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National Sepsis Program Extension

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Foreword

Sepsis is a life threatening, time critical medical emergency, that places an enormous burden on the Australian healthcare system and on Australian society. Current estimates suggest there are over 80,000 hospital admissions due to sepsis each year resulting in over 12,000 deaths. The annual cost of acute care of sepsis is over $700 million with indirect costs exceeding $4 billion. Many sepsis survivors are left with lifelong physical, cognitive and psychological disability.

Recognising the importance of a coordinated approach to the recognition and treatment of sepsis, the Australian Government committed $1.5 million to initiate the National Sepsis Program in 2019, and a further $2.1 million in 2023 for the National Sepsis Program Extension (2023-2025). Led by the Australian Commission on Safety and Quality in Health Care in close partnership with The George Institute for Global Health and Sepsis Australia, together with state and territory representatives, healthcare professionals and those with lived experience of sepsis from across Australia, the program has delivered tangible benefits.

As the national population ages and more people are treated with immunotherapy for cancers and other immuno-related illnesses, or suffer chronic health conditions, the risk of infection will increase and so too will the burden of sepsis. The economic and health system costs associated with sepsis diagnosis and management, based on emerging data about sepsis prevalence, will also rise substantially. It is vital that sepsis continues to be addressed as a health system safety and quality priority through ongoing investment, education and action.

The National Sepsis Program is ending, but Australian, state and territory Governments and health services must continue to build momentum, creating further opportunities to improve awareness, implement the Sepsis Clinical Care Standard, strengthen education and training, leverage emerging digital and telehealth opportunities, reduce data fragmentation and improve healthcare outcomes.

The National Sepsis Program Extension has been a genuine national collaboration, bringing together policy makers, healthcare professionals and those with lived experience of sepsis united in the common goal of improving sepsis outcomes. This report documents the work of hundreds of people, and we unreservedly commend it to you.

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Australian Commission on Safety and Quality in Health Care.

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Definitions and acronyms

Term	Definition
AIHW	Australian Institute of Health and Welfare
CCS	Clinical Care Standard
CEQ	Clinical Excellence Queensland
CPD	Continuing Professional Development
ED	Emergency Department
EDM	Electronic direct mail
First Nations peoples	Aboriginal and Torres Strait Islander peoples
GP	General Practitioner
Health pathways	Health pathways are clinical decision and support frameworks that assist clinicians to assess and manage medical conditions and provide guidance on appropriate patient referrals to specialists and other local services.
ICD	International Classification of Diseases
ISBAR	A standardised communication tool which supports structured communication during handover processes between health professionals. It stands for Introduction, Situation, Background, Assessment and Recommendation.
Model of Care	The way care is delivered to support the safe and timely treatment of patients through their health care.
National Sepsis Program	Initial program of work delivered by the Commission in partnership with TGI and Sepsis Australia between 2020 and 2022.
National Sepsis Program Extension (Program Extension)	This program of work, delivered by the Commission in partnership with TGI and Sepsis Australia
PBS	Pharmaceutical Benefits Scheme
Program Extension	This program of work, delivered by the Commission
Program team	The small team at the Commission working to deliver the Program Extension
Sepsis	A life-threatening organ dysfunction caused by a dysregulated host response to infection
Sepsis Australia	Sepsis Australia is a network of sepsis survivors, families and clinicians working together to prevent and reduce the burden of sepsis. Sepsis Australia is embedded within and supported by TGI. It is not a stand-alone charity.
Spiraling curriculum	An education approach where concepts are revisited multiple times through a program of study with context increasing in complexity to build ion previous knowledge
State and territory	Australian state and territory government authorities responsible for overseeing the delivery of public health services in their jurisdiction, usually a Department of Health or similar portfolio agency
TGI	The George Institute for Global Health
The Commission	Australian Commission on Safety and Quality in Health Care

The Department	Australian Government Department of Health, Disability and Ageing
WA	Western Australia
WHA	World Health Assembly
WHO	World Health Organization

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Executive Summary

Embedding sepsis in both health system policy and healthcare practice in Australia is a safety and quality priority

This document reports on the second investment by the Australian Government to enable the early detection and better treatment of sepsis in Australia. It outlines the program of work delivered by the Australian Commission on Safety and Quality in Health Care (the Commission) in partnership with The George Institute for Global Health (TGI) and Sepsis Australia as well as the results, partnerships and outcomes that have been achieved.

Sepsis as a national health priority

Sepsis is a life-threatening and time critical condition that arises when the body's response to an infection damages its own tissues and organs. It is a major cause of morbidity and mortality in Australia and globally.

Improving early detection, recognition and treatment of sepsis is key to preventing illness and death from this condition.

TGI and Sepsis Australia have been the driving force in the steadily growing coordinated national effort to address the significant burden of sepsis in Australia and meet the World Health Assembly's (WHA) resolution 70.1 calling for member states to implement national action plans to reduce deaths and disability from sepsis.

To support the national effort to address sepsis between 2020 and 2025, the Australian Government has invested $3.6 million through the first National Sepsis Program in 2020-2022 and the National Sepsis Program Extension (Program Extension) in 2023-2025. The Commission, in partnership with TGI led this work, with additional input and collaboration by the Department of Health, Disability and Ageing, state and territory health authorities, academics and researchers, peak associations and consumers.

The first National Sepsis Program delivered eight discrete projects focused on improving recognition of sepsis in healthcare settings, providing clinicians with nationally agreed sepsis clinical guidance and strengthening comprehensive care planning. A significant achievement of the program was the launch of the national Sepsis Clinical Care Standard (2022). The Final Program Report made ten recommendations to inform future work to improve the recognition of and response to sepsis in Australia.

In July 2023, the Program Extension continued the work to improve early recognition, treatment and outcomes for patients with sepsis in Australia, building on the achievements from the first program and addressing several of its recommendations through five new projects:

1. Building targeted consumer awareness of sepsis signs and symptoms, and when to seek help
2. Building healthcare professional awareness, early recognition, response and treatment of sepsis
3. Improving coordinated inpatient care and post-sepsis support for sepsis survivors, their families and other support people, and families bereaved by sepsis
4. Establishing a better understanding of sepsis epidemiology through improved data definitions, audit and data collection
5. Establishing a better understanding of the reasons for and opportunities to close the gap experienced by First Nations people with sepsis.

Summary of findings

The Program Extension has delivered strong and effective outcomes to improve the recognition of sepsis in healthcare settings across Australia. It has achieved this by:

- Providing healthcare professionals with free high quality sepsis education now available via Sepsis in Primary Care
- Delivering an effective public awareness campaign and suite of campaign resources
- Developing model of care materials to strengthen comprehensive care planning for sepsis survivors, distributed across Australian health care services
- Completing new epidemiology analysis to provide further insights about the sepsis patient journey and clinical risk factors
- Developing a national strategy for sepsis data that envisions the long-term future, recommending a five-year plan to achieve that vision
- Completing a scoping literature review to begin to develop an understanding of sepsis drivers in First Nations peoples.

The leadership and coordination provided by the Commission has been a significant asset enabling national collaboration, national participation and extended reach. The Commission was well positioned to engage with all states and territories to facilitate national coordination of key messaging and assets.

The Commission worked with states and territories to leverage local initiatives including sepsis pathways and guidelines to inform the national effort. Policy makers, researchers, clinicians and consumers were engaged in every aspect of the Program.

The Commission's strategic partnership with TGI and Sepsis Australia was instrumental to the program's success. TGI is globally respected and trusted as a source of expertise on sepsis. In addition to its valuable research program and contributions to the global and Asia Pacific sepsis alliances, it has a leading role in domestic advocacy and consumer engagement support for sepsis survivors and people bereaved by sepsis through its Consumer Partner and Advocacy Forums and Consumer Symposium.

TGI also runs the National Sepsis Awareness Survey which helps to inform the approach of health policy makers. The Survey provided vital information to inform the effectiveness of the Program Extension outcomes. Over 80 consumers with lived experience were involved in Program Extension activities. This ensured that the work included authentic perspectives to deliver accessible information, resources and products. Sepsis survivors were partners in

designing and delivering important project outcomes. Participants also reported that their participation in the Program Extension has helped their healing and recovery.

TGI provided information and expertise to inform the scoping, planning and procurement of all projects. This included drawing on its broader expertise through the Guunu-maana (Heal) research program to support planning and procurement for project five. TGI's commitment to improving the evidence base of sepsis in Australia also includes a range of clinical trials and cohort studies.

The focus on sepsis must be maintained

The Commission's new epidemiology report showed that in 2022-23, there were over 84,000 reported sepsis separations in Australian public hospitals with one in seven sepsis cases resulting in a hospital death.[1] These figures indicate that sepsis is more prevalent than previously understood. The financial impact of sepsis on Australia's health system also continues to be significant, with modelling suggesting sepsis costs are approximately $700 million annually, with indirect costs of more than $4.7 billion per year.[2]

Increased sepsis separations may in part reflect improvements in recognition and detection, however, the Program Extension results demonstrate there is still much work to do.

Jurisdictions have begun to implement the Sepsis Clinical Care Standard (CCS). Initial focus has been the implementation of sepsis pathways to support acute recognition and response. There has been limited opportunity to address those aspects of the Standard that move beyond initial recognition and response such as discharge coordination, post-sepsis care and bereavement supports.

Improvements in education and training for healthcare professionals can be further expanded to include allied and community health care professionals, and the future healthcare workforce undertaking pre-registration programs of study can be better prepared to recognise and respond to sepsis.

Clinical care and health system improvements rely on the availability of robust data; however, the current state of Australian sepsis data collection is marked by significant variability and fragmentation, broadly attributable to inconsistent definitions, resourcing constraints and the persistence of manual processes for data entry.

An authentic, qualitative evidence base, reflective of the stories and experiences of First Nations people affected by sepsis is also required to understand the drivers of sepsis and to develop health system policy, design and delivery informed by Indigenous ways of doing, knowing and being so that the national work to improve sepsis quality and safety contributes to Closing the Gap.[3]

It is vital that sepsis continues to be regarded as a national health priority.

Sepsis survivor

"It's been a mix of trial and error, some wins, setbacks, frustration… in lieu of a model of care, I just created my own"

Maintaining the momentum

Sepsis will continue to be a priority area for the Commission and TGI, with both organisations focused on strategic actions which target sepsis that they can deliver in the context of their current resourcing and responsibilities.

The Commission is currently developing the third edition of the National Safety and Quality Health Service Standards which aim to provide a nationally consistent statement of the level of care consumers can expect from health organisations. This provides an important opportunity to strengthen the quality and safety outcomes that make the most difference to sepsis recognition and response. This includes infection prevention and control, clinical governance, recognising and responding to deterioration, comprehensive care, medication safety and partnering with consumers. The Commission will also continue to support the implementation of the Sepsis Clinical Care Standard and consider sepsis where relevant in the development of new clinical care standards, for example Emergency Laparotomy.

Sepsis survivor

"I am very grateful to the ambos, nurses and doctors who saved my life… but having to Google to find answers is horrible"

As part of an extensive translational research portfolio, TGI was recently successful in securing National Health and Medical Research Council funding, to develop implement and evaluate models of care for post-sepsis support. This work will utilise the model of care framework for sepsis coordination and post-sepsis support developed as part of Program Extension.

Health worker

"Everybody but nobody coordinates sepsis care"

National and international opportunities

Current and planned national health policy reform, such as the Australian National Preventive Health Strategy 2021-2030, the Australian Government's electronic decision support tool digital reform, the First Nations health agenda and the phased approach to establishing the Australian Centre for Disease Control, provide timely opportunities to embed and maintain the focus on sepsis across Australian health policy.

Internationally, the 2030 Global Agenda for Sepsis is strategically aligned with the World Health Organization's (WHO) focus on improving the prevention, early recognition and timely treatment of sepsis.[4] The launch of the strategy in 2024 is timely as Australia, as a member state of the World Health Assembly (WHA), must deliver an ongoing and effective national action plan to reduce deaths and disability from sepsis to support the WHO commitment.

Future focus

There are still significant opportunities to strengthen awareness and embed timely recognition and response within Australian health systems. These include:

Raising public awareness

- Targeted messaging for groups at higher risk of sepsis and tailored messaging for different populations
- Embedding sepsis communication assets across acute, primary and community health systems
- Maintaining a repository of lived experience case studies and testimonies to humanise and personalise messaging

- Strengthening public health and sepsis prevention messaging including for populations who are at greater risk, for example people with diabetes, chronic kidney disease and cancer.

Education and training

- Expanding education modules for other care settings, including pharmacy, allied health and primary and community care-based services such as residential aged care and disability support services
- Addressing sepsis recognition in the context of emerging digital and telehealth models
- Considering workforce and health system strategies for inclusion in sepsis safety netting. For example, for patients and families from non-English speaking backgrounds, First Nations peoples and people with disability; and addressing current and future workforce knowledge and skills in multidisciplinary teams, communication and record keeping, as well as transitions of care, comprehensive care and recognising and responding to the deteriorating patient.
- A foundational sepsis curriculum for medical, nursing and paramedicine programs of study that focuses on the development of critical thinking and human factors as essential elements for sepsis recognition in busy clinical settings. This could include a simulation package that could be adapted for pre-registration and pre-vocational clinicians.
- Address challenges faced by curriculum developers and managers around the inclusion of sepsis content in curricula in Australian medical, nursing and paramedicine courses.
- Strengthen undergraduate and prevocational teaching focused on sepsis, including lived experience partnerships.
- Promote the importance of spiralling curriculum across curricula and into clinical practice.
- Consider developing allied health curricula and content to prepare students to recognise, respond to and manage sepsis in rural and remote areas

Post-sepsis care and coordination

- Supporting state and territory health services to implement the Sepsis Clinical Care Standard
- Strengthening transitions of care for patients with sepsis including discharge planning
- Consulting on the need for a First Nations sepsis coordination and post-sepsis support model of care framework.

Sepsis data collection and data linkage

- Implementing the National Sepsis Data Plan
- Continuing to invest in sepsis research and using the results to inform health system improvements
- Continuing to develop epidemiology and snapshot reports to measure and drive quality improvement.

First Nations

- Establishing a robust evidence base to understand the drivers of sepsis in First Nations peoples and developing culturally safe and appropriate strategies. This work should be led by First Nations people.

Recommendations

The following recommendations will maintain the momentum and focus on sepsis:

1. The Australian, state and territory Governments should review the 2030 Global Sepsis Agenda and identify opportunities to embed and integrate sepsis into health system priority initiatives, including but not limited to the Global Agenda's strategic priorities: pandemic preparedness, antimicrobial stewardship, disaster management, infection prevention and control, child and family health and vaccination programs.
2. The Pharmaceutical Benefits Advisory Committee should liaise with the Commission about clinical guidelines and monitoring criteria for the inclusion of Ceftriaxone in the PBS Prescriber's bag.
3. State and territory health services should use the sepsis coordination and post-sepsis support model of care resources developed as part of the Program Extension to implement the Sepsis Clinical Care Standard focusing on Quality Statements 4-7 and strengthen local care coordination and post-sepsis support.
4. The Australian Government should appoint a lead agency to drive the implementation of the National Sepsis Data Plan.
5. State and territory health services should consider replicating the search criteria from the Sepsis Epidemiology report to better understand the burden of sepsis on local health care systems and opportunities to strengthen sepsis prevention, recognition and management.
6. The Australian and state and territory Governments should monitor the progress of contemporary research currently being undertaken about sepsis and recognising and responding to acute deterioration to ensure government funded programs and projects continue to be evidence informed. This includes emerging evidence about the importance of listening to parental/family/carers concern.
7. The Australian Government should continue to invest in and support a national collaborative approach to maintain momentum in quality and safety improvement for sepsis. This includes:
    a. maintaining focus on sepsis awareness for the public, clinicians and health services
    b. understanding variation in care across Australia
    c. strengthening engagement with teaching organisations to ensure the future clinical work force can safely recognise, respond to and manage sepsis
    d. expanding and developing educational resources for health care workers in acute and primary care settings, including for pharmacists and allied health professionals, for the aged care and disability service sectors and for emerging digital and telehealth models of care
    e. developing sepsis snapshot reports to ensure health services have access to new and useful data while work to implement the National Sepsis Data Plan progresses.
8. The Australian Government should consider opportunities for a collaborative, community led program to address the burden and impact of sepsis on First Nations peoples. This could be begin with a consumer driven action plan, like the 'Stopping Sepsis' policy report to drive and guide future decision-making and investment.

National Sepsis Program Extension overview

Sepsis as a strategic health priority

Introduction

Sepsis is a life-threatening and time critical condition that arises when the body's response to an infection damages its own tissues and organs. It is a major cause of morbidity and mortality. In Australia, the prevalence and impact of sepsis is significantly greater than previously estimated, with over 84,000 reported sepsis separations in Australian public hospitals in 2022-23.[1] In the same year, one in seven sepsis cases in Australia resulted in a hospital death. It is also very costly; in Australia the direct hospital cost of sepsis to the healthcare system is approximately $700 million per year, with indirect costs of more than $4.7 billion per year.[2]

At the international level, sepsis continues to be a global health priority through the World Health Organization's resolution to improve the prevention, diagnosis and clinical management of sepsis and the release of the 2030 Global Agenda for Sepsis as a multi-year global strategy to address the impact of sepsis and its effects.[4]

Improving early detection, recognition and treatment of sepsis is key to preventing illness and death from this condition. Australians diagnosed with sepsis; their families and carers benefit from early diagnosis and improved health outcomes.

Bereaved person

"I won't ever get the image of his death from my mind...he deserved a better death, it was horrific"

Background to the National Sepsis Program and Extension

National Sepsis Program

In June 2020, the then Australian Government Department of Health (the Department) contracted the Commission to establish the $1.5 million National Sepsis Program and deliver eight discrete projects, in partnership with The George Institute (TGI), focused on the following key objectives:

- Improving the recognition of sepsis in all healthcare settings
- Providing healthcare professionals with nationally agreed sepsis clinical guidance materials
- Strengthening the comprehensive care planning process for sepsis survivors.

The July 2022 final report of the National Sepsis Program, provided to the Department, identified areas requiring continued support to improve sepsis outcomes and made ten recommendations for future work:

1. Further investigation of sepsis recognition and management for high-risk populations and patients in pre-hospital settings
2. Further advice or resources about routine lactate measurement in patients with clinical deterioration or suspected sepsis
3. Consultation on the feasibility of implementing standardised or appropriate sepsis screening tools in emergency departments and acute care settings for adults
4. Development and implementation of a nationally recognised post-sepsis support model of care for sepsis survivors and a model of bereavement for those who experience a sepsis loss.
5. Expansion of the National Sepsis Awareness Campaign to further promote resources developed as part of the first phase of the Program.
6. Development and implementation of targeted education on sepsis for health care professionals and undergraduate health programs.
7. Targeting clinician awareness of sepsis in Emergency Department, primary care and pre-hospital clinical cohorts and settings.
8. Explore causes of variation between clinical coders, concerning the method of coding sepsis and identify strategies to ensure greater consistency.
9. Identify strategies to improve clinical documentation of sepsis or suspected sepsis in patient medical records and discharge summaries
10. Consider a nationally recognised, self-directed sepsis audit toolkit, data portal and benchmarking mechanism to support clinicians and health service organisations to improve sepsis recognition and management.

National Sepsis Program Extension

In recognising the achievements of the National Sepsis Program, the Department engaged the Commission in June 2023, again in partnership with TGI, to deliver the $2.1 million National Sepsis Program Extension (Program Extension) to improve early recognition, treatment and outcomes for patients with sepsis in Australia.

The Program Extension effectively addresses recommendations 4, 5, 6 and 7 of the National Sepsis Program. Additionally, the new epidemiology report and national sepsis data plan, developed as part of the Program Extension, provide the foundational elements required to

address the remaining six recommendations from the National Sepsis Program (1,2,3 and 8,9, 10).

This Program Extension report demonstrates the ability of the Commission to link local state and territory activities with a national approach to support Australia's commitment to strengthening global health. It also highlights the importance of a national approach and garnering support from health system stakeholders across Australia in improving awareness and recognition of sepsis.

Program Extension objectives

Building on the work achieved through the National Sepsis Program, the Program Extension aimed to improve outcomes for people with sepsis through:

- Building consumer awareness of sepsis signs and symptoms, and when to seek help
- Building healthcare professional awareness, early recognition, response and treatment
- Improving coordinated inpatient care and post-sepsis support for sepsis survivors, their families and other support people, and families bereaved by sepsis
- Establishing a better understanding of sepsis epidemiology through improved data definitions, audit and data collection
- Establishing a better understanding of the reasons for and opportunities to close the gap experienced by First Nations people with sepsis.

Program Extension deliverables

The Commission established a small program team to deliver the Program Extension across the 2023-2025 financial years. It had five individual projects:

1. A targeted national public awareness campaign
2. Education and training resources for health professionals and undergraduate health programs
3. Coordinated sepsis care and post-sepsis support for survivors and families, including those bereaved by sepsis
4. Data collection tools for quality improvement
5. Improving sepsis recognition in First Nation peoples.

An overarching program plan and detailed individual project plans were developed to inform the work and identified reporting milestones and timeframes.

As the projects began to roll out, additional health system information, stakeholder engagement and vendor feedback identified that the deliverables of the education and training project (project 2), the coordinated care project (project 3) and the First Nations project (project 5) needed to be revised to ensure they could provide benefit to their area of focus. The changes in scope were managed through the Commission's robust project management processes with the support of the Department and TGI. The rationale for scope changes and resulting actions are described in the individual project summaries included in this report.

Program Extension scope

In scope activities

All Australian health care settings (primary, maternity, paediatric, acute and sub-acute) where people with sepsis are identified, treated and discharged were considered in the undertaking of the Program Extension. A wide range of expert stakeholders including consumers with lived experience of sepsis were consulted to support the development of the various plans, materials and resources.

As First Nations peoples are disproportionally affected by sepsis and experience a greater risk of poorer health outcomes than the non-indigenous population, the program team considered cultural awareness and safety for First Nations peoples throughout the Program Extension. This aspect of the Program Extension resulted in mixed outcomes with further reflections on this work included in the discussion of project five.

Out of scope activities

Existing state and territory programs focused on sepsis were identified, and best efforts were made to align Program Extension deliverables to established bodies of work to add value and minimise duplication of effort.

The high level of engagement by the members of the Program Extension's governance committees should ensure the Program Extension's outputs inform and support operational policy and procedure development and implementation at the state and territory and local health service level, including within Primary Health Networks.

Program Extension governance

The Program Extension drew upon the governance structures established for the first National Sepsis Program and streamlined the approach to simplify administrative processes. This enhanced the capacity of the program team and TGI to focus on the work required to deliver the five projects. Figure 1 depicts the National Sepsis Program Extension governance structure.

Figure 1: National Sepsis Program Extension governance structure

Governance committees

Individuals with relevant clinical expertise and skills and health system knowledge were invited to be part of one of two committees established to provide oversight and technical and clinical advice to the program team for the duration of the Program Extension:

1. Sepsis Program Oversight Group (Oversight Group)
2. Sepsis Program Commonwealth, State and Territory Liaison Group (Liaison Group)

Table 1 provides a summary of the roles and responsibilities of the two committees which were in place until August 2025.

Table 1: National Sepsis Program Extension governance arrangements

Committee	Sepsis Program Oversight Group	Sepsis Program Commonwealth, State and Territory Liaison Group
Function	Provide specialist clinical and technical advice as well as the lived experience perspective on all projects within the Program Extension.	Provide policy advice and expert clinical opinion on project objectives and deliverables and consider practical issues associated with implementation of the Program Extension deliverables in health service organisations
Activities	Monitor and advise on potential project risks and mitigation strategies.	Monitor and advise on risks and issues associated with project implementation, and emerging issues on sepsis relevant to each Australian jurisdiction
Membership	Membership included representatives from TGI, clinical experts, government representatives, peak bodies, colleges and consumer organisations and consumers with lived experience, including First Nations peoples (n=25)	Membership drawn from TGI, the Department, and Australian state and territory clinical experts from a range of disciplines (including adult and paediatric sub-specialties), and state and territory expert policy advisors. (n=17)
Number of meetings	Ten	Six
Further information	The role and membership of the Oversight Group is provided at **Appendix 1**.	The role and membership of the Liaison Group is provided at **Appendix 2.**

As part of project 4, Data collection tools for quality improvement, a time limited Technical Advisory Group (TAG) was also established from March to July 2025. The TAG met five times to provide focused input and support to develop the national data plan for sepsis. The role and membership of the TAG is provided at **Appendix 3**.

Program Extension partners

The program team coordinated regular discussions with TGI (fortnightly) and the Department (monthly), and the three agencies together following the submission of each progress report.

This approach ensured transparency, accountability and credibility:

- The Department had full visibility of the progress of each project and was able to contribute to design and implementation activities. For example, the Department actively participated in key project activities and presentations for the 2024 public awareness campaign and promoted the education and resources by engaging internally with the Chief Medical and Nursing Officers and medical advisors. The Department also provided important guidance and support for the program team in the areas of risk management and procurement.
- TGI were consulted and included in all key aspects of program and project planning and implementation, including procurement of project leads, the content of progress reports and receipt of the Department's feedback. The program team also drew significantly on TGI's clinical and research expertise and on the lived experience of Sepsis Australia's members to ensure the Program Extension was evidence informed.

Program Extension management

The program team leveraged the Commission's robust project management approach in delivering the Program Extension projects and adhered to critical internal policy including procurement, expenditure approval and delegated decision making.

This section provides an overview of the program team's approach with more information about the project management of the Program Extension including the contract variation, a financial summary, program team composition, procurement information and risks and issues management at **Appendix 4**.

Reporting and stakeholder engagement

In line with the contract for services with the Department, the Commission provided quarterly progress reports and project updates for each project to the Department for approval. The Commission's Program Extension partners, including TGI and Sepsis Australia and the Oversight and Liaison Groups, were engaged in every aspect of the Program Extension. The program team also developed communiqués and distributed internal and external briefings to ensure internal engagement and communications with the broader health sector.

Management of risks and issues

The program team actively identified, managed and monitored existing and potential risks to projects throughout the delivery of the Program Extension. Where program or project issues and risks were identified, a risk management approach was applied to assess the severity of risk and consider options for mitigation and resolution. Stakeholders, including the Department, were engaged as appropriate to their roles and responsibilities, and the program team worked with the program sponsor and Commission's executive to address and resolve the risk.

Contract management

The program team met regularly with each sub-contractor throughout the life of each project to discuss scope and approach, monitor progress, consider project risks and identify and implement mitigations strategies. Any risks were proactively addressed during these meetings which helped clarify expectations on all sides. Serious risks were escalated through existing internal Commission channels.

Change of project scope

A key process that informs the Commission's approach to safety and quality improvement is that work is evidence informed. During the planning and implementation, the scope for three of the five projects (projects 2, 3 and 5) were reshaped to ensure the projects could deliver beneficial outcomes to their area of focus based on robust evidence and within realistic timeframes. The revised scopes and resulting outcomes are detailed in the individual project summaries in this report and were designed to ensure the Commission can use the project and associated information to inform future work in this area.

Internal collaboration and support

The Commission delivers a wide range of national projects related to the safety and quality of health care and has a diverse range of expertise which the program team frequently drew upon to strategically embed sepsis. Internal collaboration facilitated:

- consistent messaging on complex issues, for example the interface between sepsis and antimicrobial stewardship

- opportunities to integrate sepsis, for example with detailed input on recognising and responding to acute deterioration, including the signs and symptoms of sepsis, into the guidance developed for the strengthened aged care standards
- expansion of the programs, for example by connecting with primary care providers
- robust and timely resource and report development.

Summary of Program Extension findings

What went well

National leadership and coordination

The Commission was uniquely positioned to lead and coordinate the Program Extension on a national scale. The quality of the collaboration between stakeholders in delivering the Program Extension reflects the Commission's established professional and respected relationships with jurisdictions, TGI and Sepsis Australia and the Department. The program team was able to leverage and extend its relationships by building upon TGI's existing work with Healthdirect and drawing upon jurisdictional expertise to enhance project outcomes such as the awareness campaign, the coordinated care project and development of the data plan.

Trusted partnership with The George Institute for Global Health

TGI is globally respected and trusted as a source of expertise on sepsis. In addition to its valuable research program and contributions to the global and Asia Pacific sepsis alliances, TGI has a leading role in domestic advocacy and consumer engagement support for sepsis survivors and people bereaved by sepsis through its Consumer Partner and Advocacy Forums and Consumer Symposium.

TGI also runs the annual National Sepsis Awareness Survey which informs the approach of health policy makers and provided vital information to the projects of the Program Extension.

TGI provided information and expertise to inform the scoping, planning and procurement of all five projects. This included drawing on its broader expertise through the Guunu-manna First Nations research program to support planning and procurement for project five.

TGI's commitment to improving the evidence base of sepsis in Australia also includes a range of clinical trials and cohort studies.

Strength in Program Extension's governance

The Program Extension's governance structure was instrumental in guiding the projects, consultants and program team.

The membership of the Oversight and Liaison Groups included leaders and experts in the national conversation on sepsis, who brought real time insight and experience to the Program Extension to ensure the work was targeted to areas of need and priority. The Oversight Group was an amalgamation of four existing committees established under the National Sepsis Program and proved to be an important mechanism in driving the Program Extension's success.

The Liaison Group created a space for jurisdictions to share expertise and listen to experiences across state borders to understand sepsis from national and local perspectives. The Liaison Group was highly effective in fostering collaboration and support in efforts to prioritise sepsis in the health system through policy, procedure and awareness.

Embedding lived experience in the Program Extension

The Commission's strategic partnership with TGI and Sepsis Australia was instrumental in ensuring the Program Extension actively engaged people with lived experience of sepsis.

The Program Extension involved over 40 consumers with lived experience in a variety of roles including:

- membership of the Oversight Group and procurement panels
- developing sepsis information for different audiences (videos, resources, webinar)

- giving interviews as part of the public awareness campaign
- participating in workshops, surveys, focus groups and research interviews
- user testing the new education module for primary care
- providing feedback on the proposed model of care for sepsis coordination and post-sepsis support.

The variety of lived experiences with sepsis ensured that the work included authentic perspectives leading to more accessible information, resources and products. Sepsis survivors were valuable partners in designing and delivering important project outcomes. Participants also reported that their participation in the Program Extension has helped their healing and recovery.

Effectiveness of Program Extension's leadership

The clear leadership and identified roles and responsibilities ensured the Program Extension delivered quality outcomes.

A strong Program Manager, supported by a passionate and skilled team and an engaged Executive, established and maintained a range of partnerships to leverage strategic connections, negotiate outcomes, engage diverse stakeholders and manage project contracts, budgets and risks.

Leveraging and complementing state and territory sepsis work

All states and territories have sepsis management policies in place which are supported by a variety of resources, education and training programs and guidelines. In partnering with states and territories, the Commission was able to identify gaps in resources and programs to target for support and minimise duplication of effort.

> **Bereaved person**
>
> "I find it perplexing that sepsis isn't more widely recognised. When I spoke about my mum's passing, many people were and still are unfamiliar with it"

What could improve

Expectations management

The Program Extension involved five different projects delivered under one funding agreement with a fixed timeframe and budget. During the delivery of the program of work the scope of projects was revisited in response to significant stakeholder feedback. At times this was complicated to manage.

Establishing strategic partnerships

Formalising the strategic partnership with TGI and clarifying roles and responsibilities sooner would have streamlined the initial planning phase and strengthened relationships.

Delivering First Nations focused projects

For projects focused on First Nations issues, the opportunity to engage earlier and with Community and front-line workers would have improved project planning and design.

Practical integration of sepsis into health system

The Commission, in partnership with the TGI, identified and developed a range of opportunities to expand the outcomes of the Program Extension by integrating sepsis recognition and response into health policy and practice across Australia. The elements below have received positive feedback and inform the recommendations of this report.

Improving sepsis information and resources

- The program team worked with parents from Sepsis Australia and clinicians from the Sydney Children's Hospitals Network to develop new content about sepsis for the Raising Children Network webpage.
- The Commission collaborated with NSW Health to refine the language used in NSW's 2024 sepsis awareness campaign.
- TGI partnered with Healthdirect to refresh the content about sepsis on its website.
- The program team worked with the Commission's Antimicrobial Use and Resistance in Australia team to ensure the public awareness campaign aligned with the appropriate prescribing and use of antimicrobials messaging.

Improving primary care access to sepsis medication

The Commission is awaiting a response from the Pharmaceutical Benefits Advisory Committee on the Commission's proposal to include Ceftriaxone (an important antibiotic in the treatment of sepsis) in the Pharmaceutical Benefits Scheme (PBS) prescriber's bag. This would enable general practitioners (GPs) to readily access this critical medication for the treatment of patients with sepsis, particularly in remote locations or for patients who are experiencing social disadvantage.

If the proposal is adopted, the Commission will work with the Advisory Committee to develop appropriate guidance to support the inclusion of Ceftriaxone in the PBS prescriber's bag.

Improving best practice

- The program team presented to the Commission's Antimicrobial Stewardship and Infection Prevention and Control advisory committees on the 2030 Global Sepsis Agenda. Presentations highlighted where sepsis priorities align with the United Nations Sustainable Development Goals and broader health priorities and how sepsis connects with antimicrobial stewardship and infection prevention and control priorities.
- The Commission made submissions about sepsis to inform several national and jurisdictional policies, strategies and frameworks:
    - Safer Care Victoria's Maternal Sepsis Guidelines
    - New South Wales review of 'My personal health record' (Blue Book)
    - National strategic framework for chronic disease
    - New South Wales rehabilitation model of care framework.

Supporting health care workers

The Program Extension promoted state and territory initiated quality improvement events and activities focused on sepsis to encourage engagement with the activities. This included:

- NSW Health and Royal Australian College of General Practitioners' sepsis webinar
- Consumer information webinar hosted by Perth Children's Hospital

- National forum on paediatric sepsis hosted by Queensland Health
- The Queensland Paediatric Sepsis Network and Sepsis Australia coordinated two National paediatric sepsis forums ‘Best Care for Our Kids’.

Embedding sepsis awareness in health system communications

The Commission, TGI and state and territory stakeholders have worked to embed sepsis awareness messaging and the public awareness campaign resources and assets (survivor videos, sepsis facts and figures) into Department, Commission and state and territory communication libraries to ensure sepsis is communicated year-round, and not just on September 13 which is the day traditionally set aside as World Sepsis Day.

Through the Liaison Group, the Program Extension collaborated with each state and territory to include Paediatric Sepsis Awareness week in their messaging calendar for April 2025.

The Commission was also able to align 2024 World Sepsis Day (13 September) awareness campaign messaging with themes related to World Patient Safety Day (17 September).

Maintaining a strategic focus and evidence base for sepsis

Recommendation: The Australian and state and territory Governments should review the 2030 Global Sepsis Agenda and identify opportunities to embed and integrate sepsis into health system priority initiatives, including but not limited to the Global Agenda’s strategic priorities of pandemic preparedness, antimicrobial stewardship, disaster management, infection prevention and control, child and family health and vaccination programs.

Recommendation: The Australian and state and territory Governments should monitor the progress of contemporary research currently being undertaken about sepsis and recognising and responding to acute deterioration to ensure government funded programs and projects continue to be evidence informed. This includes emerging evidence about the importance of listening to parental/family/carers concern.

Targeted national public awareness campaign

Project 1 of the National Sepsis Program Extension 2023-25

Project background

The National Sepsis Program findings identified a continued need to build awareness in the community and among healthcare professionals to improve the prevention and early recognition of sepsis and recommended a renewed focus on public awareness in the Program Extension.

Although people can develop sepsis in hospital due to an acquired infection or a post-operative complication, most sepsis cases originate in the community. Community awareness of sepsis remains low however, with a 2020 national awareness survey conducted by TGI showing only 23 per cent of Australians could name just one symptom of sepsis.[5]

Project overview

Working closely with TGI and Sepsis Australia, the Commission procured the services of TBWA (trading as FleishmanHillard Australia) to design and deliver a national targeted public awareness campaign to coincide with World Sepsis Day 2024 (13 September annually).

The objectives of the public awareness campaign were to:

- Create and enhance sepsis web pages, resources and materials to reach populations most at risk
- Share quality and engaging information so that more people in Australia know that sepsis is a medical emergency
- Ensure people who are concerned about sepsis obtain helpful information
- Ensure people who are unwell with signs and symptoms of sepsis seek medical assistance by:

  - seeing their GP, midwife, Aboriginal Health Worker or other trusted clinician
  - contacting Healthdirect.
- Ensure people who remain unwell or are getting sicker seek urgent medical assistance by:
  - presenting to an Emergency Department
  - calling 000.

Methods

Sepsis Australia, health services stakeholders, key staff at the Commission, the Department and sepsis survivors were consulted to develop creative ideas to inform the public awareness campaign assets and approach.

The national public awareness campaign was live for approximately 7 weeks, centred around World Sepsis Day on 13 September 2024 and took a broad messaging approach to reach as many people as possible. The campaign leveraged existing key messaging and focused on word recognition and symptom recognition to create a behavioural intervention that would encourage people to ask, ‘could it be sepsis?’

Clinicians and sepsis survivors associated with Sepsis Australia, TGI, ACT Health and the Commission acted as campaign spokespeople in responding to interview requests from media. A small budget for paid media was used to amplify reach across several social media channels as well as engage the hero talent.

The Department, Commission, TGI and health services across Australia supported the campaign through their own social media channels and internal communications, and the Department briefed the Minister’s office. Sepsis Australia strengthened the campaign with the launch of new social media channels and state and territory health services coordinated additional activities focused on clinician awareness for World Sepsis Day, including Grand Rounds, sepsis pathway launches, morning teas and ward decorations.

The targeted national public awareness campaign included:

Tongue twister challenge

A social media tongue twister challenge which juxtaposed the seriousness of sepsis with a light-hearted challenge designed to quickly grab public and established media attention.

Campaign assets

- An engaging campaign video featuring four sepsis survivors
- Two additional videos focused on sepsis in First Nations people featuring Uncle Matt Priestley (who had been unable to participate in the campaign video due to Sorry Business)
- Social media content for Instagram, Facebook, LinkedIn, Twitter and Tik Tok to support the campaign and tongue twister challenge.

Informed media

- An authentic social media personality (hero talent), Ms Anna McEvoy, who was contracted to be the face of the campaign as a sepsis survivor with a strong social media profile. Ms McEvoy participated in the film and used her social platforms and podcast channel to promote World Sepsis Day and the sepsis challenge.

- Clinical spokespeople added credibility and authenticity to the campaign and delivered important sepsis information through interviews on TV, radio and online.
- Sepsis survivors told their stories to media outlets to elevate human interest, promote the challenge and reinforce the 'could it be sepsis?' message.
- A media release was distributed to a range of media outlets.
- A media pack containing comprehensive information, statistics and case information was provided to media channels to support story development on sepsis.

Updated public resources

- A comprehensive update of the Sepsis Australia website as a key resource.
- New content about sepsis on the Raising Children webpage of the Australian Parenting Resource Centre website.
- Refreshed content about sepsis on the Healthdirect website.
- Refreshed sepsis awareness resources on the Commission's website to build a future proof body of assets for sepsis awareness for use by anyone.
- Worked with state and territory representatives to develop new print and digital resources for health care workers and health services including posters, screensavers and brochures.

Stakeholder engagement

- Provided advice and worked with state and territory health services to coordinate additional activities focused on clinician awareness for local World Sepsis Day initiatives including educational events, social activities and sepsis pathway and protocol launches.
- Aligned the campaign messaging with themes related to World Patient Safety Day (17 September annually).
- Collaborated with Healthdirect to collate data on sepsis page visits during the campaign.
- Lighting up the National Carillion in Canberra on World Sepsis Day to raise awareness.
- Collaborated with each state and territory to include Paediatric Sepsis Awareness week in their messaging calendar for April 2025.

Managing unintended consequences

The program team identified that a large public awareness campaign may generate individual concern about sepsis which could result in a spike in demand for emergency services. The program team actively managed campaign messaging to drive audiences to Sepsis Australia to access reliable and useful information about sepsis or to Healthdirect if they had, or were concerned about, sepsis symptoms.

Supporting health care workers

While a targeted campaign to increase clinician awareness was out of scope for this project, the Commission was mindful to provide support messaging and resources for health care workers to prepare to respond to individuals with concerns about sepsis because of the public awareness campaign. Using the phrase, 'Listen, Look and Act to recognise sepsis or rule it out', these resources mirrored the campaign message, while reinforcing important elements of diagnostic safety practice.

Consistency of messaging between sepsis and antimicrobial stewardship

Given sepsis and antimicrobial stewardship messaging are closely aligned in improving public understanding about the importance of delivering the right antimicrobial for the right patient and stopping antibiotics when they are no longer necessary, the program team worked with the Commission's Antimicrobial Use and Resistance in Australia team to ensure the media pack and key messages developed for the campaign's clinical spokespeople were consistent and reinforced this important message.

Balancing the tone of the sepsis message

Pairing a light-hearted tongue twister challenge with the serious message about sepsis awareness and prevention was managed by the careful treatment of the sepsis survivor stories balanced with the survivors' genuine delight in participating in the challenge. This was a novel way to spread the word about sepsis. Other campaign assets highlighted the seriousness of sepsis and the experiences of the survivors.

Findings

The campaign was well received across Australia by sepsis survivors, health services, health professionals and the public. It was overwhelmingly successful with an estimated reach of 319 million, through 889 earned and social media placements, including strong multilingual coverage and First Nations engagement. Reach is defined as the potential viewership of the total pieces of earned coverage.

The campaign gained traction with mass media channels such as the ABC, Channel 9, News.com.au and was accessible to more focused media channels including Mamamia (women's media); SBS radio (multicultural programming) Bumma Bippera (First Nations media) and 2GB (older listeners).

Additionally, the Department reported high levels of engagement with its own World Sepsis Day social media content (15,000 impressions) and Facebook (8,000 impressions).

Campaign outcomes

The public awareness campaign was effective in:

- Increasing sepsis awareness in the general public and targeted demographics
- Increasing traffic to and engagement with Sepsis Australia
- Increasing traffic to Healthdirect.

Tongue twister challenge

FleishmanHillard reached out to social media content creators who were directly impacted by sepsis or were connected with the target audience and invited them to join the tongue twister challenge and inspire others to get involved. This generated additional influencer content, including from creators with between 6K and 2.5M followers, and saw the online conversation include sepsis survivors sharing their stories and other people unfamiliar with learning about sepsis.

Although the tongue twister challenge was originally intended to catch the attention of media outlets to generate earned interest, stakeholders across the project reported that it also helped with organisational engagement within health services as a simple, fun and effective way to talk about sepsis.

Careful messaging

Ensuring stakeholders from all perspectives were involved in the project was essential to crafting clear and compelling messaging to deliver a balance between increasing public messaging about sepsis and reaching key cohorts at risk of sepsis.

Public awareness campaigns can generate fear, and it was critical that the project partners managed any unintended consequences through careful planning and communication. To date there have been no reports from jurisdictions about an increase in unnecessary health service demand related to sepsis.

Powerful personal stories

It is well recognised that powerful personal stories are an effective method to capture people's attention and increase awareness and empathy. The strategic partnership with TGI and Sepsis Australia was instrumental in ensuring that lived experience of sepsis was central to the campaign. People with lived experience of sepsis have also shared the importance of being able to contribute to awareness and health systems quality improvement.

> **Sepsis survivor**
>
> "Days like RU OK and Daffodil Day have such a big media presence, this needs to happen for sepsis"

Reflections

Value of professional communication expertise

FleishmanHillard's expertise, creativity and dedicated time added significant value to the campaign which in-house skills and capacity could not have achieved. The campaign was shortlisted for an Australian communications industry award.

Using social influencers

Government agencies are cautious about using social media influencers as campaign assets. Several jurisdictions prohibit their use. For this campaign, this meant that jurisdictions had to create their own additional content which sign-posted to the sepsis challenge rather than promote the challenge directly, creating cost and time implications.

A social media influencer with lived experience of the subject matter can add significant value to any awareness campaign. Ms McEvoy's personal story of sepsis strengthened the human-interest factor and her existing media channels and followers expanded campaign reach significantly and contributed to strong media interest. There is an opportunity to consider how government agencies might make better use of social influencers.

Benefits of paid media versus earned media

Projects with limited budgets are often reliant on strategies for earned media, which is where public exposure is gained through word of mouth. The sepsis campaign had a strong return on investment from $30,000 budgeted for hero talent and paid media. The development of a paid media strategy may add value to future awareness raising activity and promotional campaigns.

Advantage of partnerships

The strength in coordinating efforts between the Department, Commission, TGI, Sepsis Australia and health services across Australia ensured the public awareness campaign was respected, comprehensive and innovative.

Future focus

Target messaging for groups at higher risk of sepsis

- This campaign took a broad messaging approach to reach as many people as possible. To reach specific communities and cohorts, a hyper-targeted activity stream would be beneficial to engage specific audience segments, allowing for tailored messaging aimed at key groups like pregnant women to deepen the campaign's impact and action among such demographics.
- To target segmented populations groups, non-traditional marketing, such as transport campaigns and magnet posters on ambulances, should be considered.
- To increase awareness of the sepsis message, leverage partnerships between government and health services to ensure pamphlets and posters about sepsis are on display in health services across Australia.

Tailor messages for different population groups

- The importance of word recognition, knowing the signs of sepsis and encouraging people to ask, "could it be sepsis?" will be a consistent theme for communicating and educating the risks of this time critical medical emergency. A challenge for future campaigns will be adapting the messages to reach general, targeted and segmented population groups.
- There continues to be value in using traditional print and news media to reach certain demographics, including older people.
- To make sepsis relevant to priority populations, future awareness campaigns should consider partnerships with Diabetes Australia, Kidney Health Australia and Cancer Australia to tailor and target sepsis messaging.

Embed sepsis communication assets across the health system

To ensure sepsis is communicated year-round, not just around World Sepsis Day, sepsis campaign resources and assets (survivor videos, sepsis facts and figures) should be embedded across acute, primary and community health systems.

Maintain a repository of lived experience case studies and testimonies

Sepsis Australia is a collaborative of consumers and state, territory and national organisations focused on sepsis and as such is an excellent resource to facilitate the inclusion of lived experience in the development of sepsis focused communication materials and policy. Powerful personal stories effectively capture people's attention, increase awareness and empathy, and highlight that anyone can be affected by sepsis.

Supporting Sepsis Australia to maintain and develop its library of case studies and testimonies could continuously provide health services with new angles to engage media and clinicians; and increase engagement to resonate deeper with diverse audiences.

Strengthen public health messaging

- Future campaigns should focus on prevention and early recognition to cover the full sepsis journey.
- Radio was an effective tool to reach broad and diverse demographics in the 2024 sepsis campaign. A radio strategy should be considered for future health campaigns.
- Health system stakeholders should look for opportunities to tie sepsis into other public health messaging such as antimicrobial stewardship, patient safety and diabetes, kidney and cancer.
- A future sepsis awareness campaign could consider appropriate social media influencers to drive awareness and engagement.

Maintaining a focus on sepsis awareness

Recommendation: The Australian Government should continue to support a national collaborative approach to maintain momentum in quality and safety improvement for sepsis. This includes sepsis awareness for the public, clinicians and health services.

Sepsis survivor

“We need increased awareness and more campaigns to educate the public”

Education and training for health care professionals and undergraduate students

Project 2 of the National Sepsis Program Extension 2023-25

Project background

The National Sepsis Program recommended the development and implementation of targeted educational resources on sepsis for health care professionals and students undertaking undergraduate health programs. These improve health professional's knowledge and understanding of sepsis and lead to better recognition, response and overall health outcomes for people with sepsis in Australia.

The Commission delivered two project elements as part of the education project which are detailed separately in this section:

- increase access to sepsis education and training for primary care health professionals
- progress understanding of sepsis in university curriculum in Australia.

Sepsis in Primary Care Learning Module

Project Overview

Project design and procurement

The initial aim for this project element was to develop, implement and evaluate targeted sepsis education resources for health professionals across primary and acute care and develop undergraduate curricula. A request for quote (RFQ) for these services received a poor response from the market.

Vendor feedback identified that the scope was too broad with too many different elements, and an inadequate timeframe and budget to achieve these aims. A second round of procurement with a revised scope focused solely on the education for primary care component, increased the project timeframe while retaining the original budget. Two vendors responded to the revised RFQ.

The Commission and TGI identified Medcast Pty Ltd as the preferred vendor for the revised project to deliver a Sepsis in Primary Care Learning Module.

Project deliverables

The contract involved:

- Research, analysis and consultation with health professionals, clinical educators and other relevant stakeholders in primary healthcare settings:
  - to understand sepsis educational needs and knowledge gaps
  - to understand how and where primary health professionals find out about and access sepsis resources
  - to understand the transition of care interface between primary and acute healthcare services in the context of escalation and referral of patients with sepsis from primary care settings to emergency departments.
- Developing strategies to streamline and simplify resource navigation and access for primary health professionals.
- Developing, distributing and evaluating an interactive online sepsis education bundle including case studies and sepsis clinical training resources (i.e., a primary care sepsis escalation pathway and ISBAR escalation template) for use in primary health settings, including:
  - General practices
  - Health care clinics
  - Urgent care clinics
  - First Nations health services, including Aboriginal Medical Services.

ISBAR is tool to support structured communication between health professionals.

ISBAR stands for: **I**ntroduction, **S**ituation, **B**ackground, **A**ssessment and **R**ecommendation

Pharmaceutical Benefits Scheme (PBS) prescriber's bag

An opportunity to engage with the Pharmaceutical Benefits Advisory Committee to propose the inclusion of Ceftriaxone (an important antibiotic in the treatment of sepsis) in the PBS prescriber's bag was added into the project scope as a valuable enabler for primary care clinicians. By including Ceftriaxone in the PBS prescriber's bag, GPs would have access to this critical medication for the treatment of patients with sepsis, particularly in remote locations or for patients who are experiencing social disadvantage.

The Commission is waiting for a response from the Advisory Committee once its review process has concluded. If the proposal is adopted, the Commission will work with the Advisory Committee to develop appropriate guidance to support the inclusion of Ceftriaxone in the PBS prescriber's bag.

Methods

The scope for this project element was managed by defining primary care to include primary health care services such as GP practices, Urgent Care Clinics and Aboriginal Community Controlled Health Services. Adopting a broader definition of primary care including community based aged and disability support services for example was rejected because it would

introduce significantly more learning criteria that could not be accommodated in a 1-hour learning module.

Consultation and engagement

Medcast consulted with Sepsis Australia Consumer Forum, the Program Extension's Oversight and Liaison Groups and a range of health service stakeholders to inform content development for the Sepsis in Primary Care Learning Module including:

- 164 health care professionals and 62 people with lived experience of sepsis completed a survey
- Interviews with two GPs and two Practice Nurses working in regional and remote settings and two First Nations clinicians.

Sepsis Australia facilitated consultation and engagement with the Australian Pharmacy Guild to inform the education content, although pharmacists were not specifically included as a target audience for the education module.

Six key learning needs were identified to inform the module and resource development:

1. Core topics: early recognition, red flags and vital sign interpretations; differentiating sepsis and escalation and communication protocols
2. Practical tools and pathways
3. Consideration of sepsis in rural and remote contexts
4. Incorporating cultural safety principles into practice
5. Post-sepsis syndrome
6. Enhancing clinical decision making.

> **Parent of a sepsis survivor**
>
> "Post-sepsis syndrome is real and varied, and patients and advocates need to be believed"

E-Learning Module

Sepsis Australia and several Oversight Group members participated in user testing of the one-hour online learning module with outcomes used to refine the module and resources, including practical guidance on standardised scripting for sepsis escalation using the ISBAR approach. The Sepsis in primary care e-learning module was launched on 14 May 2025. It is hosted on the Medcast website and:

- Prioritises practical, case-based scenarios tailored to primary care, paediatrics, postpartum care and rural and remote health settings
- Focuses education on red flags and differentiating between normal recovery and sepsis to identify early warning signs of sepsis
- Training on how to escalate effectively and manage sepsis with limited resources
- Is freely accessible with enrolment through the Medcast platform
- Provides one hour of Continuing Professional Development (CPD) recognition, including a reflective component which is now a GP CPD requirement.

Enrolment through Medcast is required to enable CPD point allocation for participants and data reporting to the Commission.

As of 4 August 2025, the e-learning module had 1589 registrations, with 481 of those completing the full module. The net promoter score (NPS) is a way to measure participant satisfaction. In the education sector the benchmark is NPS 35, with scores over 50 considered to indicate strong and engaging content relevant to learning needs. The NPS for the sepsis modules was 61. The content about Post-Sepsis Syndrome was particularly well received.

Downloadable resources

Three new downloadable resources were developed as standardised tools for use by clinicians to support and embed sepsis awareness in clinical practice. The figures in brackets represent the number of times each resource had been downloaded as of 4 August 2025:

- Could it be sepsis - Primary care screening tool (1012)
- The sepsis six - Primary care management tool (794)
- Post-sepsis Syndrome screening tool (540)

Health worker

"Sometimes you just know when someone looks very sick, but it's about having the criteria to back it up"

Webinar

A one-hour interactive live webinar about sepsis in primary care was held on 18 June 2025 and recorded for future access on the Medcast website as a free accredited CPD activity for medical practitioners, nurses and paramedics. 237 people participated in the live webinar. Over half of those attending the webinar were nurses.

Marketing and promotion

To support the launch of the e-learning module and resources, the program team briefed the Department and state and territory health departments and several primary care stakeholders. A 1-minute promotional video and electronic direct mail (EDM) content for use in newsletters, social media posts and other member and subscriber communications were distributed. This approach aimed to maximise potential reach and included targeted engagement with:

- Primary Health Network Cooperative
- Australian Practice Nurses Association
- College of Emergency Nursing Australasia (urgent care centre workforce)
- Australian Indigenous Doctors Association
- National Aboriginal Community Controlled Health Organisation
- Royal Australian College of General Practitioners

The Commission distributed an EDM to 14,313 subscribers on 14 May 2025. The EDM had a 30% open rate (4294 subscribers) and 11% click rate (477 subscribers).

The Department also promoted the e-learning though the Chief Nursing and Medical Officer's newsletter distributed in May 2025.

Findings

Improved access to resources

This project element has been effective in addressing gaps in the availability of evidence-based sepsis education resources for primary care clinicians in Australia with almost 1600 clinicians accessing the Medcast resources in under 3 months. The project element has also been effective in promoting access to existing education and training resources, such as the Commission's Sepsis Clinical Care Standard and existing state and territory sepsis resources and programs.

Supporting practice change

The Program Extension's Oversight Group were instrumental in driving the development of standardised practical tools for use by clinicians, alongside the education module, to support the effectiveness of the learning and embed sepsis awareness in practice. Feedback from those who have completed the online learning places a high value on the module interactivity, and post-sepsis syndrome content. Screening tools and other downloadable resources were also welcomed as demonstrated in the number of downloads to date (>2346).

Ongoing currency and suggested improvements of education module

Learners who completed the module provided the following feedback to improve the module:

- Deepen Post-Sepsis Syndrome content, including providing more guidance on referral pathways, psychosocial impacts and long-term care planning.
- Enhance mobile and user experience to address navigation and interactive issues.
- Include more video-based learning including simulations, case walkthroughs and survivor testimonials to reinforce concepts visually.
- Add clinical depth for advanced learners by including more information on antibiotic selection and stewardship, fluid resuscitation and blood culture interpretation and managing sepsis in patients with complex needs such as those with chronic illness or who are immunocompromised.
- Customise for diverse clinical roles such as enrolled nurses, pharmacists, midwives and non-prescribing clinicians and consider more differentiated case examples for metropolitan versus remote settings.

Ongoing hosting of education module

A transition plan is in place to ensure the transfer of hosting and content review arrangements.

Future focus

Leverage learnings from the development of the primary care module to improve current learning modules and create similar sepsis education modules for other care settings, including pharmacists, allied health and primary and community care-based services such as residential aged care and disability support services and for emerging digital and telehealth-based health services.

Consider workforce and health system strategies for inclusion in sepsis safety netting. For example, for patients and families from non-English speaking backgrounds, First Nations peoples and people with disability; and addressing current and future workforce knowledge and skills in multidisciplinary teams, communication and record keeping, as well as transitions of care, comprehensive care and recognising and responding to the deteriorating patient.

Health worker

"It's the first couple of hours with fluids, antibiotics, escalation. That's where we make the difference"

Sepsis in pre-registration curricula survey

Project Overview

Project design and deliverables

The initial aim for this project element involved sepsis subject curriculum development for medical, nursing and allied health undergraduate programs in Australia. A key feature of the Commission's approach to quality and safety improvement is that work is evidence informed. Initial consultation and analysis by the program team around the curriculum development activity demonstrated that there was insufficient evidence to inform the work. The Commission re-scoped the project element to focus on identifying the knowledge gaps and understanding the extent to which sepsis is incorporated into existing undergraduate education and training.

The Commission completed this project element in-house. TGI and representatives from the Program Extension's Oversight and Liaison Groups assisted the Commission with direction on data collection and analysis of themes associated with sepsis in health curricula.

Stakeholders involved in undergraduate health professional education and training and curriculum development in medical, nursing and allied health undergraduate programs were consulted to:

- Identify opportunities to increase awareness of the Sepsis Clinical Care Standard, clinical pathways and supporting education and training resources within interprofessional undergraduate health programs.
- Consider how existing sepsis education and training resources can be promoted or adapted for undergraduate audiences and incorporated within existing undergraduate curriculum.
- Identify opportunities for future work in sepsis education and training within interprofessional undergraduate health programs.

Methods

The Commission's approach to understanding sepsis teaching in university curricula was informed by work already undertaken by the Queensland adult sepsis network and Clinical Excellence Queensland. This included learning from two published research articles [6,7] and successful engagement with state-based universities delivering medical and nursing training.

An online survey was developed to obtain a national view of how sepsis is included in university curricula. The target audience for the survey was curricula developers and course leads of pre-registration medicine, nursing and paramedicine courses offered by Australian universities and institutes as listed on the Australian Health Practitioner Regulation Agency website.[8] The survey had the potential to reach people responsible for 120 approved programs of study.

The survey contained 27 questions covering where and how sepsis is included in curricula; approaches to sepsis teaching and assessment; governance and review; partnerships and

collaborations; and a confidence rating scale about the work readiness of graduates to be able to recognise and respond to sepsis. It also included a question to identify those institutions offering pre-vocational curriculum for medical graduates.

The survey was distributed through four peak organisations:

- Medical Deans Australia and New Zealand
- College of Deans, Nursing and Midwifery, Australia and New Zealand
- Australasian Council of Paramedicine Deans
- Confederation of Post Graduate Medical Education Councils.

> **Sepsis survivor**
>
> "They (clinicians) need education. They need sepsis to be on their radars"

Findings

19 responses to the survey were received, with 12 fully completed. Responses covered medicine, nursing and paramedicine undergraduate programs with the most responses (n=8) from paramedicine. No responses were received about pre-vocational curricula.

The low survey response rate means there is insufficient data to support a detailed analysis of how sepsis is treated in programs of study for pre-registration medicine, nursing and paramedicine. High level insights from the survey results are discussed below.

Sepsis inclusion in programs of study

Sepsis was included in all 12 programs of study, and in most of the cases, sepsis content was included in several different topics and years within individual programs. This suggests that there is good recognition that sepsis awareness is required across health care services, and not just in emergency or critical care settings.

Curricula gaps that affect work readiness

The survey results indicated that the definitions, signs and symptoms, time critical treatments, risk factors and clinical pathways associated with sepsis are very consistent across the programs. However, recording sepsis in notes, communicating with patients and families, discharge planning and understanding post-sepsis syndrome were consistently missing from curricula which indicates there is limited consideration of sepsis in the context of the patient experience and transitions of care.

> **Bereaved person**
>
> "That is my big thing… the lack of sharing of critical information that allows (people) to make informed decisions or know what questions to ask or to understand what is happening"

Curricula review processes

Curricula review processes appear well established with changes to state and territory sepsis clinical pathways being the most common source of information used to inform curricula reviews. Other forms of consultation and engagement with various health sector stakeholders were also used to inform curricula reviews.

Teaching and assessment

Survey responses reported consistent teaching and assessment methods across programs of study in line with clinical education approaches. The survey responses identified that simulations and case-based tutorials were the most effective teaching methods.

Opportunities for curricula improvement

The three most popular opportunities for curricula improvement identified in the survey responses were:

- A national foundational e-module (n=9)
- Free and open access to state and territory models and clinical pathways (n=7)
- Support to partner with sepsis survivors to embed lived experience (n=7).

Partnerships and collaboration

State and territory health services and clinicians and alumni were the most frequently cited partnerships used to strengthen sepsis teaching and curricula content in the survey responses. Logistical pressures and resources required to maintain partnerships were a significant barrier to other forms of collaboration, including partnering with people with lived experience. Despite this, all responders saw value in investing in and expanding partnerships and collaborations, particularly within their own organisation and with other universities or educational institutions.

Summary of survey results

The results highlight themes that may guide future thinking and further discussion about how to enhance pre-registration curricula to better prepare new clinicians to appropriately recognise and respond to sepsis.

Further engagement with the university sector through established Deans associations is recommended to test the results and analysis of this report and to explore opportunities and ideas.

> **Health worker**
>
> “Patient stories are particularly impactful for the staff to go ‘this is why this is purposeful’”

Future focus

- A foundational sepsis curriculum for medical, nursing and paramedicine programs of study that focuses on the development of critical thinking and human factors as essential elements for sepsis recognition in busy clinical settings. This could include a simulation package that could be adapted for pre-registration and pre-vocational clinicians.
- Address challenges faced by curriculum developers and managers around the inclusion of sepsis content in curricula in Australian medical, nursing and paramedicine courses.
- Strengthen undergraduate and prevocational teaching focused on sepsis, including lived experience partnerships.
- Promote the importance of spiralling curriculum across curricula and into clinical practice.
- Consider developing allied health curricula and content to prepare students to recognise, respond to and manage sepsis in rural and remote areas.

Maintaining a sepsis ready clinical workforce

Recommendation: The Pharmaceutical Benefits Advisory Committee should liaise with the Commission about clinical guidelines and monitoring criteria for the inclusion of Ceftriaxone in the PBS Prescriber's bag.

Recommendation: The Australian Government should continue to invest in and support a national collaborative approach to maintain momentum in quality and safety improvement for sepsis. This includes:

a. maintaining focus on sepsis awareness for the public, clinicians and health services

b. understanding variation in care across Australia

c. strengthening engagement with teaching organisations to ensure the future clinical work force can safely recognise, respond to and manage sepsis

d. expanding and developing educational resources for health care workers in acute and primary care settings, including for pharmacists and allied health professionals, for the aged care and disability service sectors and for emerging digital and telehealth models of care

e. developing sepsis snapshot reports to ensure health services have access to new and useful data while work to implement the National Sepsis Data Plan progresses.

Sepsis survivor

"Be open and honest. Explain why the patient might feel as they do. Don't be dismissive"

Coordinated sepsis care and post-sepsis support

Project 3 of the National Sepsis Program Extension 2023-25

Project background

The Sepsis Clinical Care Standard (CCS)[9] was developed as part of the National Sepsis Program and launched in June 2022. The Sepsis CCS includes seven quality statements which describe the key components of care that a patient presenting with signs and symptoms of sepsis should receive so that the risk of death or ongoing morbidity is reduced. The final four quality statements focus on:

- coordinated in-hospital care
- patient and carer education and information
- transitions of care
- care after hospital and survivorship.

This project was initially designed to evaluate the implementation of actions taken by Australian health services to meet the seven Sepsis CCS quality statements, including the effectiveness of the recommended sepsis coordinator role and the Commission's discharge coordination tool. This evaluation would inform work to develop and implement a nationally recognised post-sepsis support model of care for sepsis survivors and a model of bereavement for those who experience a sepsis loss.

Sepsis survivor

"A multidisciplinary approach that involved me in the decision-making processes was very effective for my recovery"

Project overview

Project deliverables

Early project scoping and consultation around how Australian hospitals (both public and private) are progressing in implementing the Sepsis CCS identified that the initial focus has been on improving recognition and treatment (quality statements 1 to 3) and on collecting data to support monitoring, reporting and auditing. Some hospitals and health services are now in a position of readiness to implement quality statements 4-7.

Given the constraints on hospitals in implementing the Sepsis CCS, the project scope was revised, in consultation with the Department, to examine how health services can provide greater information and clarity for patients, their families and healthcare professionals about options and pathways for high quality evidence based post-sepsis care and ensure supported transition back into the community to optimise recovery.

Where models of care were in place or being developed, the program team focused on ensuring these were incorporated into a Model of Care Framework and companion resources to inform and support state and territory health services as they progress the implementation of the Sepsis CCS.

The Model of Care Framework did not consider First Nations perspectives. This was beyond the scope of the Program Extension.

ARTD Consultants Pty Ltd were identified as the preferred supplier through a formal procurement process.

Methods

ARTD Consultants engaged stakeholders, drew on existing best practice and research initiatives and available data to develop a consultation report to inform the Model of Care and business case for investment in the coordination of care and post-sepsis support in Australia. This included mapping the sepsis patient journey and reviewing literature on models of care in Australia and overseas to identify existing care models for sepsis coordination and post-sepsis support and their key elements.

The project also examined data from the Australian and New Zealand Intensive Care Society's annual Critical Care Resource survey which includes specific questions about sepsis coordination. The data identified that the development of sepsis coordination services and models within health services is in its infancy.

The Program Extension's Oversight and Liaison Groups provided valuable insight and feedback to the consultants throughout the project.

Consultation

Consultation to inform the project involved:

- 44 people with lived experience of sepsis responding to a survey
- 7 semi-structured interviews with people bereaved by sepsis
- 390 health stakeholders completing a survey
- 35 health stakeholders involved in focus groups and interviews
- 13 sepsis survivors, family members and carers taking part in focus groups.

Model of Care Framework

The Model of Care Framework for sepsis care coordination and post-sepsis support has been developed to guide Australian health services in the implementation of the Sepsis CCS by identifying the elements required for effective care in local contexts.

This project confirmed that sepsis coordination is complex because patients can be admitted through a range of different teams and specialities and also transition through multiple points of care. It is therefore important that a model of care is flexible and adaptable to encourage its take up and implementation, especially in rural and remote contexts.

The Model of Care Framework recognises the importance of integrating the coordination of care and post-sepsis support into existing health service sepsis pathways which has resource implications at the operational level. A business case for investment in sepsis care, discussed below, was developed to address this.

Table 2 details the elements of the Model of Care Framework and how these are addressed.

Table 2: Model of Care Framework elements

Model of Care Framework element	How Framework addresses the element
Principles	
Represent the core of what people with lived experience of sepsis want from their healthcare providers.	Focus on listening, communication, collaboration, open disclosure and empathy.
Transitions of care	
Describes the critical points of transition through the health system where improvements in coordination of care are needed.	Focus on information, communication and transitions of care.
Better care initiatives	
Describes elements of care coordination, post-sepsis support and bereavement support, which, overall, are not yet consistently delivered, and where continued development is needed.	Focus on information, communication, planning, collaboration and coordination.
Key clinical priorities	
Are system activities which are undertaken to some extent within the system, but in an ad hoc or inconsistent way. They are often reliant on an individual's knowledge or practice.	Focus on systematisation and integration in hospital and primary healthcare settings.

Interactive PDF

A graphic design firm specialising in health, Wellmark Pty Ltd, was contracted to create an Interactive model of care framework to effectively illustrate its practical use by health services and sepsis survivors.

The interactive PDF of the Model of Care Framework outlines the complex interaction of health system functions as people with sepsis and their families move through key transitions. Importantly the PDF captures the bifurcation required for the Model of Care to ensure

consistent and appropriate coordination and support when people survive sepsis and when they do not.

Business Case

The Business Case provides an economic rationale for investment in coordination of care and post-sepsis support in Australia. It provides evidence of the significant cost savings, reduction in hospital admissions and improvements in care that local investment in sepsis care coordination and support could deliver.

The Model of Care Framework and Business Case are supported and informed by a Supporting Evidence and Implementation Ideas document which provides a detailed overview of the project's consultation and evidence review and inform the statements and claims. It also illustrates ways in which the Model of Care Framework may be implemented in practice by drawing on existing examples of coordination and navigation models and approaches that might be extendable or adapted for sepsis. ARTD also provided a detailed consultation report from which quotes from sepsis survivors were sourced for this final report.

Sepsis survivor

"I cannot fault the treatment in ICU, but once on the ward, the wheels fell off"

Findings

This project makes a strong and compelling case for health services to improve sepsis care coordination and post-sepsis support. This was confirmed by sepsis quality and safety leads who expressed the high value they saw in the model of care framework and business case which is summarised in the theory of change outlined in Figure 2.

Figure 2: Theory of change

IF WE

Provide access to coordinated care and post-sepsis supports

Address gaps in education and training about sepsis and post-sepsis syndrome

WE CAN ACHIEVE

Early recognition and treatment of sepsis and post-sepsis syndrome

Coordination and collaboration through transitions of care

Improved communication between consumers and medical professionals

LEADING TO

Improved understanding of and adherence to medical advice after discharge

More efficient and effective use of primary health

Reduced preventable hospitalisations

Reduced trauma for bereaved family members

OVER THE LONGER TERM CREATING

Faster recovery times and outcomes

Improved health, wellbeing and socio-economic outcomes

Reductions to the costs of providing health care.

Complimentary work

During this project, TGI was successful in securing a National Health and Medical Research Council grant to undertake a more detailed development, implementation and evaluation of a Model of Care for sepsis. The program team ensured that the data collected as part of this project and this project's deliverables will compliment and inform the more extensive translational research objectives of TGI, while also being valuable to state and territory health services now. All project materials have been shared with TGI to support its ongoing research.

Sepsis survivor

"In hospital, my surgeon took the time to explain the long and arduous journey ahead"

Future focus

- Provide more targeted support to state and territory health services in implementing the Sepsis Clinical Care Standard through the development of resources, lived experience examples and case studies.

- Provide support to health service organisations to adapt the Model of Care Framework for sepsis coordination and post-sepsis support to the local contexts including ways to strengthen transitions of care and discharge planning.
- Consult on the need to develop a model of care framework or model of care elements for sepsis coordination and post-sepsis support for First Nations people, led by a community-controlled organisation.

Improving sepsis coordination and post-sepsis support

Recommendation: State and territory health services should use the sepsis coordination and post-sepsis support model of care resources developed as part of the Program Extension to implement Quality Statements 4-7 of the Sepsis Clinical Care Standard and strengthen local care coordination and post-sepsis support.

Health worker

"Sepsis pathways are 'game-changers' when implemented successfully to streamline and enhance coordination"

Data collection tools for quality improvement

Project 4 of the National Sepsis Program Extension 2023-25

Project background

The quality and quantity of existing sepsis data in Australia is insufficient to provide a comprehensive picture of sepsis to health services to inform their ability to plan and evaluate health care delivery and guide clinical practice as part of quality improvement.

An epidemiological analysis as part of the National Sepsis Program and a small-scale medical record audit of sepsis cases by the Commission identified the need for strategies to improve clinical documentation and coding of sepsis or suspected sepsis in patient medical records and discharge summaries nation-wide.

Defining the data problem

The quality of national sepsis data relies on:

- Consistent recognition, documentation, reporting and coding of sepsis
- Access to comprehensive contemporary data about patients with sepsis
- Data collection and management, quality monitoring and improvement processes.

Measuring sepsis and sepsis outcomes is challenging because:

- Diagnosis of sepsis is difficult and confirmed diagnoses of sepsis is inconsistently documented
- There are a large and complex number of differing sepsis codes
- There are limitations in the use of International Classification of Diseases (ICD) codes to study epidemiology
- There is variation in coding practice
- There are two approaches to sepsis measurement, both with limitations

- There are data gaps
- There is no national sepsis data set or measurement framework.

Sepsis survivor

"They (clinicians) are still reluctant to put that label 'sepsis' for fear that they will be seen as a bit catastrophic or overreacting"

Project overview

This project aimed to improve the quality and quantity of sepsis data collection, coding and reporting to better understand the true burden of sepsis and to inform strategies aimed at improving early detection, treatment and outcomes.

The project involved:

Revised epidemiology report

Building on the Commission's 2020 'Epidemiology of Sepsis in Australian Public Hospitals' report[10], the Commission conducted an analysis to better understand the sepsis patient journey in public admitted care and to provide Australian health services with updated epidemiological data about sepsis.

A national sepsis data plan

The development of a national sepsis data plan to identify recommendations to inform the strategic direction and timeline of work required to ensure better sepsis data identification, storage, access, integration and governance in Australia.

The national sepsis data plan:

- Has focused, tangible and measurable goals to support quality improvement
- Contains strategies to standardise the identification and management of sepsis data
- Is informed by research and quality improvement projects focused on strengthening sepsis data.

New and updated existing data measurement tools and guidance

The initial project scope sought to create and update existing data measurement tools and guidance to support accurate sepsis data collection in Australian care settings. Project planning and stakeholder consultation identified that a national sepsis data strategy to clarify the sepsis data problem in Australia would add more value in the long term and that an updated epidemiology report would contribute to the evidence base informing sepsis quality improvement in the short-term.

Methods

Epidemiology Report

Developed inhouse by the Commission's technical experts, 'A National Analysis of the Sepsis Patient Journey in Australian Public Hospital Admitted Care' report (the Epidemiology Report), due to be published on 10 September 2025 in the lead up to World Sepsis Day, investigated trends in sepsis separations in Australia public hospitals.

The analysis looked at health outcomes for patients who received admitted care in public hospitals between 2013-14 and 2022-23, who were coded with at least one explicit sepsis diagnosis, and examined pre and post-sepsis separations for patients with a sepsis diagnosis within a 30-day window.

Understanding the sepsis patient journey by examining before and after sepsis admissions highlights parts of the public hospital system where targeted improvement in sepsis recognition and response may add the most value. This includes delivering better patient outcomes and in doing so decreasing the burden of sepsis on health systems.

The findings of the Epidemiology Report informed the national sepsis data plan project and other projects within the Program Extension including the coordinated sepsis care and post-sepsis support project and the improving sepsis in First Nations peoples' project.

National sepsis data plan

The program team identified Callida Consulting Pty Ltd as the preferred provider to develop a national sepsis data plan. The project involved:

- Creation of a vision statement for a National Sepsis Data plan
- Consultation with clinicians, data specialists, public health officials and those with lived experience of sepsis to inform the national sepsis data plan and captured in a stakeholder report
- A gap analysis
- Development of a national sepsis data plan.

A Technical Advisory Group, with representatives from all Australian jurisdictions, was established to support and inform the development of the national sepsis data plan. The role and membership of the Technical Advisory Group is provided at **Appendix 3**.

Findings

Epidemiology Report

The Epidemiology Report indicates the prevalence and impact of sepsis is significantly greater than previously reported estimates, with reported sepsis separations from 2012-13 to 2022-23 increasing to 84,000 separations per year, a significant increase on the previously reported rate of 55,000 per year. In 2022-23, one in seven sepsis cases in Australia resulted in a hospital death.

While the methodology and analysis of the report means that the new figures are not directly comparable to previous global estimates (due to differences in how sepsis has been measured), the data is consistent with contemporary global estimates and emerging Australian research.

Average cost of sepsis separations has increased

The report shows that the estimated averaged cost for sepsis separations in Australia has increased by 50%, from $20,934 (2013-14) to $31,440 (2022-23). 30-day all-cause readmissions following sepsis have also increased by 22%, from $14,748 (2015-16) to $17,954 (2022-23).

High impact of sepsis on First Nations health

The report's analysis of 2022-23 saw 5,753 sepsis separations for Aboriginal or Torres Strait Islander patients. The Australian Bureau of Statistics' medium series projection for Aboriginal

or Torres Strait Islander population was over 1 million (as at 30 June 2022). This translates to approximately six sepsis separations per 1,000 Aboriginal or Torres Strait Islander people, double that of the Australian national rate.

People with disability may be at greater risk of sepsis

The Australian Institute of Health and Welfare's (AIHW) People with disability in Australia Chronic conditions web report notes that 50% (or 2.8 million) of people with at least one of eight pre-selected chronic conditions also have disability.[11] Diabetes is one of the chronic conditions being monitored by the AIHW and the Epidemiology Report shows that one in three hospitalisations for sepsis also involved a patient with diabetes.

Older people are at higher risk of sepsis

Analysis completed as part of the Epidemiology Report confirmed that older people and aged care residents are more likely to be admitted to hospital and treated for sepsis.

Higher incidence of sepsis in people living with chronic illness

The report provides important insights on the higher incidence of sepsis for those living with chronic illness such as diabetes or kidney disease and for those with low immunity such as people living with cancer. Patients with chronic and complex health conditions are at greater risk of sepsis and are harder to treat.

Social determinants appear to affect readmission risk

Hospital transfer data analysed to inform the Epidemiology Report suggests that rural living and higher socio-economic disadvantage are important risk factors associated with 30-day readmission to hospital after sepsis. Of people who returned to hospital in the 30 days after sepsis, at least one in five were treated for sepsis again.

Sepsis survivor

"Small towns like where I live have nothing"

Potential for collaboration to reach priority groups

The Epidemiology Report identified that partnerships between the National Sepsis Program and chronic disease associations such as Diabetes Australia, Kidney Health Australia and Cancer Australia may help to ensure that future sepsis awareness efforts reach those most at risk.

Health services should also consider targeted quality improvement initiatives in chronic disease services and clinics.

Value of jurisdictional epidemiology analysis

The Epidemiology Report did not compare differences between Australian states and territories however the insights suggest that jurisdictions may benefit from replicating the search parameters of the Epidemiology Report to obtain locally comparable data.

Jurisdictions could also consider target subgroups, exploring local variation in hospital, geographic and patient level data to identify opportunities for local quality improvement including ways to strengthen health equity.

Tailored analysis of specific populations may also help health services better assess the prevalence and impact of sepsis on those groups. This includes paediatric and neonatal

cohorts to ensure that the insights about risk factors are not masked by the weight of adult patient data.

Recommendations around communication and transfer of care

The Epidemiology Report recommends that the identification and management of complex infection cases is improved, and the better transfer of information across hospital systems may equip health services to evaluate the likelihood of a patient developing sepsis and/or mitigate a subsequent sepsis hospitalisation.

Recommendations to inform the development of the national sepsis data plan

The Epidemiology Report highlighted current data limitations for consideration in the development of the national sepsis data plan, including recommendations to enhance the quality and utility of sepsis data through:

- consensus on the exact code combinations to define sepsis
- inclusion of recommended 'Minimum Core Set of Cultural and Language Indicators'
- data linkage including mortality sources, private hospital data, emergency department presentations and post-hospital follow up care.

National sepsis data plan

A high-level assessment of the current state of sepsis data, the challenges to improve sepsis data and the opportunities to do so was informed by information collected through a national data request and stakeholder consultation. The key findings of that assessment are detailed in a strategic report and are highlighted in Figure 3 below.

Figure 3: Key findings in relation to sepsis data in Australia

- Consistent collection practices, less restrictive sharing and siloing, and strategic investment is required to improve the quality and cohesion of Australian sepsis data.
- Successful national data sets, such as that developed by ANZICS, demonstrates that the complex challenges associated with inter-jurisdictional contexts and systems maturity are surmountable to realise an effective national data strategy.
- Progress is being realised at a local level, indicating an appetite among medical professionals to see and drive change. This progress must be effectively funded to realise national change.
- There is a significant gap in the collection of qualitative experience and outcomes measures in the data ecosystem, and as a result, data on the lived experience of sepsis is often omitted from analysis.
- Inter-jurisdictional commitment, strategic sponsorship and investment, and the participation of those with lived experience of sepsis, is required to improve national quality and safety data for sepsis.

Framework for a national sepsis data strategy and a five-year plan

The report proposes that a national sepsis data strategy is realised through four key strategic pillars:

1. Effective data **governance**, to ensure effective oversight of a minimum national dataset and its development

2. Improvement to **data quality and collection**, to realise a robust and longitudinal national clinical registry
3. Uplift to ICT **infrastructure**, to support increased and improved data storage, sharing, and structure.
4. Exploring data **linkage** opportunities, to ensure that fragmented datasets are brought together to realise the intent of a national clinical registry.

The report identifies three key enabling factors to realise success against these pillars:

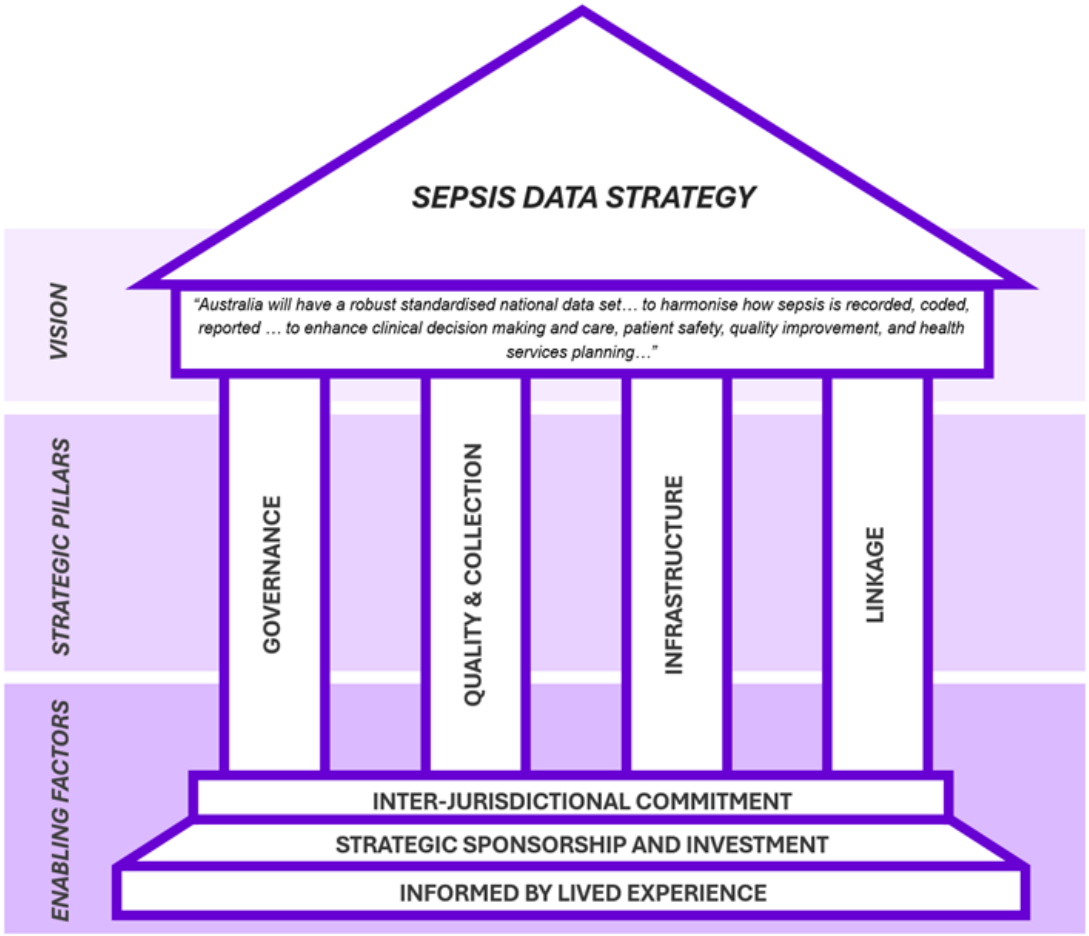
1. **Inter-jurisdictional commitment** and buy-in to the realisation of a national data strategy
2. **Strategic sponsorship and investment** to realise incremental improvements and increased advocacy within federal health settings
3. Centring consumer participation into the development of the dataset to ensure that it supports those with, and **is informed by, a lived experience** of sepsis.

Figure 4 shows the interrelation between the strategic pillars and enabling factors in realising the vision for sepsis data and the proposed strategy.

The strategy has been framed within a five-year timeline recognising that several dependencies may warrant choosing an alternate time horizon for several actions.

Appendix 5 outlines a five year implementation plan.

Figure 4: Sepsis data strategy



Future focus

- Implementation of the National Sepsis Data plan, including formalised data governance and ethics to support data linkage, should be led by a national integration authority.
- Continue to invest in sepsis research and use the results to inform health system improvements.
- Continue to develop epidemiology and snapshot reports to measure and drive quality improvement.

Health worker

"There might not be a perfect answer, but there will be a consistent answer. If we start comparing [imperfect sepsis data] in a consistent way, then we might get something meaningful"

Maintaining the evidence to strengthen sepsis outcomes

Recommendation: State and territory health services should consider replicating the search criteria from the Sepsis Epidemiology report to better understand the burden of sepsis on local health care systems and opportunities to strengthen sepsis prevention, recognition and management.

Recommendation: The Australian Government should appoint a lead agency to drive the implementation of the National Sepsis Data Plan.

Recommendation: The Australian Government should continue to support a national collaborative approach to maintain momentum in quality and safety improvement for sepsis including:

- understanding variations in care across Australia
- the development of sepsis snapshot reports to ensure health services have access to new and useful data while work to implement the national sepsis data plan progresses.

Health worker

"I'd love to see (our local) complex needs coordination program expanded into post-sepsis care to enable collaborative discharge planning. It's important not to reinvent the wheel"

Improving sepsis recognition in First Nations peoples

Project 5 of the National Sepsis Program Extension 2023-25

Project background

First Nations peoples are disproportionally affected by sepsis with the age-standardised incidence rate for sepsis reported to be 1.7 times higher among First Nations people than other Australians across all age group (apart from the youngest patients <1 year old).[11] The Epidemiology Report produced as part of the Program Extension highlighted that in 2022-23, hospitalisation of First Nations peoples due to sepsis was double the rate of non-indigenous peoples.[1]

The first National Sepsis Program recommended further investigation of sepsis recognition and management be prioritised for high-risk populations, including First Nations peoples.

Project five of the Program Extension was established to understand the impact of sepsis on First Nations peoples to identify the key factors leading to the disproportionate impact of sepsis outcomes and to support the development of targeted strategies to address these.

Health worker

"Nearly every extended family in our catchment knows of someone who has had sepsis, and most will know of an extended family member who has died from sepsis"

Project overview

Planning

The initial proposal for this project developed in November 2023 set out a schedule of activities to complete literature and data analysis to inform the development of culturally appropriate education, tools and resources. However, in late 2023 and early 2024 several

events led the Commission to pause and rethink this approach to ensure that the work was not jumping too quickly to solutions without spending the time required to listen and understand the issues:

- A preliminary environmental scan to inform procurement revealed a lack of tangible data or an established evidence base to inform analysis about the drivers of poor health outcomes for First Nations peoples with sepsis.
- The Productivity Commission's review of the National Agreement on Closing the Gap noted the lack of power-sharing for shared-decision making and failure to acknowledge that First Nations people know what is best for their communities as 'persistent barriers to progressing the Agreement's Priority Reforms'.[13]
- The Aboriginal Health and Medical Research Council of NSW Indigenous Health Summit called on government commissioning practices to move beyond top-down and participatory approaches to consider co-design, delegative and Indigenous led models and to put Indigenous ways of doing, knowing and being into all aspects of health system research, policy, design and delivery.[14]

The project plan was significantly rescoped. The proposed new approach was discussed and tested with First Nations clinicians and researchers between March and June 2024 and approved for implementation in July 2024.

Purpose

The purpose of this project was to understand the drivers of sepsis in First Nations peoples by:

- Establishing an authentic, qualitative evidence base, reflective of the stories and experiences of First Nations people affected by sepsis.
- Working with a First Nations community to listen to and understand their priorities and develop local strategies to improve sepsis outcomes.

> **Bereaved person**
>
> "A lot of people in community never even heard of this word sepsis. It don't care what race you are, it don't care what nationality you are"

Procurement

Potential suppliers were identified from Supply Nation and a First Nations led procurement panel, supported by the program team, was formed to consider proposals and recommend a preferred supplier. Indigenous Professional Services (IPS) Management Consulting, a majority First Nations owned and led consultancy based in Western Australia (WA) was contracted to lead this project.

Methods

A pilot approach

The project was framed as a small-scale pilot to enable the project team to test and reflect on a previously untested method and consider opportunities for scaling or replication in the future. This approach also reflected the reduced project timeframe available due to the change in focus and additional planning and engagement.

Working with IPS, a single location in WA was identified as a possible place at which On Country engagement could take place. The idea of a single location was tested with and supported by First Nations organisations. An important caveat to this was that the unique experiences of a focus community should not be used to infer or extrapolate shared or common experiences about sepsis for other distinct First Nations communities.

A cultural safety charter

IPS facilitated a workshop with the Commission, the Department and Sepsis Australia to create a guiding cultural safety charter for the project to frame the understanding of cultural safety and consider what that means practically in project implementation. The charter (**Appendix 6**) considers cultural safety definitions, strategies and guidance on power imbalance, cultural load, relationships and reciprocity and the need to learn and respect local cultural protocols. The charter provided guidance for the program team and partners (the majority of whom were non-indigenous) about important elements of practice including strengths based versus deficit language, conscious and unconscious bias, engagement with government in the context of current and historical experiences of colonialisation, and respect.

Scoping literature review

IPS completed a scoping literature review examining the experiences of sepsis by First Nations peoples. The research strategy combined a review of existing health and wellbeing frameworks developed to promote the health and wellbeing of First Nations peoples with an Ovid MEDLINE data search focusing on three domains for sepsis – recognition, response and outcomes.

Three themes to guide healthcare systems in managing sepsis in First Nations peoples emerged in the literature review as presented in Table 3.

Table 3: Themes to guide healthcare systems in managing sepsis in First Nations peoples

Preventive Action	Health Care System Performance	Targeting at Risk Populations
Promoting wellness	Culturally informed practice	Awareness in high-risk groups and co-morbidities
Building resilience and capacity	Enabling workforce and workforce development	Accessible assistance
Sociodemographic, cultural, political and commercial risk	Formal partnerships and integrated service delivery	Culturally informed evidence base
Knowledge and risk translation	Shared access to data	Data, research and evidence
Self-determination, community control and capacity		

The literature review highlighted structural, situational and behavioural factors affecting sepsis recognition, response and health outcomes. These included:

- building trust and relationships
- incorporating traditional knowledge and ways to communicate and empower communities to recognise and respond to sepsis
- co-designing solutions with communities
- recruiting and supporting a First Nations workforce
- delivering culturally safe and trauma-informed care
- developing integrated approaches that reduce the impact of sociodemographic risk.

Barriers and risks

Taking a place-based approach and focusing on listening and collecting the stories of First Nations peoples to understand the drivers of sepsis was a new way of working for the Commission. Several lessons have been learned.

> **Bereaved person**
>
> "All my family understand this yarn. My late Aunty had her leg cut off. We got to send her to the Dreamtime"

Ethics approval was not secured

The engagement component of the project design shifted the context from quality improvement to human research. This meant that ethics approval was required before On-Country engagement could begin.

A review of health related human research ethics principles, guidelines and processes identified that several weeks would be required to obtain ethics approval. This process began in January 2025 and it was anticipated that engagement might begin in May 2025 with analysis and reporting possible in August 2025.

Unfortunately, several unanticipated delays beyond the Commission's control meant that a local letter of support for the project was not secured in time to submit an ethics application.

Without ethics approval, the Commission could not give IPS the support, mandate or time to conduct local engagement and complete their analysis and report. In July 2025, the Commission decided that the project could not proceed in its current form and the contract with IPS was ended. This was a significant disappointment for all parties.

Reflection

The planning and implementation of this project uncovered an important dilemma. Sepsis is a time critical medical emergency that disproportionately impacts the health and well-being of First Nations peoples. The need for increased awareness is urgent, however working in culturally safe ways to incorporate Indigenous ways of knowing, being and doing takes time, effort and resources. The National Sepsis program was a time limited, fixed budget program. These constraints impacted all aspects of program design and implementation. Several key elements of the work including planning and procurement were completed in a relatively short time frame to ensure adequate time for project delivery. This had an exclusionary effect for potential partners or suppliers that required more or advanced notice or preparation time to respond to consultation or proposal requests.

There is an inevitable tension in the way quality improvement initiatives to improve health outcomes for First Nations peoples are planned and resourced.

This tension was partly addressed in other aspects of the National Sepsis Program. For example, targeted social media was developed for the 2024 awareness campaign; new data in the epidemiology report provided further insight into sepsis risk factors for First Nations peoples; and a First Nations focused case study was included in the Sepsis in Primary Care Module. While these elements contribute to incremental improvement, the bigger piece of work in this project remains undelivered.

The Lowitja Institute's 2025 discusison paper challenges the efficacy of established government planning prcocesses that set the scope, outputs, timeframes and investment for

projects first and only then seeks to engage with First Nations peoples about implementation design and delivery. This is an important message for the all government agencies with a mandate to improve health outcomes for First Nations peoples.

> *"We are working in our way now because we know what works. So, if you're not going to come and do it our way, or build up genuine relationships, then we don't really want to know you because you are not going to give us any benefit."*[15]

The Department and Commission remain committed to building a robust understanding of the drivers of sepsis in First Nations peoples with an agreed rescoping and redesign process underway. Learning from what didn't work, this process will transfer more control over scope and project design to First Nations agencies, and address ownership of data upfront. The Commission will report on outcomes of this project as an addendum to this report in 2026.

Findings

Further work is required to establish a robust evidence base to understand the drivers of sepsis in First Nations peoples and develop culturally safe and appropriate strategies. This work should be led by First Nations peoples.

Improving sepsis outcomes for First Nations peoples

Recommendation: The Australian Government should consider opportunities for a collaborative, community led program to address the burden and impact of sepsis on First Nations peoples. This could begin with a consumer developed action plan, like the 'Stopping Sepsis' policy report to drive and guide future decision-making and investment.

Health worker

"We're missing sepsis resources tailored for Aboriginal health workers"

Conclusion

Embedding sepsis as a system and health issue in health policy and practice in Australia is an important safety and quality priority

National Sepsis Program Extension outcomes

The National Sepsis Program Extension has delivered strong and effective outcomes in improving the recognition of sepsis in healthcare settings across Australia, providing healthcare professionals with high quality sepsis education and developing clinical guidance materials to strengthen comprehensive care planning for sepsis survivors.

New epidemiology provides further insights about the sepsis patient journey and clinical risk factors, and a national strategy for sepsis data envisions the long-term future and a five-year plan to achieve that vision.

All five projects that were part of the Program Extension have identified important aspects around the understanding of sepsis recognition and management by the Australian public, clinicians, policy makers, academics and others involved in the Australian health system.

All five projects have identified areas for future focus and highlight the need for an ongoing, coordinated, sustained and informed national effort to improve the prevention, early recognition and timely treatment of sepsis in Australia.

Bereaved person

“We have to find a model of care that invites patients, carers and families into a relationship that is cooperative and equally valued”

Maintaining the momentum

Sepsis will continue to be a priority area for the TGI and the Commission, with both organisations focused on strategic actions to improve sepsis quality and safety across

Australian health care services, informed by robust evidence and guided by stakeholder consultation and feedback.

National Policy Approach

A national policy approach to sepsis is important to effectively and efficiently coordinate resources, research, data, effort and expertise to maximise outcomes for the health system and the population. The National Sepsis Program and Program Extension have demonstrated the value of a coordinated national approach and the value of investment in sepsis as a health priority.

Future investment to embed and maintain the focus on sepsis in Australian health policy ties into current and planned national health policy reform such as the Australian National Preventive Health Strategy 2021-2030, the Australian Government's electronic decision support tool digital reform, the First Nations health agenda and the phased approach to establishing the Australian Centre for Disease Control.

2030 Global Agenda for Sepsis

Internationally, the 2030 Global Agenda for Sepsis launched in 2024 is a multi-year global strategy to address the human, societal, healthcare and economic impact of sepsis and its effects. Developed by the Global Sepsis Alliance it is aligned with the WHO's focus on improving the prevention, early recognition and timely treatment of sepsis and ties to the WHA's resolution 70.1 for all member states to implement national action plans to reduce deaths and disability from sepsis.

The Global Agenda for Sepsis identifies major gaps in the global sepsis response to date and outlines five strategic areas of focus for international and national health and research policy implementation and investment. It also includes a results framework which outlines three main impact indicators and a range of goals, key performance indicators and means of verification for each strategic objective.

The Global Agenda for Sepsis provides Australia with guidance on identifying opportunities to embed and integrate sepsis into health system priority initiatives, including but not limited to pandemic preparedness, antimicrobial stewardship, disaster management, infection prevention and control, child and family health and vaccination programs.

Maintain the focus and engagement on sepsis

While 80% of sepsis cases start in the community, up to 50% of cases are potentially preventable through early recognition and intervention.[2]

A long-term commitment to preventing sepsis and reducing its impacts could offer a return on investment that far out ways the costs.

Sepsis survivor

Say the word [**sepsis**] and explain it.

Acknowledgements

Quality outcomes are enabled and informed by quality systems, processes and people

The National Sepsis Program Extension has been informed by contributions from individuals and organisations who have generously shared their clinical, technical, cultural, organisational and lived expertise.

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Australian Institute of Health and Welfare (AIHW); Healthdirect; The Department of Health, Disability and Ageing; The Independent Hospitals and Aged Care Pricing Authority (IHACPA); The National Disability Insurance Scheme Quality and Safeguards Commission (NDISQSC); Pharmaceutical Benefits Scheme Advisory Committee.

The George Institute for Global Health and Sepsis Australia, including the Sepsis Consumer and Carer Advisory Forum, Sepsis Australia Members, and the Gunna Maana, Critical Care and Sepsis Support Research Teams.

State and Territory Health Servies

ACT Ambulance Service; ACT Health; Austn Health; Canberra Hospital; Clinical Excellence Queensland; Country Health WA; Gove District Hospital; Monash Health; Northern Territory Health; NSW Ambulance; NSW Clinical Excellence Commission; NSW Illawarra Shoalhaven Local Health District; NSW Ministry of Health; Queensland Adult and Paediatric Sepsis Networks; Queenland Ambulance; Queensland Health; Roxby Downs Family Practice; Royal Hobart Hospital; Safer Care Victoria, South Australia Health; Sydney Children's Hospitals Network; Tasmanian Health Service; Victoria Health; Western Australia Health.

Private Hospital Sector

Ramsey Health, St John of God Healthcare.

Aboriginal and Torres Strait Islander health services and associations

Australian Indigenous Doctors Association; Australian Indigenous HealthInfoNet; Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS); Kimberly Aboriginal Medical Services; National Aboriginal Community Controlled Health Organisation (NACCHO);

NSW Aboriginal Health and Medical Research Council; Palm Island Medical Service; Pilbara Aboriginal Health Alliance (PAHA), The Lowitja Institute.

Peak Bodies and Special Interest Associations

Australia and New Zealand Intensive Care Society (ANZICS); Australia and New Zealand College of Deans, Nursing and Midwifery; Australia and New Zealand Confederation of Post Graduate Medical Education Councils; Australian College of Emergency Nursing (ACEN); Australian College of Nursing (ACN); Australian Pharmacy Guild; Australian Primary Care Nurses Association (APNA); Australasian Council of Paramedicine Deans; Health Consumers Queenland; HealthPathways; Medical Deans Australia and New Zealand; Royal Australian College of General Practitioners (RACGP);The Parenting Research Centre; Primary Health Network Cooperative.

Universities and Research Institutes

Burnett Institute; Curtin University; Edith Cowan University; Griffith University; Holmesglen Institute; Macquarie University, Monash University; Gold Coast University; University of Adelaide; University of Canberra; University of Melbourne University of Newcastle; University of New South Wales; Notre Dame University; University of Queensland; University of Southern Queensland; University of Sunshine Coast; University of Sydney; University of Tasmania; University of Western Sydney; University of Wollongong, Victoria University.

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Appendices

Appendix 1: Oversight Group - role and membership

The Oversight Group provided specialist clinical and technical advice as well as the lived experience perspective into projects within the National Sepsis Program Extension.

The Oversight Group:

- Provided strategic advice to inform implementation of the Program Extension
- Monitored and advised on potential risks and relevant mitigation strategies for the Program Extension
- Provided ongoing guidance on the impact of the Program Extension and its deliverables on all major stakeholders
- Tracked and advised on the development of Program Extension deliverables
- Reviewed and advised on implementation issues and project updates raised by the Liaison Group
- Actively supported the Program Extension and acted as an advocate for its deliverables.

Table 4: Membership of the Oversight Group

Jurisdiction	Name	Position	Organisation
National	A/Professor Carolyn Hullick (Chair)	Chief Medical Officer	Australian Commission on Safety and Quality in Health Care
National	Dr Brett Abbenbroek	Program Manager, Sepsis Australia, Critical Care Program/ Asia Pacific Sepsis Alliance	The George Institute for Global Health
National	Professor Simon Finfer	Professorial Fellow, Critical Care and Trauma Division Adjunct Professor Chair, Critical Care Medicine	The George Institute for Global Health University of NSW School of Public Health, Imperial College London
National	Associate Professor Andrew Singer AM	Principal Medical Advisor, Senior Specialist in Emergency and Retrieval Medicine	Australian Government Department of Health, Disability and Ageing
National	Dr Paresh Dawda	Vice Chair Expert, Royal Australian College of General Practitioners Committee for Quality Care	Royal Australian College of General Practitioners (RACGP)
National	Dr Robert Blackley	Registrar	Australian College of Rural and Remote Medicine Australian Indigenous Doctors Association nominee

Jurisdiction	Name	Position	Organisation
National	Dr Dale Pugh	Nurse / Midwife	Australian College of Nursing
NSW	Dr Harvey Lander	Director, Systems Improvement	NSW Clinical Excellence Commission
NSW	Dr Belinda Munroe	Emergency Clinical Nurse Consultant / NSW Branch President, College of Emergency Nursing Australasia	Illawarra Shoalhaven Local Health District
NSW	Professor Melissa Baysari	Professor of Human Factors	The University of Sydney
NSW	Mr Mick O'Dowd	Consumer representative	The George Institute for Global Health / Sepsis Australia
NT	Ms Kirsten Thompson	Nurse Management Consultant – Sepsis	Clinical Excellence and Patient Safety, NT Health
QLD	Professor Bala Venkatesh	Program Director Chair Qld Statewide Sepsis Steering Committee Academic Professor	The George Institute QLD Health Gold Coast University Hospital
QLD	Associate Professor Paula Lister	Director of Paediatric Critical Care, Co-chair of QLD Paediatric Sepsis Program	Child Health Queensland and Sunshine Coast University Hospital
QLD	Ms Mary Steele	Consumer representative	The George Institute for Global Health / Sepsis Australia
QLD	Professor Jason Roberts	NHMRC Practitioner Fellow, Consultant Clinical Pharmacist	Queensland University
SA	Dr Simon Lockwood	General Practitioner/Rural Generalist	Roxby Downs Doctors Surgery/ Chair of Country SA Primary Health Network
SA	Ms Fiona Gray	Consumer representative	The George Institute for Global Health / Sepsis Australia
TAS	Dr Naomi Spotswood	Neonatologist	Royal Hobart Hospital
VIC	Professor Karin Thursky	Professor Infectious Diseases, Antimicrobial Stewardship	Peter MacCallum Cancer Centre
VIC	Professor Denise O'Connor	Deputy Director, Wiser Health Care Unit	Monash University
VIC	Dr Stephanie Hunter	Project Manager (REDEEM) Intensive Care Research Nurse	Monash University Australian College of Nursing Nominee

Jurisdiction	Name	Position	Organisation
VIC	Dr Jonathan Barrett	Medical Director	St John of God Hospitals
VIC	Professor Ed Oakley	Chief of Critical Care and Emergency Physician	Royal Children's Hospital
WA	Dr Lorraine Anderson Resigned Nov. 2024	Medical Director, Aboriginal Medical Services	Kimberley Medical Services
WA	Dr Julie Dockerty	Principal Medical Advisor	Department of Health Western Australia
WA	Dr Stephen Macdonald	Emergency Physician	Royal Perth Hospital

Appendix 2: Commonwealth, State and Territory Liaison Group - role and membership

The Commonwealth, State and Territory Liaison Group (Liaison Group) provided expert advice and guidance to the Program Extension. The Liaison Group was supported by the Program Extension's Oversight Group.

The Liaison Group:

- Provided policy advice and expert clinical opinion on project objectives and deliverables
- Collected high-level information about existing sepsis awareness, recognition, care and outcomes related projects within their jurisdictions and shared these with the Commission, The George Institute and other members to inform program development and delivery
- Ensured the activities of the Program Extension are aligned with current safety and quality requirements across Australian states and territories and the new Sepsis Clinical Care Standard
- Considered practical issues that may impede take up and implementation of the Program Extension deliverables within Australian health service organisations and identified mitigation strategies.

Table 5: Membership of the Liaison Group

Jurisdiction	Name	Position	Organisation
ACT	Ms Sarah Pope	Assistant Director, Clinical Governance Section	ACT Health Directorate
ACT	Associate Professor Sanjaya Senanayake	Infectious Diseases Physician	ACT Health
Australian Government	Ms Fifine Cahill	Assistant Secretary, Public Hospital and Health Reform Division	Department of Health, Disability and Ageing
Australian Government	Ms Rachel Henry	Director, Public Hospital and Health Reform Division	Department of Health, Disability and Ageing
NSW	Dr Melanie Berry	Emergency Medicine Physician	NSW Health
NSW	Ms Mary Fullick	Senior Improvement Lead, Systems Improvement	NSW Clinical Excellence Commission
NT	Ms Siang Cheah	Senior Pharmacist, Central Australia	NT Health
NT	Ms Juliet Bevan	Nurse Manager, Gove District Hospital	NT Health
NT	Ms Kirsten Thompson	Nurse Management Consultant	NT Health
QLD	Dr Adam Irwin	Academic Lead, Paediatric Infectious Diseases Medical Co-Chair, Paediatric Sepsis Program	Queensland Health
QLD	Mr Michael Rice	Director Rapid Response and Improvement, Patient	Queensland Health

Jurisdiction	Name	Position	Organisation
		Safety and Quality Improvement Service	
SA	Dr Andrew Churchman	Emergency Medicine Physician	SA Health
SA	Ms Chelsea Meintjes	Quality Improvement Lead	SA Health
TAS	Ms Laura Bullock	Sepsis Clinical Nurse Consultant	Tasmanian Health
TAS	Dr James Wolfe	Deputy Director of Physician Education and Sepsis Program Lead	Tasmanian Health
TAS	Ms Eleanor Cole	Sepsis Clinical Nurse Consultant	Tasmania Health
VIC	Mr Julian Ellis	Director, Centre for Clinical Excellence	Safer Care Victoria
VIC	Professor Karin Thursky	Professor Infectious Diseases, Antimicrobial Stewardship	Peter MacCallum Cancer Centre
VIC	Ms Amelia Johnston	Manager, Centre for Clinical Excellence	Safer Care Victoria
WA	Ms Sherlyn Schuurmans	Senior Project Officer	WA Health
WA	Dr Christine Pascott	Medical Advisor	WA Health

Appendix 3: Technical Advisory Group - role and membership

The Technical Advisory Group supported and informed the development of the national sepsis data plan. The role and functions of the Technical Advisory Group included:

- Participate in the selection of a preferred supplier (the Supplier) to develop the national sepsis data plan (selected members only)
- Provide information, advice and guidance to the Commission and the Supplier about local sepsis data, reporting, coding and information systems etc. to inform the development of the national sepsis data plan
- Facilitate local engagement and discussion
- Review reports and materials developed by the Supplier, including the draft national sepsis data plan, to ensure that it is fit for purpose
- Provide internal updates on the work of the Commission and the development of the national sepsis data plan as required by the nominating jurisdiction.

Table 6: Membership of the Technical Advisory Group

Jurisdiction	Name	Position	Organisation
ACT	Chrysta Bridge	Director Business Intelligence	ACT Health
Australian Government	Hannah Harding	Director Data Analytics and Translation	Department of Health, Disability and Ageing
National	Suraj Rasakulasingam	Manager, Data Analytics and Patient Safety Measurement	Australian Commission on Safety and Quality in Health Care
National	Professor Simon Finfer	Critical Care and Trauma Division & Director Sepsis Australia and Asia Pacific Alliance	The George Institute for Global Health
National	Dr Ashwani Kumar	Research fellow	The George Institute for Global Health
NSW	Dominic Dawson	Director, Information Management and Quality	NSW Health
NT	Kirsten Thompson	Sepsis Nurse Manager Consultant	NT Health
QLD	Graham Hall	Director Analytics and Systems	Clinical Excellence QLD
SA	Iain Bertram	Senior Data Scientist	SA Commission on Innovation and Excellence
SA	Rachael Needle	Digital Optimisation Manager – Clinical	Southern Adelaide Local Health Network
TAS	Dr Jennifer O'Hern	Staff Specialist/Infectious Diseases Consultant	Tasmania Health
TAS	Dr Leo Peraira	Infectious Diseases Physician	Tasmania Health

VIC	Felicity Loxton	A/Director Improvement Branch	Safer Care Victoria
WA	Sherlyn Schuurmans	Senior Project Officer, Medicine and Tech Unit	WA Health
WA	Ben McFadden	Senior Data Officer, Health Care Quality Intelligence	WA Health

Appendix 4: Program Extension management and operations

The Commission adheres to rigorous project management methodology and in line with Australian Government project management and procurement rules.

The National Sepsis Program Extension deliverables and the separate project deliverables are detailed in Table 7. Progress and final reports were developed for the Program Extension and each individual project in line with the contract and submitted to the Department for approval.

Table 7: National Sepsis Program Extension and Project Deliverables

National Sepsis Program Extension Deliverables	
A detailed project plan including evaluation approach, anticipated costs, stakeholder engagement and communications plan, governance arrangements, sub-contracting arrangements and risk management/escalation approach	
An established program team, establishment of advisory groups with clinical and subject matter expertise to support progression of program activities	
Awareness campaign materials; data collection plan and products; education and training materials and evaluation and post-implementation review materials	
Four formal progress reports	
A final program report	
Individual Project	**Deliverables**
A targeted national public awareness campaign	• Campaign establishment, strategy, and consultation • Campaign delivery • Evaluation
Education and training resources for health professionals and undergraduate health programs	• Training establishment, strategy and consultation • Curriculum development • Online training module development • Post-implementation review/evaluation
Coordinated sepsis care and post-sepsis support for survivors and families, including those bereaved by sepsis	• Planning to evaluate models of care • Evaluation of the implementation and effectiveness of sepsis coordinators and the sepsis discharge coordination tool • Consultation with clinicians to define key elements of an effective Model of Care to strengthen coordination of post-sepsis information and support, including bereavement support • Development of a business case for coordinated post-sepsis support
Data collection tools for quality improvement	• Planning, development and consultation • A revised epidemiology report • National data collection plan informed by the recommendations of the sepsis medical records review pilot and include guidance on plan implementation and evaluation.

Improving sepsis recognition in First Nation peoples[1]	• Consultation and engagement with stakeholders • Development of methods and tools for better capturing data on sepsis experienced by First Nations peoples • Development of supplementary tools and resources for identification and awareness of sepsis in First Nations communities.

Contract deed of variation

The initial contract for services was executed on 13 June 2023.

Two deeds of variation were executed through the program to accommodate unanticipated and unavoidable delays impacting program establishment and initial program planning. The amended due dates of the deliverables is outlined in Table 8.

Table 8: Variation to contract deliverable due dates

Deliverable	Original due date	Varied due date
Awareness Campaign	24 April 2025	30 November 2024
Education and Training	24 April 2025	4 August 2025
Care for sepsis survivors and other bereavement support	24 April 2025	30 June 2025
Data collection and publication	24 April 2025	25 July 2025
Improve recognition of sepsis for First Nations peoples	24 April 2025	31 March 2026
Final Report	13 June 2025	31 August 2025
Contract end date	30 June 2025	31 March 2026

Budget summary

Table 9 outlines the National Sepsis Program Extension expenditure on 30 September 2025. Costs associated with the program closure phase, outstanding payments to contractors for work ending after 30 September, and the continuation of the First Nations Project are not included in these figures. It is anticipated that the budget of $2,100,000 will be fully expended.

Table 9: National Sepsis Program Extension Expenditure

Program expenditure on 30 July 2025	Cost
Project 1: Targeted National Public Awareness Campaign	$384,407.61
Project 2: Education and Training for Health Professionals	$352,734.41
Project 3: Coordinated Care and Post Sepsis Support	$352,734.41
Project 4: Data Tools for Quality Improvement[2]	$293,945.34
Project 5: Improving sepsis recognition in First Nations peoples	$179,367.20
Governance, strategic advice and consumer engagement	$207,749.39
Total	**$1,770,938.36**
Budget remaining at 30 September 2025	$329,061.64

[1] Note the deliverables and timeframe of this project have been varied to reflect lessons learned and accommodate new timeframes.
[2] This figure does not include preparation of the Sepsis Epidemiology report which was completed by the Commission inhouse.

Team composition

The list of the personnel involved in the Program Extension during the period from September 2023 to September 2025 is provided in Table 10. The team excelled at embedding collaborative practice into all aspects of project planning, procurement, delivery, reporting and evaluation to ensure a robust and effective project management approach.

Table 10: National Sepsis Program Extension Team composition

Personnel	Title
Commission - Program team	
Ms. Anna Flynn	Director, Partnering with Consumers
Ms. Lisa Quirk	Program Manager, National Sepsis Program Extension
Ms. Annie Spence	Senior Project Officer, National Sepsis Program Extension
Ms. Neha Yadav	Project Officer, National Sepsis Program Extension
Ms Vanessa Rossi	Project Officer, Partnering with Consumers
Ms Farzana Flora	Project Officer, Partnering with Consumers
Commission – Supporting Staff	
Professor Carolyn Hullick	Chief Medical Officer
Dr Phoebe Holdenson-Kumara	Medical Advisor
Dr Lee Fong	Medical Advisor
The George Institute for Global Health staff	
Professor Simon Finfer	Professorial Fellow, The George Institute for GlobalHealth Director, Australian Sepsis Network
Associate Professor Naomi Hammond	Critical Care Program Head, The George Institute for Global Health
Dr Brett Abbenbroek	Program Manager, Australian Sepsis Network, TheGeorge Institute for Global Health
Dr Ashwani Kumar	Public Health Researcher, Critical Care Division, The George Institute for Global Health
Ms. Harriet Benjamin	Digital Engagement and Events Coordinator, The George Institute for Global Health

Procurement

The timeframe, budget, diverse scope of work and program team size informed the decision to deliver the five Program Extension projects through a procurement probity plan. The plan was endorsed by the Department in May 2024 and provided the framework to identify and engage a series of contractors to provide specific services.

All project sub-contracting was carried out in line with Commonwealth Procurement Rules and the Department was notified of and approved the preferred vendor prior to the Commission

entering any sub-contracting arrangements. The Commission used Aus Tender and Supply Nation panel lists and its own supplier performance records to identify and assess potential suppliers to match the type of work required.

Procurement evaluation panel members were drawn from a range of sources reflecting technical, subject matter and lived experience expertise. Panel diversity strengthened the evaluation of proposals and final recommendations about which supplier to engage for each project. Eligible panellists were renumerated for their time and expertise. Suppliers were identified who had the skills and capabilities to deliver the projects as required, informed by strong project planning.

Sub-contractors

The Program team established effective working relationships with all sub-contractors, as listed in Table 11, to ensure clarity of purpose, timely risk management and effective project management.

Table 11: National Sepsis Program Extension sub-contractors

Name	State	Role
TBWA (trading as FleishmanHillard Australia)	NSW	Deliver a national targeted public awareness campaign
Medcast Pty Ltd	Vic	Develop an online sepsis education bundle for primary care
ARTD Consultants Pty Ltd	Qld	Develop a post-sepsis support model of care framework and business case
Wellmark Pty Ltd	Vic	Develop graphic design of post-sepsis support model of care framework and interactive PDF
Callida Consulting Pty Ltd	ACT	Develop a National Sepsis Data Plan
Indigenous Professional Services Management Consulting	WA	Facilitate and develop project Cultural Charter; complete a literature review about drivers of sepsis among First Nations peoples; develop consent protocols and materials for community engagement.
Professional Writing Services	NSW	Write National Sepsis Program Extension Final Report
Armstrong Communications	NSW	Graphic Design: World Sepsis Day resources

Appendix 5: Vision and strategy for national sepsis data plan

Figure 5: A Vision for Sepsis Data in Australia

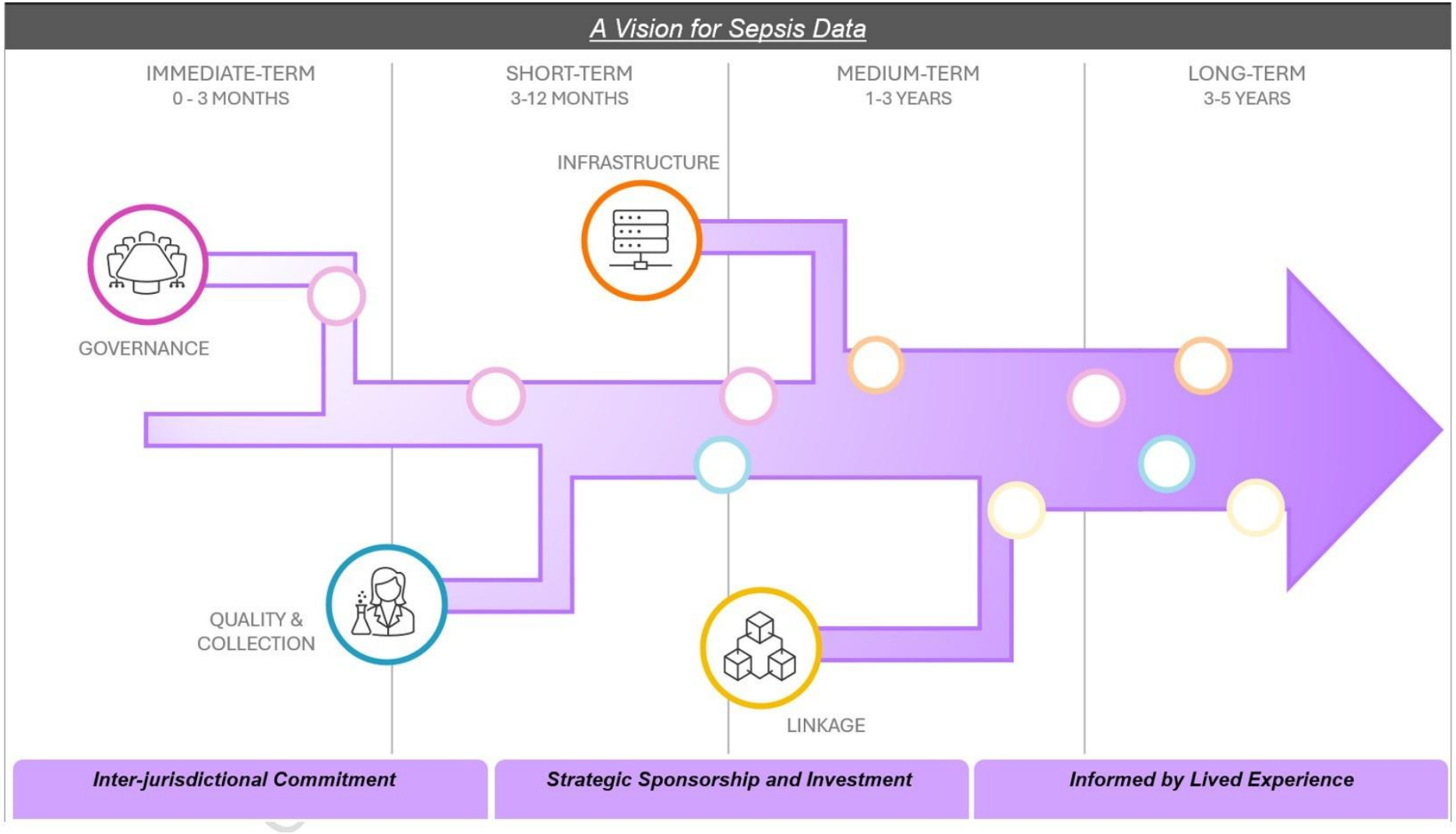

Figure 6: Strategy and timeline for National Sepsis Data Plan

	STRATEGY			
	GOVERNANCE	QUALITY & COLLECTION	INFRASTRUCTURE	LINKAGE

IMMEDIATE TERM (0-3 MONTHS)	In the immediate-term, establish a national working group to govern downstream actions.
	• ***Establish a national working group***, to:
	  • Define strategic purpose and use case(s) for sepsis data
	  • Refine and revisit the strategic vision
	  • Refine stakeholder mapping
	  • Clarify roles and responsibilities for data custodianship			

SHORT TERM (3-12 MONTHS)	In the short-term, develop a national governance framework to drive future outcomes.
	• Develop a ***national governance framework*** to determine privacy, ethics, and access denominators across jurisdictions.
		...build consensus on core definitions and collection pilots.
		• ***Build consensus*** on sepsis definitions and 'time zero' for data collection process.
		• Develop a data dictionary for a national minimum dataset aligned to the Sepsis Clinical Care Standard
		• ***Begin design of a national snapshot audit*** to occur during Sepsis Awareness Month
		• ***Review PROMs and PREMs*** for post-sepsis care and determine if new long-term outcome measures are required (in conjunction with consumers).
			...commence mapping to understand the scope of data differences and shared overlap.
			• Commence broad EMR / system ***interoperability mapping***,* including:
			  • Where similar successful system configurations could be adopted
			  • Digital maturity across jurisdictions
			  • EMR capabilities for sepsis data capture
			• *Note* – may be supplemented / superfluous if CSIRO project has completed this activity.
				...explore opportunities for intra-jurisdictional dataset linkage.
				• ***Identify key linkage opportunities*** (e.g. ambulance to hospital) and begin exploring means to link data sets.

MEDIUM TERM (1-3 YEARS)	In the medium-term, commence development of a data governance framework, centering consumers • ***Align framework*** with existing national committees and formalise mechanisms for engaging clinicians, consumers, researchers, and data custodians in governance. • Draft and consult on ***national data sharing agreements***. • Explore comparable ***funding approaches*** (e.g. Stroke) and secure long-term funding for governance functions, including blended funding models (e.g. federal, state, research grants) to support scale-up.	...review collection practices and commence early pilot activities. • ***Commence national snapshot audit*** to occur during Sepsis Awareness Month • ***Review coding practices*** and documentation standards for sepsis and, if required, commence development of additional training and education materials. • ***Begin pilot*** on PROMs and PREMs for post-sepsis care	...invest in enabling factors for data uplift. • Invest in workforce capability (clinical informaticians, data analysts) • ***Align with FHIR*** standards for interoperability • Ensure ***readiness to implement ICD-11*** when it is rolled out in Australia	...begin to explore feasibility of national data linkage. • ***Begin mapping*** discharge and post-care data flows • Engage with NSW Lumos and other pilot projects

LONG TERM (3-5 YEARS)	In the long-term, formalise national data stewardship and access
	• ***Formalise national stewardship*** of data set, including:
	  • Integrate sepsis data into broader health performance frameworks
	  • Focus on uplift and mandate
	  • Establish enduring governance mechanisms for data linkage and research access
	• ***Develop tiered access*** models (e.g. public, research, policy) with clear approval pathways, and maintain a national data access register to track who and how data is being used.
		...embed continuous improvement and initiative upscaling.
		• Review PROMS and PREMS pilot to determine future ***uplift and upscaling***.
			...integrate technology solutions to enhance data analytics.
			• ***Establish a national sepsis registry*** or federated data platform.
			• ***Integrate predictive analytics*** and AI for early detection.
			• Develop ***real-time dashboards for clinical monitoring*** based on common system configurations.
				...commence national data linkage and use linked data to realise improved sepsis outcomes.
				• ***Develop protocols*** for linking hospital, mortality, and primary care data
				• ***Launch pilot linkage project*** between two chosen jurisdictions
				• Enable national linkage across the full patient journey (pre-hospital, hospital, post-discharge)
				• Use linked data to inform public health campaigns, funding models, and service planning
				• Support longitudinal research and outcome tracking

Appendix 6: Cultural Safety Charter

Figure 7: National Sepsis Program Extension Cultural Safety Charter

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