare Review, SIRA has undertaken a range of early actions outlined in section 2.2 of this report in relation to healthcare arrangements within SIRA's schemes.

To acknowledge the potential future impacts on healthcare generally as a result of COVID-19, section 2.3 of this report outlines SIRA's response to monitoring and managing those impacts as they may emerge. However, we note that the analysis underpinning the Healthcare Review has focused on periods that precede or had limited exposure to the broad health system impacts of COVID-19.

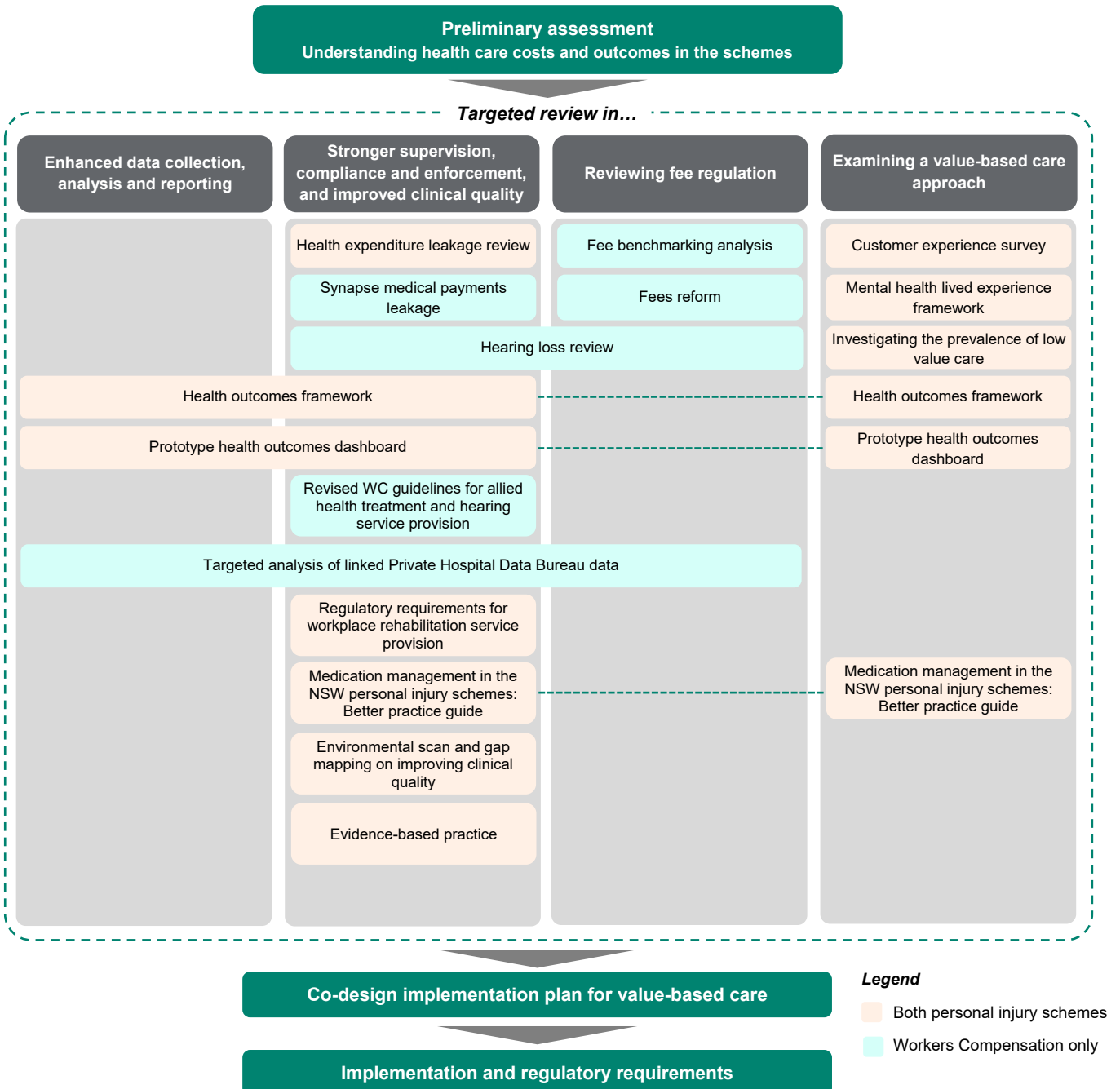
2.1 Summary of work performed

Figure 3 provides an overview of the analysis conducted as part of the Healthcare Review, aligned against the dimensions of the Healthcare Review. The Healthcare Review has considered the regulatory requirements for healthcare within both the NSW WC and CTP schemes, however due to limited data on healthcare utilisation given the relatively short period of time since the new CTP scheme commenced in December 2017, some targeted analyses were specific to NSW WC. Prior to 1 December 2017, the NSW CTP scheme was a common-law based scheme (the Motor Accidents Compensation Act (MACA) scheme). Due to the lump-sum settlement approach in the common-law scheme, limited data was collected on the care and treatment of injured persons in the MACA scheme. The current Motor Accident Injuries Act (MAIA) scheme is the first defined benefit CTP scheme in NSW and is the first time detailed data has been collected on the care and treatment of injured persons in CTP. The MAIA scheme is still relatively immature (less than three years old at the time of the Healthcare Review) resulting in relatively limited data compared to the NSW WC. SIRA will use CTP data to continue to build regulatory analysis of healthcare in the CTP scheme.

Preliminary assessment

SIRA commissioned a **preliminary assessment of healthcare** under the personal injury schemes, to understand the key drivers of the observed increases and compare NSW WC and CTP with the experience of other jurisdictions and funders. This preliminary assessment comprised three streams including: 1. an interjurisdictional comparison, 2. understanding the relative size of healthcare expenditure in the personal injury schemes compared to total healthcare expenditure within NSW and 3. identifying preliminary healthcare cost dynamics. Subsequently, SIRA commenced broad stakeholder consultation with insurers, providers and conducted a public consultation of the **regulatory requirements for healthcare**. Over 50 submissions were received in response to the public consultation establishing broad support for the review and recommending additional areas for targeted review.

Figure 3: Overview of the analyses included in the Healthcare Review



Leakage reviews

Further investigation was undertaken to identify potential areas of healthcare expenditure leakage contributing to the observed increases in expenditure. Broadly, leakage is defined a payment that shouldn't have been made, and can be divided into several categories. The **healthcare expenditure leakage review** considered five possible categories for leakage generally observed in healthcare sector: over-servicing, non-investigation of anomalous claims, overcharging, and weaknesses in payment management, using a combination of statistical and deterministic approaches. Key findings supported the feedback received through the previous insurer consultations that leakage was influencing trends in healthcare expenditure and utilisation - for example, non-compliance with SIRA's maximum fee levels for the WC scheme, non-adherence to SIRA guidelines (such as the Allied Health Recovery Request required for allied health), and anomalous provider and insurer behaviour when compared to peer schemes (with potential over-servicing in the allied health services). A further deep dive **medical claims leakage review** conducted by Synapse Medical, a specialist medical billing administrator explored the level of medical leakage within the NSW WC scheme through a review of a sample of claims.

Fee benchmarking and Private Hospital Data Bureau data analysis

Approximately 70%⁴ of healthcare expenditure in the WC scheme is covered by fees orders. As a result the structure and fee levels in the NSW WC gazetted fee orders impacts healthcare expenditure within the WC scheme. SIRA completed a **fee benchmarking** exercise for the NSW WC scheme that identified areas of difference to other personal injury schemes and healthcare funders. There are some areas where NSW WC fees are not aligned with other health care purchasers' in either fee levels or fee structure, or both. Potential NSW WC fees reforms are being considered for both the shorter term (focused on improving consistency and clarifying rules), and the longer term move towards outcomes-focused, value-based care. .

The NSW WC fee benchmarking analysis identified limited publicly available information to facilitate benchmarking of private hospital fees. SIRA requested Private Hospital Data Bureau (PHDB) data from the Commonwealth Department of Health to link to its scheme claims and payment data to facilitate preliminary analysis of private hospital fees and the relationship between surgical fees and selected health outcomes within SIRA's schemes. The **targeted analysis of linked Private Hospital Data Bureau (PHDB) data** explored the relationship between surgical costs and selected health outcomes, and the variation in private hospital costs and outcomes between hospital providers, compared to the wider NSW private hospital experience. SIRA's preliminary analysis of the relationship between surgical costs and health outcomes is considering whether there is evidence of improved health outcomes to support the higher fee levels observed in the NSW WC scheme compared to other schemes through SIRA's NSW WC fee benchmarking analysis.

Hearing loss review

SIRA undertook a **hearing loss review** on work-related hearing loss claims, examining current pathways for a worker to receive a hearing aid, access to legal funding, the methodology used to assess work-related hearing loss and the provision of appropriate hearing aids and supports to meet an individual worker's needs.

Revised guidelines

SIRA has commenced consultation to revise relevant guidelines. The revision of guidelines is focusing on enhancing clinical quality and health and work outcomes while improving value and sustainability of the schemes. In particular, we have sought public feedback on **revised WC guidelines for approval of allied health and hearing service providers** and **regulatory requirements for workplace rehabilitation**

⁴ This percentage, derived from SIRA analysis, is based on the broad definition of healthcare. This broad definition differs from the definition of healthcare used within this report, as outlined in Section 1.1.

service provision. The former guideline covers the framework for SIRA approval of appropriately qualified and experienced allied health and hearing service providers. The latter considers the policy and framework underpinning the approval, engagement and performance of workplace rehabilitation providers. Revised guidelines are expected to be implemented in 2021. We also developed a **better practice guide for medication management in the personal injury schemes**, which aims to minimise the potential harms associated with the use of medications to support optimal health outcomes.

Outcomes framework and measurement

The preliminary analysis and feedback from SIRA's consultations highlighted the importance of SIRA implementing a value-based care approach to healthcare arrangements within SIRA's schemes. SIRA has undertaken development and public consultation on a proposed **health outcomes framework**. The measurement of outcomes will be assisted by the baseline survey and ongoing analysis of **customer experience**, focusing on trust and health and social outcomes.

SIRA has also developed the **mental health lived experience framework**, which is a strategic framework for guiding our work impacting mental health.

Low value care analysis and evidence-based best practice research

SIRA is also examining areas where there is a risk of **low value care** provided to claimants. SIRA has engaged Professor Adam Elshaug from the Centre for Health Policy in the University of Melbourne School of Population and Global Health, an expert on low value care in Australia, to determine the extent of low value care in the schemes. This will be complemented by research we will undertake with Professor Elshaug to study the extent of low value surgery and procedures in the schemes. We have also been working with the John Walsh Centre for Rehabilitation Research (JWCRR) on evidence-based best practice research.

Four rapid reviews and follow-up webinars were completed in 2020, covering occupational noise-induced hearing loss and audiometry, better pain management approaches, best practice opioids management and best practice vocational rehabilitation programs.

SIRA has also commissioned The George Institute for Global Health to undertake a **personal injury environmental scan, gap mapping and qualitative stakeholder analysis**, to inform future research and collaboration approaches in improving clinical quality.

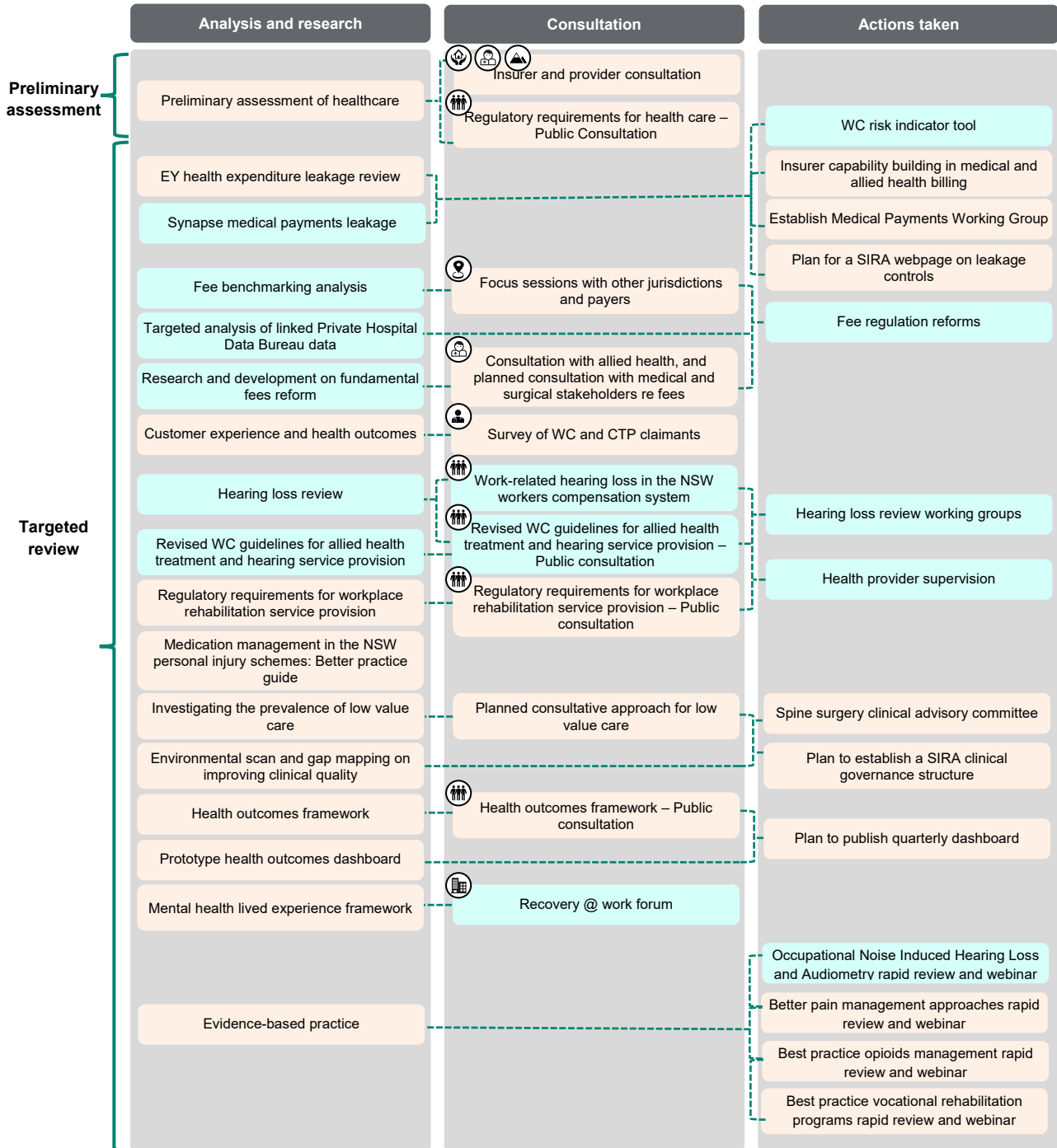
2.2 Stakeholder consultation and early actions taken

Throughout the Healthcare Review, SIRA undertook a consultative approach through a range of forums with insurers, providers, peak bodies and scheme participants and through public consultation. We will continue to keep stakeholders informed and work with them to achieve our shared vision for value-based healthcare within the personal injury schemes.

As a result of our analysis and stakeholder consultation, early actions were taken to progress our shift to value-based care. In particular, we have established working groups and advisory committees to embed a consultative and collaborative approach to the Healthcare Review.

Figure 4 (over page) outlines an overview of the depth and breadth of our stakeholder consultation and early actions taken as a result of the analysis and stakeholder consultations during the Healthcare Review.

Figure 4: Overview of analyses, consultations and actions taken under the Healthcare Review



2.3 Impact and response to COVID-19

We recognise that COVID-19 has led to uncertainty and adverse impacts on the provision of healthcare under the personal injury schemes. The longer-term impacts of COVID-19 on healthcare trends are yet to be understood.

We are committed to working constructively and pragmatically with scheme participants to mitigate and alleviate uncertainty during this pandemic.

We are working with insurers, business groups, unions, other jurisdictions and actuaries to understand, assess and model potential impacts. This includes the longer-term potential for:

- Changing patterns of work, fewer return to work options, and changes to wages and premiums
- New care and claims impacts such as work-related COVID-19 infections, working from home and psychological injury
- Changing patterns and exposures for travel
- Changes to insurer investment returns
- Disruption to medical treatments.

These potential longer-term trends may impact the WC and CTP schemes differently.

3. Key findings from the Healthcare Review

The key findings from the work performed on the Healthcare Review across SIRA's personal injury schemes relate to four key categories:

- **Healthcare expenditure trends:** Healthcare expenditure is rising at a faster rate than it is in Medicare and private health insurance, however there has not been a contemporaneous improvement in return to work rates. Possible explanations for these trends include increased service utilisation, differences in the mix of injuries, inefficiencies in the current provision of healthcare services, leakage and variations in administrative and billing practices. In response to this, SIRA has increased monitoring and supervision of providers and claims, revised and improved guidelines, and implemented webinars on better practice for the provision of services. The next phase of SIRA's healthcare program will be to design and implement a value-based health care system to improve outcomes for people and support the long-term sustainability and viability of the schemes.
- **Healthcare leakage:** SIRA found evidence of leakage, include over-servicing, payments for non-coverage, non-investigation of anomalous claims, overcharging and weaknesses in payment management. Two separate leakage analyses performed by EY and Synapse Medical across both personal injury schemes have identified evidence of leakage risks, including apparent non-compliance with SIRA's maximum fee levels, non-adherence to SIRA guidelines (such as the Allied Health Recovery Request (AHRR) requirement for allied health), and anomalous provider and insurer behaviour when compared to peers (with potential over-servicing in the allied health services). The leakage analysis provides SIRA with targeted areas to address with the sector to reduce future leakage.
- **Fee benchmarking (WC only):** In 2019, 70%⁵ of healthcare expenditure in the NSW WC scheme fell under existing fees orders. While the fee levels have not increased significantly in recent times, benchmarking provides insights into whether healthcare expenditure differs significantly to the same services funded by comparator schemes. Benchmarking of a subset of the NSW WC fees orders to comparator schemes identified that the NSW WC fees orders were:
 - predominantly above or in-line with comparators: Surgeon, orthopaedic surgeon and physiotherapy, chiropractic and osteopathy fees orders generally appeared higher than comparators

⁵ This percentage, derived from SIRA analysis, is based on the broad definition of healthcare. This broad definition differs from the definition of healthcare used within this report, as outlined in Section 1.1.

- more granular than comparators: SIRA had many more fee categories than comparators
- different from comparators in the use of time- or session-based fees, specifically for exercise physiology and psychology and counselling
- using different reference rates: surgeon and orthopaedic surgeon fees orders used AMA fee schedule plus a loading, where comparators used AMA, MBS or defined their own rates

Conditions of operating and access were similar to comparators, with only minor variations, while the fee setting process varied across comparators in their use of indexation and/or market price benchmarking. Preliminary analysis has been performed on linked SIRA and PHDB data, focused on the relationship between surgical fees and selected health outcomes and variations in private hospital fees and services. The analysis has allowed SIRA to identify key differences between the NSW WC healthcare fee schedules and comparator schemes, both in terms of the structure of the fee schedules, and the level of the fees.

- **Data availability and quality:** Limited availability of healthcare data and healthcare data quality issues has restricted the granularity of some investigation and analysis to date. SIRA is undertaking a Data System Modernisation Project for WC to address current gaps in routine scheme monitoring and reporting related to treatment provider behaviours.

3.1 Healthcare expenditure trends

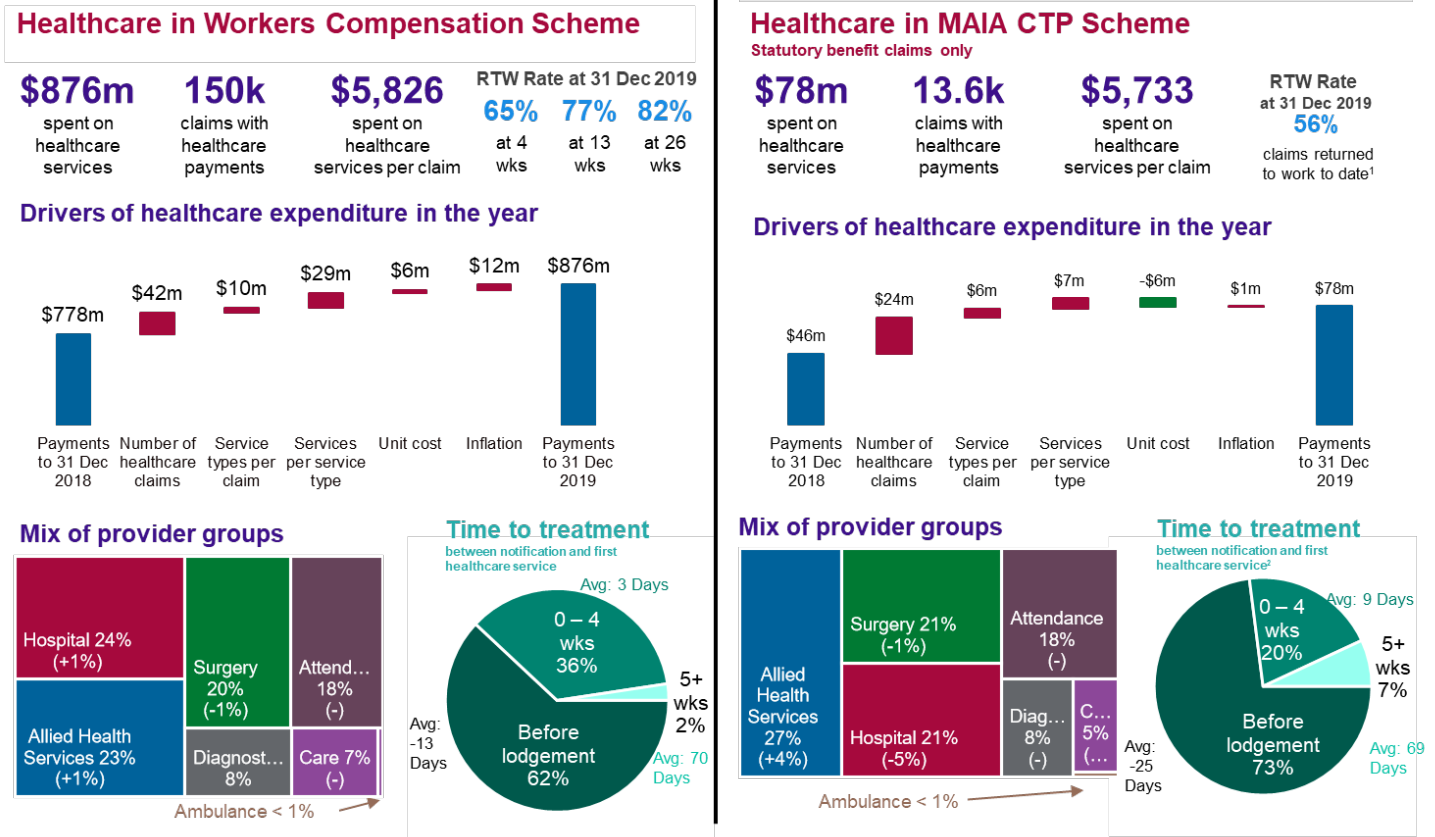
In the initial stages of the Healthcare Review, the preliminary assessment of healthcare expenditure trends considered healthcare expenditure growth in the NSW WC scheme between the 2016-17 and 2017-18 financial years (i.e. up to 30 June 2018) and illustrative trends observed in preliminary CTP scheme data from 1 January 2018 through to 30 March 2019.

Through the course of the Healthcare Review, SIRA has progressed development of a health outcomes dashboard to support monitoring of healthcare expenditure trends and outcomes within SIRA's schemes. Refer to Figure 5 for an excerpt of the dashboard displaying costs and outcomes in the year to December 2019.

Figure 5: Health outcomes dashboard with costs and outcomes in the year to December 2019

Healthcare costs and outcomes in the 12 months to 31 December 2019

CTP scheme started 1 Dec 2017. It is expected that metrics shown will develop as the scheme matures. RTW rate is in development.¹



¹ Proportion of injured persons which have returned to work across the scheme at 31 December 2019 for injured persons who were working, seeking work or had arrangements to join the workforce at the time of accident. This measure is one of many possible RTW measures and is reliant on insurer data quality. The Motor Accidents team is actively investigating the quality of insurer data submissions as part of the ongoing process to develop agreed RTW metrics. This RTW metric will be replaced by the agreed metrics in future reports.

² Numbers shown varies from the CTP Monthly monitoring report as the CTP report considers a broader definition of Healthcare services and considers claims reported up to Sep-19.

Although there are limited conclusions that can be made about the MAIA CTP scheme due to its relative immaturity, as some healthcare providers operate in both the NSW WC and CTP scheme, some of the observations in the NSW WC scheme may also apply to the CTP scheme as it matures to a steady state.

This section sets out recent trends observed in healthcare expenditure in the year to December 2019 for the NSW WC and CTP schemes through SIRA's ongoing monitoring of healthcare expenditure and outcomes established through the Healthcare Review; note that potential impacts of COVID-19 have not been fully explored at this stage.

Workers compensation scheme

Healthcare expenditure drivers and trends

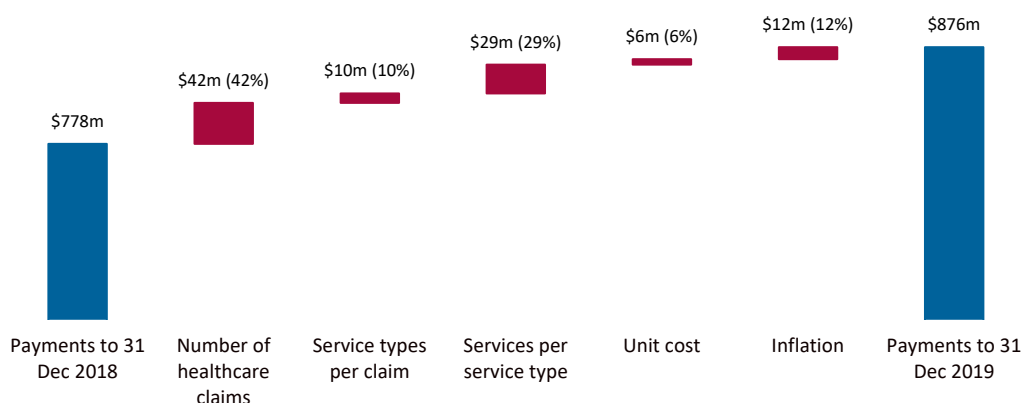
In the year to June 2018 the largest driver of healthcare expenditure was the increase in service utilisation within the scheme (61 per cent of growth). An increase in the number of claims accessing healthcare accounted for 18% of growth in healthcare expenditure. SIRA has been actively monitoring the drivers of healthcare costs, including the recent increase in the number of claims accessing healthcare.

In the year to December 2019, total NSW WC healthcare expenditure rose in inflation adjusted terms from \$778 million to \$876 million – a rise of more than 12.5 per cent. Figure 6 (over page) outlines the drivers of this growth. After adjusting for inflation, the largest driver of healthcare expenditure over the period was the

increase in the number of claims accessing healthcare (42 per cent of growth) and the increase in service utilisation (39 per cent of growth). In comparison, the increases in unit costs of healthcare services was a smaller driver of healthcare expenditure growth over the period.

Although increases in the unit costs of healthcare are a relatively small driver of the growth in healthcare expenditure, the maximum fees set by NSW WC fee orders are expected to materially influence the current level of total healthcare expenditure within the scheme. As part of the Healthcare Review, SIRA has considered its relative fee levels through a fee benchmarking analysis, section 3.3 of this report outlines the key findings of this analysis.

Figure 6: Drivers of WC healthcare expenditure in the year to December 2019⁶

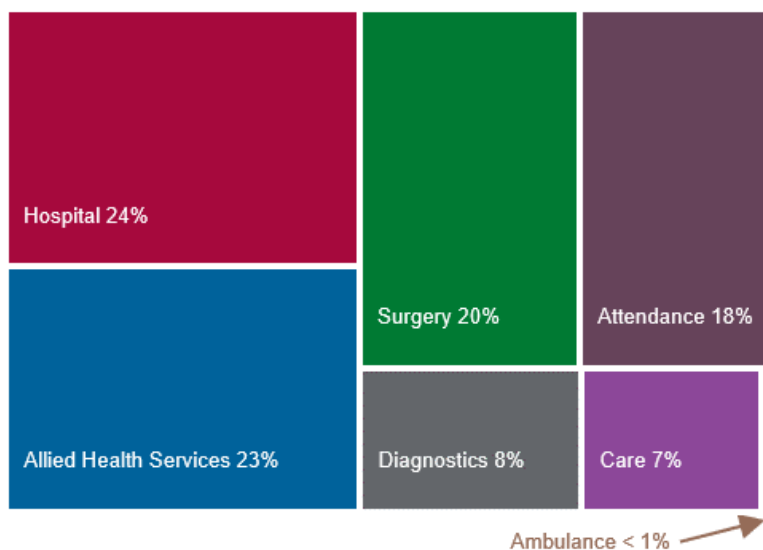


The rate of growth experienced in the year to December 2019 is not anomalous; between 2016 and 2019, the compound annual growth rate for healthcare expenditure funded by the NSW Workers Compensation scheme was 12 per cent. This growth rate is higher than the rates experienced by other funders of healthcare services over the same period; Medicare healthcare expenditure grew at an average of 3 per cent, while private health insurance expenditure grew at an average of 2 per cent. However, the structure of the WC scheme may lead to unintended consequences in certain scenarios, such as decisions to take actions (or delay actions) to maximise the assessment of the injury (the Whole Person Impairment) in order to access additional benefits (lump sum and/or common law), and to extend access to income replacement and medical benefits. These consequences are not present in Medicare and private health insurance.

While healthcare expenditure growth has occurred across all types of healthcare services, the highest growth has been observed for allied health services, with more injured people using physiotherapy, psychological therapy, and exercise physiology. Allied health expenditure has experienced growth at an average rate of 18 per cent per annum above CPI in the two years to December 2019, well above the scheme average of 12 per cent. Figure 7 outlines the breakdown of health expenditure in the year to December 2019 by provider group, allied health services represent 23 per cent of healthcare payments in 2019, second only to expenditure on hospital services.

⁶ Note that the percentages in this waterfall chart do not add to 100% due to rounding.

Figure 7: WC healthcare expenditure by provider groups in the year to December 2019



Impact of healthcare arrangements on scheme performance

The Healthcare Review has observed that during the time period that the NSW WC scheme has incurred escalating growth in healthcare expenditure beyond levels experienced by other funders (i.e. Medicare and Private Health Insurance), there has not been a contemporaneous improvement in scheme performance as measured by the return to work rate.

All insurers within the NSW WC scheme operate under a similar legislative and regulatory environment⁷, however differences have been observed in the return to work outcomes achieved by different insurer groups (e.g. between the Nominal Insurer, Treasury Managed Fund (TMF) and Specialised & Self-insurers). With the Nominal Insurer comprising the largest share of healthcare expenditure (72% in 2019), SIRA commissioned a compliance and performance review of the Nominal Insurer (the Dore Report), which outlines that there has been a deterioration in the performance of the Nominal Insurer.

The Report of the Independent Reviewer for SIRA's Compliance and Performance Review of the Nominal Insurer (the Dore Report) concluded that while there have been some external factors that affected the deteriorating performance of the Nominal Insurer, the primary driver for the decline is the implementation and operation of the new claims model implemented by icare.

Implications and future state considerations

The Healthcare Review has observed that the NSW WC scheme healthcare expenditure is increasing at a rate faster than other payers, due primarily to continued growth in healthcare service utilisation and the number of claims accessing healthcare. These trends may reflect a changing mix in injuries within the scheme, increased complexities and comorbidities of injured persons, or inefficiencies in current healthcare arrangements within the scheme. Healthcare leakage, variation in administrative and billing practices and low-value care are several concerns that have been highlighted through the Healthcare Review.

The Nominal Insurer has experienced the highest growth in service utilisation of the insurer groups, however the growth rate in service utilisation for all insurer groups was notably higher than growth benchmarks from other healthcare funders. This suggests that although the new claims model implemented by icare likely influenced growth trends in healthcare service utilisation and expenditure in the case of the Nominal Insurer, SIRA's analysis throughout the Healthcare Review has identified broader scheme-wide healthcare challenges outlined throughout this report⁸ which must be addressed to improve value in healthcare expenditure across the scheme and to promote the long-term sustainability and viability of the schemes.

In response to this, SIRA has increased monitoring and supervision of providers and claims, revised and tightened guidelines, and implemented webinars on good and best practice for the provision of certain

⁷ Some examples of legislative differences include Coal Mines Insurance, which is under the 1926 Act, and TMF Emergency Services' exemption from the 2012 reforms.

⁸ One example of a broader scheme-wide healthcare challenge is unintended consequences associated with the system potentially incentivising some claimants attempting to maximise their benefits. This challenge is not present in Medicare and Private Health Insurance.

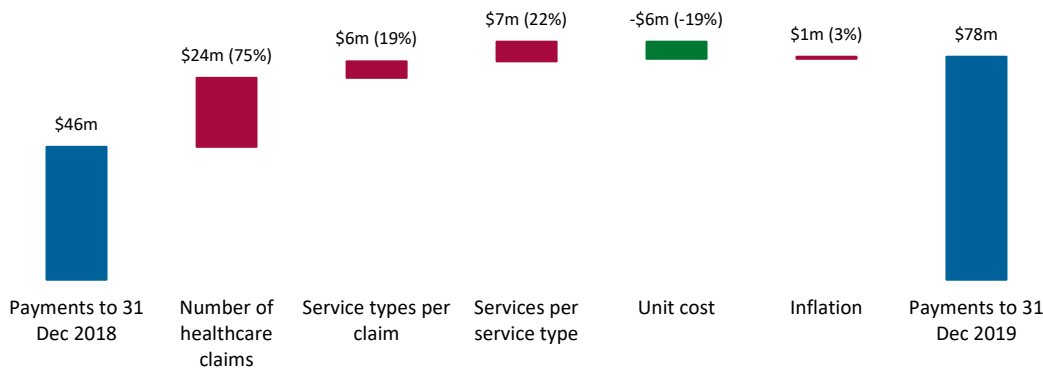
services. The implementation and transition to value-based care will continue to strengthen the efforts taken by SIRA in providing efficient, outcomes-focused healthcare.

Compulsory Third Party scheme

Healthcare expenditure drivers and trends

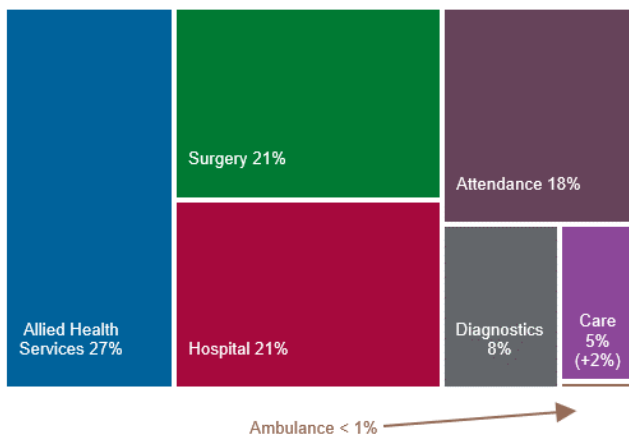
In the year to December 2019, \$78 million was spent on healthcare across 13,600 claims, up 69 per cent from \$46 million in the 12 months prior. The largest driver of the rise has been an increase in the number of injured persons receiving healthcare services (52 per cent of growth), and increased utilisation of services (27 per cent of growth). However, as the CTP scheme is only in its third year, the underlying trends and growth in healthcare expenditure are not unexpected as the scheme matures toward a 'steady state'. Healthcare expenditure growth can be expected to continue until the scheme reaches its steady state.

Figure 8: Drivers of CTP healthcare expenditure in the year to December 2019



Nonetheless, SIRA can identify some early trends. Between insurers, there is variation in the average healthcare expenditure per claim, despite all insurers operating under the same legislative and regulatory environment. Additionally, allied health services comprised the largest share of healthcare related expenditure in the year to December 2019 (27%), compared to the year to December 2018, where hospital services were the largest share of expenditure (26%, compared to 23% for allied health).

Figure 9: CTP healthcare expenditure by provider groups in the year to December 2019



Impact of healthcare arrangements on scheme performance

At this stage of the MAIA scheme maturity, it is premature to form any conclusions on the relationship between healthcare arrangements and scheme performance. SIRA's health outcomes framework outlines a range of outcome measures that will be considered as part of SIRA's ongoing monitoring to assess the value of healthcare arrangements within the CTP scheme going forward.

Implications and future state considerations

Given the MAIA CTP scheme is still new and still developing, it is difficult to determine key trends and drivers relating to the growth in healthcare expenditure in the scheme, as it is obscured by the growth of the scheme itself, including the changes the insurers are making as they adapt to statutory benefit processes.

3.2 Healthcare leakage

Leakage reviews performed

The healthcare expenditure leakage review considered five common categories for leakage observed in the healthcare sector. Leakage is defined as the expenditure amount associated with anomalous claims beyond the threshold level identified within each category tested that represents the usual range of healthcare expenditure expected to be observed. The categories considered are:

- **Over-servicing:** Excessive treatment by a provider that falls outside typical treatment patterns for a condition;
- **Overcharging:** Providers charging above maximum fees or providers inappropriately charging to a higher fee schedule;
- **Non-coverage:** Failure to apply correct policy, guidelines and regulations to treatment and care claim settlement;
- **Non-investigation:** Existing rules are not robust enough or not consistently applied to identify anomalous claims for investigation or when identified, not sufficiently investigated; and
- **Payment management:** Duplicate or overpayment due to failure to identify and use accurate date or follow authorisation.

Ten hypotheses were investigated using a combination of statistical and deterministic approaches, which focused on the first four categories and covered allied health, ambulance services, anaesthesia services, surgical procedures and domestic, personal and nursing care.

For those hypotheses investigated, key areas of potential leakage included non-coverage, such as where allied health services had been provided without evidence of the required Allied Health Recovery Request (AHRR) being completed, over-servicing, particularly where multiple physical therapy providers were being seen simultaneously, and apparent overcharging of anaesthesia services. Overall, the following target areas were identified:

- Apparent non-compliance with SIRA's fee regulations
- Apparent non-adherence to SIRA guidelines on prudent management of scheme funds
- Anomalous provider and insurer behaviour when compared to peers e.g. relatively high service volumes, relatively high service payments, and relatively broad range of concurrent treatment providers
- Poor data availability, quality and consistency that inhibit investigations into whether leakage is occurring; and
- Gaps in routine scheme monitoring and reporting related to treatment provider behaviours across SIRA's schemes.

Following this initial investigation, a second review was undertaken by SIRA in collaboration with Synapse Medical, a specialist medical billing administrator, to identify medical practitioners who are not adhering to SIRA's regulated payment rules and rates for the workers compensation scheme, and insurers who are paying invoices contrary to billing rules. This covered surgical interventions, anaesthetics, surgical assistant fees, pathology and diagnostic imaging and radiology.

The review of 1,000 claims with higher utilisation of medical practitioner services identified 25 per cent of total payments as potentially incorrect or overpayments, where the largest overpayments were to anaesthetists followed by surgeons.

One of the drivers of leakage appears to be poor billing literacy amongst health practitioners and insurers about SIRA's regulated payment rules and rates. Weak insurer controls and lack of preventative or detective billing rules are another factor, with the analysis revealing that claims are being paid by insurers at incorrect rates and for erroneous item combinations. Of further concern, the analysis identified that many claims by anaesthetists are being artificially inflated, as evidenced by the number of modifiers and/or long anaesthetics. The analysis also unearthed significant 'up-coding', where practitioners opted to charge the more complex fee option.

Implications and future state considerations

The leakage review identified the need to improve billing literacy across both insurers and providers, strengthen insurer controls over billing, and simplify medical billing rules, in particular around the application of modifiers for anaesthetist fees, to reduce health expenditure leakage and enhance the cost-efficiency of healthcare. SIRA's current fees reform work aims to simplify and clarify fee structures and billing rules to help improve billing literacy and reduce potential leakage.

The identification of leakage areas and quantification of the size of potential leakage relies on robust and granular health data collections. Improvements in healthcare data quality and granularity are required to facilitate SIRA's further understanding of leakage areas.

The leakage reviews applied a hypothesis-based approach in identifying and prioritising areas for investigation. A broader leakage analysis will be undertaken by analysing more claims and health providers, including the use of advanced analytics software to enhance provider management and supervision and prevent fraudulent claims in the schemes.

3.3 Fee benchmarking

Workers compensation health practitioner fee benchmarking

In 2019, approximately 70%⁹ of healthcare expenditure in the NSW WC scheme fell under existing fees orders. While the fee levels have not increased significantly in recent times, benchmarking provides an understanding of whether the healthcare expenditure would differ significantly if the same services were funded by comparator schemes. The fee benchmarking exercise undertaken considered the following fee orders: allied health (physiotherapy, chiropractic and osteopathy, exercise physiology, and psychology and counselling), private hospital, and surgeon and orthopaedic surgeon.

The benchmarking identified that NSW WC fees orders:

- **Had fee levels predominantly above or in-line with comparators:** Analysis of a selection of NSW WC fee orders illustrated that across healthcare service types with significant expenditure, such as surgery and physiotherapy, the fees being paid to practitioners for most service types are higher than comparator schemes, including other compensable schemes and other funders of healthcare services.
- **Differed in the fee structure from comparators:** Where NSW WC used AMA codes and rates, many other schemes use the MBS codes and billing rules with minor modifications. In allied health, a greater level of granularity of consultation types and loadings in the fee order design contributes to greater differences in fee levels. Exercise physiology fees are time-based, where some comparators have moved to session-based and, for psychology and counselling, all but one comparator used time-based fees, where NSW WC uses session-based fees.
- **Had similar conditions of operating and access to comparators:** only minor variations were found in this area.

⁹ This percentage, derived from SIRA analysis, is based on the broad definition of healthcare. This broad definition differs from the definition of healthcare used within this report, as outlined in Section 1.1.

- **Has used indexation recently for fee setting:** Some funders apply annual indexation, whereas others re-base prices on an annual or periodic basis using a range of market price benchmarks.

Improved clarity and simplicity of the fees orders is likely to make it easier for providers and insurers working in the NSW WC scheme.

Implications and future state considerations

The fee benchmarking exercise identified that the fees being paid in NSW WC for healthcare services are largely higher than other schemes, for the majority of services provided. While the fees for these services have not grown significantly year on year, a comparison of the most recently published fee schedules (April 2020) show that most fees are higher than comparator schemes, suggesting that SIRA's fee schedules have historically been higher than comparator schemes. Additional analysis has found that the NSW WC fee schedules also differ in structure, both in terms of the granularity of the fee schedules, and whether the fees are paid per consultation or are time-based. Through this analysis, SIRA has identified the need to revise both the level and the structure of the NSW WC healthcare fee schedules.

Additionally, the fee benchmarking work was limited by publicly available information and information obtained through focus interviews with scheme comparators. Due to limited information on private hospital fees to inform benchmarking, following the benchmarking project, SIRA has requested and received Private Hospital Data Bureau (PHDB) data from the Commonwealth Department of Health under a Public Interest Certificate to link to its scheme claims and payments data. SIRA has performed preliminary analysis on linked data to:

- Explore the relationship between surgical costs and selected health outcomes to consider whether there is evidence of improved health outcomes to support higher surgical fee levels observed in the NSW WC scheme
- Understand variations in private hospital costs and outcomes between different hospital providers.

3.4 Data availability and quality


Throughout the healthcare review, SIRA has encountered a number of challenges relating to data availability and quality. This has impacted the analysis that has been feasible, insights that could be made and the ability to monitor and understand healthcare activity and outcomes. In particular, SIRA has encountered inadequate clinical data in its routine insurer data collections to facilitate monitoring of health outcomes, healthcare data quality issues, and limited granularity in the healthcare information available within SIRA's current scheme data sets.

Also, there is limited data currently collected about outcomes, including health outcomes and experience measures. Whilst some new collections have started, these will need to be further developed to ensure consistency and robustness in the outcomes measures to support the effective implementation of the health outcomes framework. As part of its implementation planning, SIRA will be considering the cost-benefit of additional data requirements for monitoring and regulatory purposes prior to implementation.

The Data System Modernisation Project for WC will address current gaps in routine scheme monitoring and reporting related to treatment provider behaviours and consider additional granularity in the payment codes to increase transparency in the scheme.

4. Emerging feedback themes

The key themes arising from the targeted review of the Healthcare Review, including public submissions and feedback, are shown in the table below.

 1. Enhanced data collection, analysis and reporting		
<p><i>Our investigations and feedback from public consultations identified opportunities for enhancing data collections, improving data quality, and increasing transparency within the scheme to understand outcomes and drivers of expenditure.</i></p>		
1.1 Data sharing and reporting of outcomes and costs to increase transparency within the scheme	<ul style="list-style-type: none"> Improve data sharing and reporting through publication of outcomes and costs, including provider performance, unexpected outcomes/adverse events, quality of care and claimant satisfaction. This may consist of a scheme provider benchmarking tool used to support evidence-based decision making for claim managers. 	<p><i>How have we addressed it to date?</i></p> <p>A healthcare costs and outcomes dashboard for quarterly publication is being developed. It will include progress against the outcomes in the health outcomes framework quarterly</p>
1.2 Enhance data quality, consistency and standardisation to increase the reliability of reporting	<ul style="list-style-type: none"> Enhance the current health data collections by accessing and linking broader health datasets. Improve the granularity of regular data collections to capture clinical information, enabling effective segmentation and pathway assessment. Improve the data quality of existing data elements to increase the robustness of outcomes measurement. Standardise, automate and integrate data collection processes. Consider the costs and benefits of data collection of new data elements on various scheme participants, including the workload of healthcare providers and insurers. 	<p><i>How have we addressed it to date?</i></p> <p>Access to Commonwealth Private Hospital Data Bureau data, linked with the NSW WC and CTP data, is enabling increased transparency in private hospital utilisation</p>
1.3 Develop a data governance framework	<ul style="list-style-type: none"> Develop a data governance framework that captures components such as data quality, access, security and standards, and roles and responsibilities. 	<p><i>How have we addressed it to date?</i></p> <p>We have established the Medical Payments Working Group with insurers to assist in improving data quality and governance</p>



2. Stronger supervision, compliance and enforcement, and improved clinical quality

Leakage analyses as part of the Healthcare Review have identified areas of potential leakage and leakage reduction strategies, emphasising the need for increased health provider supervision and enhanced monitoring. There are also further opportunities to improve clinical quality to ensure individuals receive evidence-based care.

2.1 Understand areas of claims leakage in the scheme for further investigation and action to enhance the cost-efficiency of healthcare

- Identify claims leakage issues across the WC and CTP schemes, including lack of adherence to processes and variation between providers.
- Improve insurer billing literacy and governance, strengthen insurer controls over health provider billing and increase supervision activity on billing anomalies

How have we addressed it to date?

Analyses on health expenditure leakage, medical payments leakage and MRI leakage have been performed to identify potential areas of leakage

How have we addressed it to date?

We have established the Medical Payments Working Group with insurers as an ongoing forum to reduce leakage in SIRA's personal injury schemes

2.2 Increased provider supervision and monitoring to promote improved practice

- Identify instances of non-compliance and empower SIRA to direct health providers
- Enhance monitoring of relative insurer efficiency
- Enhance monitoring of utilisation, expenditure and patient outcomes across the scheme

How have we addressed it to date?

We established data exchange with the Australian Health Practitioner Regulation Agency, and undertook regulatory actions directed towards providers, such as referrals to the Australian Health Practitioner Regulatory Agency, annual reviews and performance meetings with insurers, and letters to allied health providers. We also published a report on the first quarterly performance audit of claims management by the Nominal Insurer.

2.3 Develop a clinical governance framework

- Develop a clinical governance framework to hold providers accountable for continuous improvement of service quality and safeguard high standards of care
- Define consistent roles and responsibilities of stakeholders to drive outcomes

How have we addressed it to date?

SIRA is convening of a series of clinical advisory groups. The first to be established will be on spinal surgery.

2.4 Improve clinical quality through evidence-based clinical frameworks and standards

- Set evidence-based clinical frameworks and standards, and enhance specifications in manuals and guidelines to promote effectiveness and efficiency in care

How have we addressed it to date?

We completed public consultation on the revised WC guidelines for allied health treatment and hearing service provision; and regulatory requirements for workplace rehabilitation service provision, leading to the development of a workplace rehabilitation provider approval framework

How have we addressed it to date?

We commenced a clinical quality improvement project aimed to ensure injured workers and road users get evidence-based care. This will involve updating the mandatory allied health provider training program and evaluation of allied health practitioners' certification of capacity

How have we addressed it to date?

As part of the activities to build the evidence base and clinical standards, we delivered webinars on occupational noise-induced hearing loss, better pain management, best practice opioids management and best practice vocational rehabilitation programs

2.5 Education and training

- Build capability around case management functions through education and training
- Increase education and training to increase the health literacy of all stakeholders, clarify expectations and increase awareness of scheme objectives, requirements and policies for rehabilitation and injury management

How have we addressed it to date?

We developed certification of capacity training with the Australian Physiotherapy Association which included promotion of the Health Benefits of Good Work. We are working with Heads of Workers Compensation Authority and RACGP to implement GP principles.



3. Reviewing fee regulation

Appropriate fee regulation is an important tool for driving improved healthcare quality and outcomes in the schemes. Our analyses and consultations have identified opportunities for fees reform and alternative funding models to shift to an outcomes focus.

3.1 Benchmarking with other schemes to identify variations between the NSW WC and CTP scheme and comparator schemes

- Review and benchmark current NSW WC gazetted fee schedules, indexation methodologies, charged fees within the WC and CTP scheme and benefits/risks of gazetting selected CTP fees
- Consider the adoption of MBS billing rules and practices and further alignment to AMA/MBS prices

How have we addressed it to date?

A fee benchmarking analysis was performed to identify differences between NSW WC fees with comparator schemes, including variations in reference rates and indexation. This informed options for the fee regulation reform that is currently ongoing.

3.2 Incentivise practice change through fees

- Consider adequate remuneration for allied health providers in completing Allied Health Recovery Requests plans
- Consider higher fees for specialist healthcare providers in regional/rural areas

How have we addressed it to date?

We analysed various short, medium and long-term options for fee reforms, leveraging the insights from the benchmarking study.

3.3 Outcome-based regulation

- Adopt an outcome-based approach to fee regulation, considering financial incentives supporting the implementation of innovative models of care

How have we addressed it to date?

The 2020 fees reform is a precursor to introducing more outcomes-based fee regulation



4. Implementing a value-based care approach

Our investigations and feedback from public consultations identified opportunities in co-designing an outcomes framework and focusing on low value care.

4.1 Develop an outcomes framework that moves towards a value-based care framework

- Progress towards a value-based care framework through collaboration with insurers, peak bodies, associations and other participants
- Develop an outcomes framework with defined metrics, which incorporates key measures such as return to work and expenditure while extending also to patient experience and health outcomes. The outcomes framework and metrics should consider the differences in the individual compensation scheme (e.g. legislation, injury profiles, demographics, insurers and differing responsibilities for return to work/activities), while maintaining consistency across the schemes
- Establish outcomes-based performance targets, including return to work/activities, patient reported experience and patient outcome measures

How have we addressed it to date?
 The health outcomes framework is aligned to the Quadruple Aim and captures domains around physical and mental health, injured person experience and accessibility, wellbeing, cost, safety and quality, and provider capability, delivery and experience

How have we addressed it to date?
 We conducted a customer experience, trust, and health and social outcomes study to benchmark the performance of the schemes and identify improvements to the schemes within these domains

4.2 Identify and examine low value care

- Identify and disincentivise low value care to promote optimal outcomes for injured people receiving care

How have we addressed it to date?
 Clinical advisory groups on issues such as spinal surgery will develop measures to reduce low value care in SIRA-regulated schemes.

4.3 Emphasise early intervention

- Promote value-based care through an additional emphasis on early intervention approaches to treatment

The Healthcare Review led to the development of a health outcomes framework¹⁰ to provide a transparent and systematic approach for monitoring and reporting on the healthcare provided within the WC and CTP schemes, and the progress towards achieving SIRA’s objectives as they relate to the delivery of healthcare. Feedback was sought on the health outcomes framework, with 28 submissions received, with stakeholders showing in-principle support for the health outcomes framework.

¹⁰ For further details on the health outcomes framework, see our consultation paper available at: <https://www.sira.nsw.gov.au/consultations/health-outcomes-framework>

5. A shift towards outcomes-focused, value-based care

The health outcomes framework centres around our vision for healthcare within the personal injury schemes we regulate, that is...

“...the WC and CTP schemes regulated by SIRA deliver value-based care to injured persons covered by the schemes.”

The framework supports the achievement of this vision by specifying how success will be defined and measured. The definition of value-based care embedded in the framework aligns to the principles and definitions as set out by the NSW Ministry of Health, including the Quadruple Aim¹¹ for delivery of healthcare that improves:

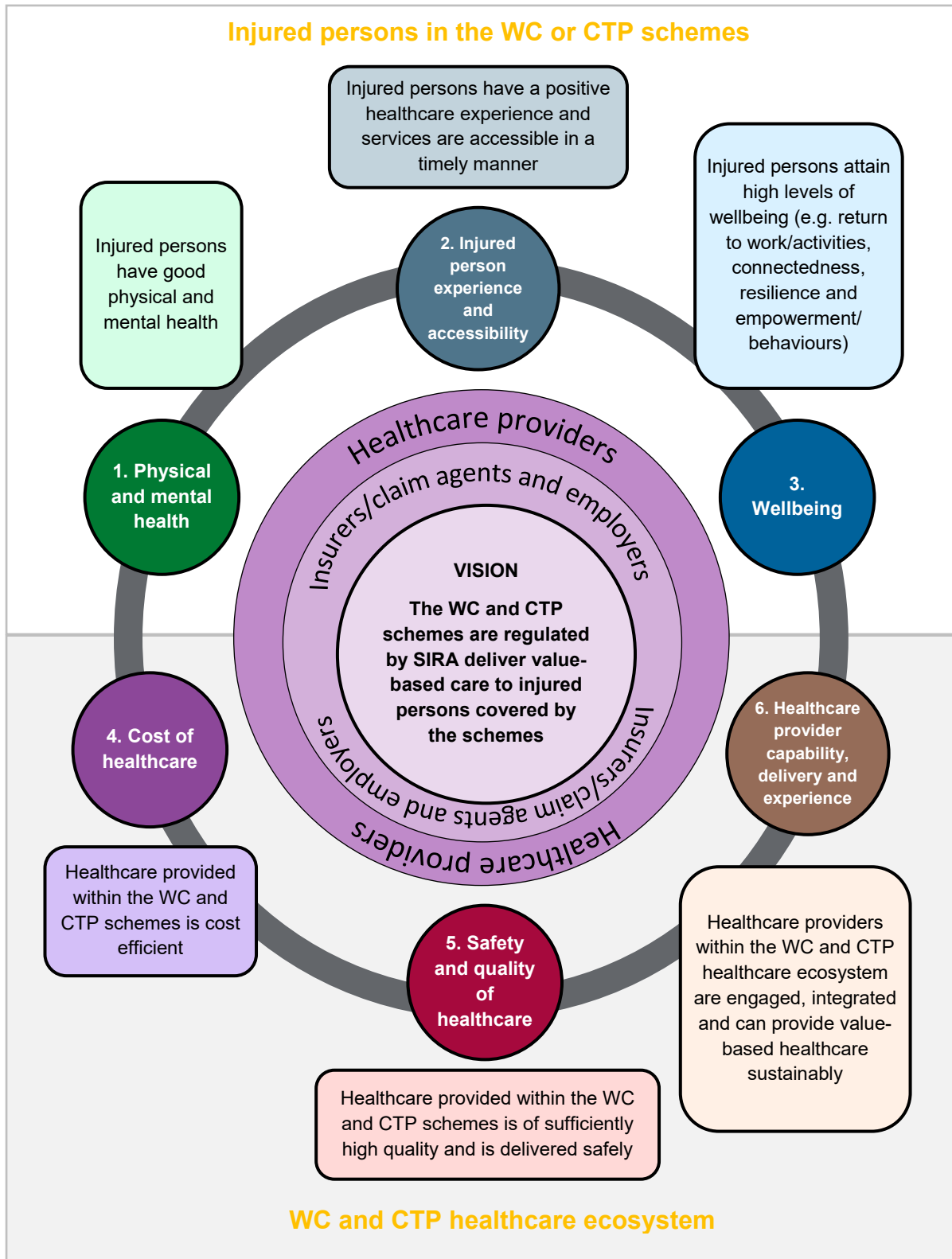
- Health outcomes that matter to patients
- Experiences of receiving care
- Experiences of providing care
- Effectiveness and efficiency of care.

The outcomes framework is a critical component of the shift towards value-based care, as it will underpin the design and approach to implementation, including a basis for developing metrics, and importantly strengthening reporting and transparency, monitoring, evaluation, governance and providing an evidence base for continuous improvement.

The six domains of the health outcomes framework, which also align to the quadruple aim, are outlined in Figure 10 on the following page. We will be considering refinements to the framework based on feedback received through consultation. Further details will be issued in SIRA's implementation update in early 2021.

¹¹ NSW Ministry of Health (2019), *Value based healthcare*, Available at: <https://www.health.nsw.gov.au/Value>

Figure 10: Draft outline of health outcomes framework and domains

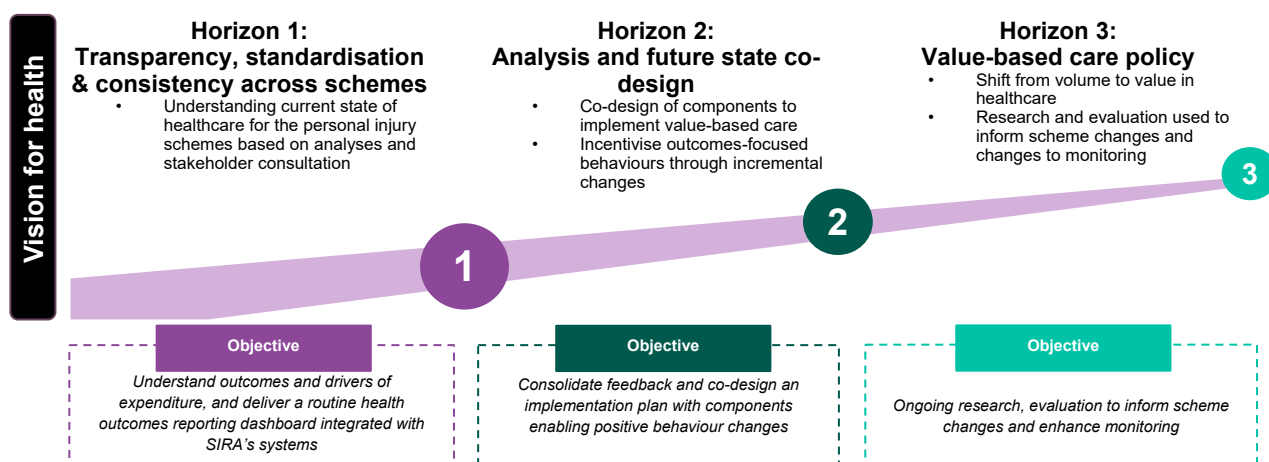


6. Next steps

In SIRA's consultation on its health outcomes framework for the NSW workers compensation and motor accident injury/compulsory third party schemes, three horizons were set out to guide the future activities required to support the transformation to value-based care within SIRA's schemes.

The feedback received throughout consultations undertaken as part of the Healthcare Review has contributed to SIRA's understanding of the opportunities for improvement in healthcare arrangements within the NSW WC and CTP schemes. In response, reflecting the findings and themes emerging from the Healthcare Review, SIRA has refined the horizons to guide the phased implementation of value-based care within SIRA's schemes shown in Figure 11.

Figure 11: Implementing the health outcomes framework



We understand that the ongoing engagement and consultation with scheme service providers is a critical success factor to the implementation of value-based care within SIRA's schemes. These future horizons provide a planning framework to guide our program of work in 2021 including implementing value-based care with input from scheme service providers.

The health outcomes framework is SIRA's first step toward increased transparency across the schemes and is intended to enable value-based care. Finalising and implementing the health outcomes framework is a key next step towards achieving our vision for healthcare within personal injury schemes. We look forward to continuing to work closely with all stakeholders as we transition through the three horizons to implementing the provision of value-based care across our personal injury schemes.

Next steps

We will provide a further update in February 2021 on how you can be involved in our implementation planning for value-based care.

Appendix A: Summary of public consultation

This section provides information on the key consultations that were conducted as part of the Healthcare Review.

Public consultations

1. Work-related hearing loss in the NSW workers compensation system	
<i>This public consultation sought feedback on SIRA's review into services to support people with work-related hearing loss in the NSW WC system.</i>	
Date	August – October 2019
Number of submissions received	26
Key themes	
<ul style="list-style-type: none">• There is a lack of awareness of entitlements for work-related hearing loss• The claims pathway is complex and can lead to delays in hearing aid provision• Hearing aids can be effective and promote participation• Fees orders, hearing aid costs and inclusions should be reviewed• There is evidence of close working relationships between some audiologists and legal firms• There should be a greater focus on support, training, counselling and auditory rehabilitation of workers to maximise outcomes.	

2. Regulatory requirements for healthcare

This public consultation sought views to inform revised regulatory requirements relating to the healthcare arrangements within the NSW WC and CTP systems.

Date	September – November 2019
Number of submissions received	53

Key themes

- The importance of strengthening insurer controls over health provider billing
- The need for insurers to more closely scrutinise proposed treatments
- The importance of early treatment in medical costs across the life of a claim
- The need for insurers to better identify injured people at risk of not returning to work
- A link between adversarial claims and disputes and non-medically appropriate care
- An increase in degenerative, rather than traumatic injuries
- Some health providers are seeing patients for long periods without clinical justification
- The need for increased data publication including on provider performance; unexpected outcomes/adverse events; and claimant satisfaction
- Consideration of outcome-based fee models
- The need for SIRA to set clinical frameworks and standards

3. Health outcomes framework for the NSW workers compensation and motor accident injury/compulsory third party schemes

This public consultation sought feedback on the health outcomes and reporting framework for the NSW WC and CTP schemes.

Date	July – September 2020
Number of submissions received	28

Key themes

- The metrics to be used to measure outcomes should be included in the framework
- The roles and responsibilities of scheme participants need to be defined within the framework
- The framework should align with NSW Health's approach to health care
- SIRA should develop a communication strategy to promote and educate scheme participants about the framework
- Data collection and analysis should be used to identify low and high value care in the WC and CTP systems
- Public reporting of performance will increase transparency and accountability
- SIRA should use the framework to promote timely, evidence-based delivery of health care.
- Improved communication and collaboration between scheme participants is important for achieving outcomes
- SIRA should continue consultation with stakeholders throughout the development and implementation of the framework.

4. Revised workers compensation guidelines for allied health treatment and hearing service provision

This public consultation sought feedback on the revised workers compensation guidelines for allied health treatment and hearing service provision.

Date	July – September 2020
Number of submissions received	19

Key themes

- The range of allied health disciplines required to hold SIRA approval should be expanded
- The guideline should be separated into two separate documents – one for allied health providers and the other relating to hearing service providers
- The requirements for providers in relation to conflict of interest issues should be increased, particularly in relation to hearing service providers declaring commercial/financial associations with legal providers and hearing aid suppliers
- More detail should be provided regarding SIRA's provider supervision approach
- A clearer title should be used that better aligns with the intent of the guideline, such as "SIRA approval of providers".

5. Regulatory requirements for workplace rehabilitation service provision in NSW personal injury schemes

This public consultation sought feedback on the NSW policy and framework underpinning the approval, engagement and performance of workplace rehabilitation providers..

Date	October – November 2020
Number of submissions received	13

Key themes

At the time of writing, the submissions for this consultation are still under review.