Evidence Brief

Enabler 3: Data, Research, and Evaluation.

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Definition and scope of this enabler

Enabler 3 is about improving data, research, and evaluation to support suicide prevention in Australia. This evidence brief examines what are the current key issues, what is currently happening in Australia, what are the critical gaps, and where should efforts be focused with regard to data, research, and evaluation. The *National Suicide Prevention Advisor's Final Advice* emphasises the importance of better collection and timely reporting of data related to suicidality, as well as robust and reliable data about the social determinants that may impact on suicide behaviour, for suicide prevention policy and practice. Therefore, the scope of data included in this brief therefore includes direct measures of suicidality (e.g., data about suicide, suicide attempts etc.) but also data related to the social determinants of suicide.

What are the key issues?

The key issues related to this Enabler are 1) **data:** data collection, data sharing and data enhancement, 2) **research:** research priorities, research funding and incorporation of lived experience into research, 3) **evaluation:** existence of evaluation, funding and workforce capability, sharing of evaluation findings, and 4) **translation:** translation of research into policy and practice.

1. **Data issues**

    a. *Data collection* – relates to what data about suicidality, the broader social determinants of suicide, and priority populations are collected in Australia.

    b. *Data sharing* – relates to how the data that is collected is then accessible to, and shared with, relevant stakeholders for epidemiological research, and for the development and evaluation of suicide prevention interventions.

    c. *Data enhancement* – relates to enhancements to data collections to allow, for example, the utilisation of real-time data, and data linkage for research and evaluation. Real-time data on suicides can have significant benefits as the timeliness of these data can inform evaluation exercises, allowing interventions to be modified or adapted as they are rolled out to improve their effectiveness in a timely manner. (1) Real-time data can also allow timely responses to emerging situations which may be likely to impact suicide rates.(1) Data linkage presents a valuable opportunity to understand more fully the social determinants of suicide as well as the potential effectiveness of suicide prevention interventions.

2. **Research issues**

    a. *Research priorities* – relates to the need to identify and invest in suicide research that focuses on key priority areas that can address critical gaps in suicide prevention research.

    b. *Research funding* – relates to the funding of suicide prevention research in Australia and the research workforce.

    c. *Lived experience* – relates to the importance of lived experience inclusion in all aspects of suicide prevention research and evaluation.

3. **Evaluation issues**

    a. *Existence of evaluation* – relates to the presence of evaluation across the suicide prevention system in Australia (i.e., whether evaluation is routine and consistent).

    b. *Funding and workforce capability* – relates to the funding of evaluations and the need to develop workforce capacity in evaluation.

    c. *Sharing of evaluation findings* – relates to extent to which evaluation findings are shared across suicide prevention stakeholders.

4. **Translation issues**

    Another key issue is the timely translation of suicide prevention research into policy and practice. Australia has a good reputation for conducting high-quality research in suicide prevention but faces challenges converting this research into program delivery and policy advice.

What is currently happening (in Australia)?

There have been major improvements in the collection, collation, accessibility, and reporting of data regarding direct measures of suicidality (such as the incidence of suicide, self-harm and suicidal behaviours) in Australia, because of the establishment of the National Suicide and Self-Harm Monitoring System (NSSHMS) by the National Suicide Prevention Office and Australian Institute of Health and Welfare (AIHW). The NSSHMS collates existing data on suicide, self-harm and suicidal behaviours from a range of data sources and surveys and includes (1) a public website which is a comprehensive public resource of Australian data on suicide and self-harm and (2) a state and territory Portal for authorised users to share content across Commonwealth and jurisdictional government agencies and other approved users. The system contains high quality data, with excellent internal consistency and agreement between the data of the public site and source datasets and importantly, overcomes many delays associated with traditional data collection and processing methods (2).

The NSSHMS includes Australian Bureau of Statistics Cause of Death data on suicide which is the only source of data for measuring of long-term trends on Australian suicide and includes information such as basic demographic data (e.g., age and sex), and information about methods of suicide and geographical information related to the place of residence of

the deceased. However, suicide registers have great potential for suicide prevention research and evaluation. Registers not only have the potential to provide more timely data through inclusion of real-time data, but registers are able to capture more detailed data through inclusion of information generated throughout the coronial process about the detailed circumstances of the lives of people who have died by suicide. Suicide registers in Queensland, Victoria, Western Australia, Tasmania and in New South Wales are currently active and through its NSSHMS the AIHW is working to establish suicide registers in remaining jurisdictions. Data from the existing suicide registers is already being used for research in Australia, with some registers having existed for decades. Examples of peer-reviewed publications utilising data from Australian suicide registers include recent examinations of trends in suicide using real-time data since the COVID-19 pandemic (3-7), and numerous epidemiological studies (including data linkage studies) utilising data from the Queensland (8-16), Victorian (17-23) and Tasmanian (24) registers.

The National Hospital Morbidity Database (NHMD) is the national source of hospitalisation data. Data on the patient's diagnosis, interventions and 'external cause' (including self-harm) are reported to the NHMD by all states and territories. Reporting of self-harm hospitalisations data has been included in AIHW reports (25) and the data is now included in the NSSHMS. While data about self-harm emergency department (ED) presentations are being collected in some states in Australia (26), there are known issues with the quality, completeness, and comparability of these data between jurisdictions. For example, in some states such as Victoria and Queensland data have routinely been collected on self-harm ED presentations for approximately 25 years – though these are not dedicated self-harm data collection systems but broader ED data collections. Data from these systems is not included in the NSSHMS, possibly because data is considered to be incomplete or inaccurate given data capture is reliant on busy triage staff.(26) Further development is required to improve ED data collections as a source of national data and the AIHW is currently working with key stakeholders to develop a nationally consistent method to identify and collect data on suicide-related ED presentations. There are also dedicated sentinel ED-based surveillance systems for intentional self-harm that exist across Australia (26, 27) - these sentinel systems also do not yet contribute to the NSSHMS. The two most comprehensive of these ED-based dedicated self-harm monitoring systems are the Hunter Area Toxicology Service that monitors drug overdoses and self-poisoning for one health catchment area in Newcastle (27) and the Self-harm Monitoring System for Victoria which is being developed in eight public hospital EDs across the state.(26) The establishment and ongoing maintenance of these types of sentinel surveillance systems to monitor self-harm represents an opportunity to capture more detailed information than would be available (for example about trajectories of care) in any routine administrative ED presentations data collections.

There are nationally representative surveys that include data on self-harm and suicidal thoughts or behaviours including 1) the Australian Child and Adolescent Survey of Mental Health and Wellbeing collects data for adolescents aged 12–17, and 2) the National Survey of Mental Health and Wellbeing collects data for people aged 16-85. Nationally representative surveys also collect data on the social determinants of suicide.

In addition to collating existing data on suicide, self-harm, and suicidal behaviours, the NSSHMS also commissions new statistical research to further understanding of suicide and self-harm in Australia. For example, Australian National University projects that analyse existing Australian data in new ways such as: 1) a project examining spatiotemporal trends in suicide, 2) another estimating and projecting monthly variation and trends in suicide, and 3) another investigating social and economic factors associated with suicide. Other projects

have involved collecting and collating data from various Australian states' suicide registers in a timely manner. For example, a University of Melbourne project that examined patters of suicide in the context of COVID-19 in Queensland, Tasmania, and Victoria. Most recently the AIHW and the Victorian Department of Health funded the University of Melbourne to conduct a pilot project with the Coroners Court of Victoria to examine the potential for monitoring suicide clusters in real time.

Data linkage presents a valuable opportunity to conduct research that examines that social determinants of suicide and to understand the effects of interventions that target social determinants of suicide. Currently, state-based data linkage units, and the AIHW at the national level, connect through the Population Health Research Network (PHRN), which enables national collaboration of health data integration and related research. There are many examples of suicide and self-harm research data linkage projects in Australia (see for example (19, 21-23, 28-33)) which are helping us to understand the relationship between sociodemographic factors, service use and suicide and self-harm. Some examples of data sources which when linked with other sources provide opportunities to conduct high quality, high impact novel research to improve understanding of the social determinants of suicide in Australia include the Multi-Agency Data Integration Project (MADIP), the National Integrated Health Service Information Analysis Asset (NIHSI) the Household, Income and Labour Dynamics in Australia (HILDA) Survey and the Data On Multiple Individual Occurrences (DOMINO) dataset.

The National Suicide Prevention Leadership and Support Program (NSPLSP) is key among national suicide prevention efforts. Currently, the Commonwealth Government funds projects under the NSPLSP, and the program is a mechanism for providing essential sector leadership, reform, advocacy, research, and translation. Funded under the NSPLSP, the LIFEWAYS Project provides capacity building of the suicide prevention research workforce and its research priorities study identified that future suicide prevention research should address suicide attempts, protective factors, social determinants, community settings, and interventions, and focus on strengthening effective research translation into practice. This study also highlighted the merit of having a designated Suicide Prevention Research Fund, which is well-placed to target priority research areas and gaps.

There have been improvements in the inclusion of lived experience in suicide prevention research in Australia and more recognition that lived experience should be embedded into research design. However, research continues to occur without the input from lived experience. In addition, the impact of this lived experience on suicide research activities is yet to be evaluated and should be prioritised.

Currently, evaluations mostly rely on existing administrative health service data to inform and assess the effectiveness of suicide prevention initiatives. Many evaluations still lack program logic that identifies program outputs/outcomes and system outcomes.
There has been significant investment from federal and state governments in evidence-based suicide prevention practices. However, translation of research in policy and practice is still sub-optimal, for example the time from research to useful policy and practice is a concern.

What are the critical gaps (in Australia)?

The critical gaps in Australia with regards to suicide data, research and evaluation include:

- Lack of data on priority populations: there are issues with respect to a lack of availability and accuracy of data identifying priority populations including First Nations peoples,

people who identify as LGBTIQ+ and people from CALD backgrounds within relevant data sources.
- Lack of national data on ED presentations: There is currently no national standardised collection of emergency department data that captures self-harm ED presentations.
- Lack of routinely collected national data on suicidal thoughts and behaviours: although the Australian Child and Adolescent Survey of Mental Health and Wellbeing collects data for adolescents aged 12–17, and the National Survey of Mental Health and Wellbeing collects data for people aged 16-85, these surveys are administered inconsistently and do not collect information for younger children or the oldest adults.
- Lack of national real-time data on suicide and self-harm: although some states have real-time (or close to real-time) suicide registers, there is a lack of real-time suicide data available in all states and territories. In addition, there is no national consistent real-time (or close to real-time) hospital admissions and/or ED presentations data, though some jurisdictions do routinely capture this information - often through data linkage units. This lack of data includes the lack of nationally representative live geospatial data that would be beneficial to suicide prevention efforts.
- Lack of access to national data available for data linkage: further data linkage opportunities may improve understanding of risk factors for suicide and self-harm, including the social determinants of suicide, and enable the targeting of intervention programs towards individuals at heightened risk of suicide and self-harm.
- There is lack of research that addresses suicide attempts, protective factors, social determinants, and interventions.
- Despite improvement, there is still a lack of lived experience inclusion in suicide prevention research in Australia. There is also a lack of understanding of the impact of this lived experience inclusion on suicide research.
- There is a lack of a standard approach to evaluations and a lack of good quality, nationally representative linked datasets available for use in evaluations.
- There is a lack of sufficient funding for evaluations.
- Due to the lack of good quality evaluations, there is still therefore limited information available about the effectiveness of suicide prevention interventions. For example, it is not yet clear exactly which policies and policy settings are likely to be the most impactful and cost-effective in the context of reducing suicide risk.
- The is currently sub-optimal translation of suicide research into policy and practice, for example there is a lag in the time it takes for research findings to be translated into useful policy and practice.

Where should efforts be focused (in Australia)?

Efforts should be focused on reducing the critical gaps mentioned above and enhancing the utility and accessibility of the data that is already being collected. Better data is needed on priority populations. In addition, more representative and consistently collected data on ED presentations, more routine and ad hoc data linkage and more collection of data on the social determinants of suicide should be priorities.

There is a need for a national approach to continue to identify suicide research priorities and to ensure that research addresses critical research and data gaps. It is likely that research that addresses suicide attempts, protective factors, social determinants, and interventions should be prioritised. Lived experience must be embedded into research design and importantly, the impact of this lived experience on suicide research activities should be evaluated. The current designated suicide prevention research fund used to direct evolving priority research areas and gaps should be retained.

There is a need to build capability of government in all areas of evaluation to support suicide prevention initiatives. This includes the development of evaluation capacity and the identification of a standard approach to evaluate suicide prevention activities. It is essential that evaluations are planned prior to the implementation of any new suicide prevention interventions. Planning needs to outline the most appropriate outcome measures from the outset so that appropriate data can be collected throughout the implementation phase of the intervention (if relevant) rather than evaluators relying on what "best-fit" secondary data sources exist post the implementation of an intervention. The development of high quality, linked, nationally representative and routinely collected longitudinal datasets should be prioritised as this would greatly improve the outcome measures that can be used for the evaluation of suicide prevention interventions and initiatives. Dedicated funding to support the evaluation of suicide prevention programs would enable ongoing monitoring and evaluation to inform policy decisions and ensure evidence-based approaches in suicide prevention.

There is currently sub-optimal translation of suicide research into policy and practice. Consequently, there is a need for a concerted effort to find solutions so that implementation of research findings can occur in a timely manner. This could include finding ways to improve capacity building in research translation and finding ways of making peer-reviewed research more widely available.

ENABLER 3 ACTIONS

Action 1

The NSPO develop and implement a National Suicide Prevention Outcomes Framework, which will include a set of meaningful outcomes and measures spanning beyond health indicators to enable ongoing monitoring and evaluation of suicide prevention reform.

Evidence findings related to Action 1

This action is supported by the overall findings from the evidence brief. The development of a National Suicide Prevention Outcomes Framework would provide a structured and systematic approach to measuring and assessing the outcomes and impacts of suicide prevention programs, interventions, and initiatives. Overall, an outcomes framework would address some of the current critical gaps identified in this evidence brief, particularly in relation to evaluation, and would support evidence-based decision-making.

Action 2

Governments to develop and implement regular data collection mechanisms that consistently measure wellbeing, drivers of distress, suicidal distress indicators, and population characteristics, across all jurisdictions.

Evidence findings related to Action 2

This action is supported by the findings from the evidence brief. We identified a lack of data on priority populations and a lack of routinely collected data about suicidal thoughts and behaviours and a lack of national data on ED presentations for self-harm.

Expert Consultation concurred, with the majority of participants endorsing the following statement:

In order to build a more useful suicide prevention data system, standardised data collection measures should be implemented nationally, and a broader range of data should be collected. This might include more detailed information on personal and social factors, data on specific target populations, and qualitative data.

Action 3

Build partnerships and mechanisms across government portfolios that enable sharing and linkage of public data, to provide greater insight into the protective and risk factors associated with suicide, populations disproportionately impacted by suicide, and the relationship between sociodemographic factors and service use.

Evidence findings related to Action 3

This action is supported by the findings from the evidence brief given we identified a lack of access to national data available for data linkage and that further data linkage opportunities may improve understanding of risk factors for suicide and self-harm. We also outlined that there is already linkage of service use data and suicide data occurring in some jurisdictions which is helping us to understand the relationship between sociodemographic factors, service use and suicide.

Expert Consultation concurred, with the majority of participants endorsing the following statement:

Greater linkage and harmonization between existing datasets from government departments would be of benefit and should be the first priority.
Where possible, it would be valuable to link suicide mortality data to other relevant behaviour health data such as Emergency Department visits for self-harm, new mental health diagnoses.

Action 4

Governments invest in continued enhancement of the National Suicide and Self-harm Monitoring System including real-time monitoring and data utilisation processes to support timely service planning and system response. This includes ensuring Suicide Registers exist across all jurisdictions that have live geospatial identification and data translation functions and the establishment of a collection of representative and consistent ED presentations data on self-harm across Australia.

Evidence findings related to Action 4

This action is supported by the findings from the evidence brief. We identified that there is currently no national standardised collection of emergency department data that captures self-harm ED presentations and that there is a lack of national real-time data on suicide and self-harm available to inform timely system responses. We also identified the need for continued investment in ad-hoc research projects associated with the AIHW NSSHMS given these projects - such as a current one examining the potential for monitoring suicide clusters in real time - have the potential to make real contributions to the prevention of suicide and self-harm in Australia.

Expert Consultation concurred, with the majority of participants endorsing the following statement:

National mortality data and State/Territory-based suicide registers and monitoring systems provide the best data on suicide and should continue to be supported and enhanced. Where there is no state/territory-based register these should be established. In order to build a more useful suicide prevention data system, standardised data collection measures should be implemented nationally, and a broader range of data should be collected.

Action 5

Governments to adopt a standard approach to evaluate suicide prevention activities and develop evaluation capacity to understand the impacts of all portfolio policies and programs on suicide prevention reform.

Evidence findings related to Action 5

This action is supported by the findings from the evidence brief given we identified a need to build capability of government in all areas of evaluation to support suicide prevention initiatives given the current lack of a standard approach to evaluations and a lack of sufficient funding for evaluations.

Expert Consultation concurred, with the majority of participants endorsing the following statement:

Independent evaluation should be embedded and resourced as part of all government-funded activities and services – including multi-sectoral activities/services. These evaluations should focus on implementation, process and outcomes (assessed by core recommended outcome measures and indicators), not just outputs.

Two thirds of **experts** endorsed this following statement:

Interventions and services which do not show evidence of efficacy when evaluated over an appropriate length of time, should not continue to be funded.

While this statement was endorsed by more than two thirds of experts, it was noted by one expert that there may be interventions that do not prevent suicide, or cannot be shown to do so immediately, they may prove effective in the long run or be valuable for other reasons.

Action 6

Develop a national strategic approach to identify suicide research priorities, address critical research and data gaps, particularly around the social determinants of suicide, and align the activities of the National Health and Medical Research Council, Medical Research Future Fund, Suicide Prevention Australia research fund and LIFEWAYS project.

Evidence findings related to Action 6

This action is supported by the findings from the evidence brief. We identified a need for a national approach to continue to identify suicide research priorities and to ensure that research addresses critical research and data gaps. We suggested key priority areas for future suicide prevention research should address suicide attempts, protective factors, social determinants, community settings, and interventions, and focus on strengthening effective research translation into practice. We also suggested that the designated suicide prevention research fund to direct evolving priority research areas and gaps should be retained.

Action 7

Build capability of government in evaluation, data, and research to support suicide prevention.

Evidence findings related to Action 7

This action, while very broad, is supported by the findings from the evidence brief given we identified the need to build capability of government in all areas of suicide prevention, including data, research, evaluation, and translation.

Expert Consultation concurred, with a majority of participants endorsing the following statements related to Action 7:

> *Independent evaluation should be embedded and resourced as part of all government-funded activities and services – including multi-sectoral activities/services. These evaluations should focus on implementation, process and outcomes (assessed by core recommended outcome measures and indicators), not just outputs.*
>
> *Providing greater accessibility to government-held data and increasing the Australian Institute of Health and Welfare's capability in data translation and dissemination for lay users will support more data-driven decision making in government services and community organisations.*
>
> *In order to build a more useful suicide prevention data system, standardised data collection measures should be implemented nationally, and a broader range of data should be collected. This might include more detailed information on personal and social factors, data on specific target populations, and qualitative data. Data on disbursement of suicide prevention funds would also be informative.*

Additional recommendations or actions for consideration arising from the evidence and/or expert consultations:

Lived experience should be included in research design, potential mechanisms to ensure this may include requiring co-production as a condition of funding and/or including people with lived experience in governance committees, procurement panels and other leadership roles. In addition, the impact of this inclusion of lived experience on suicide research activities should be evaluated.

A suicide prevention national research clearing house should be developed which would provide regular updates and lay summaries of relevant research and evaluations that have been published. This should include a website that highlights the relevant research and is accessible to, and understandable by, all suicide prevention stakeholders (e.g., services, practitioners, and community). **Expert consultations** strongly endorsed this recommendation.

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