12 Improving outcome measurement

12 IMPROVING OUTCOME MEASUREMENT

This chapter examines ways to improve outcome measurement of NSPP-funded projects and identifies opportunities for program enhancements to achieve these improvements. These enhancements draw on the knowledge of project activities gained through engagement with projects and the insights gained from stakeholder consultations throughout this evaluation. They are also informed by the current literature on suicide prevention and evaluation (see Appendix E).

12.1 Conceptualising outcome measurement

As outlined in Chapter 8, outcome measurement for suicide prevention is complex and multifaceted. In part this reflects the range of factors that need to be considered in measuring outcomes, as illustrated by the following definition:

Outcomes are changes, results, and impacts that may be short or long term; proximal or distal; primary or secondary; intended or unintended; positive or negative; and singular, multiple, or hierarchical. Outcomes are enduring changes, in contrast to outputs, which are more specific.\textsuperscript{106}

In the context of evaluating effectiveness, outcome measurement plays a central role in addressing the following core questions posited in Section 8:

- Question 1: Did interventions or programs deliver what they said they would?
- Question 2: What were the outcomes of these programs?

\textit{Figure 12-1} provides a causal mechanism model to explain how NSPP-funded activities are intended to lead to a reduction in completed suicides and demonstrates how these two questions fit into the evaluation continuum. Question 1 is primarily addressed by measuring inputs and outputs while Question 2 is addressed by measuring outcomes (proximal and distal). Note: This causal mechanism model is based on the conceptual framework that underpins the overarching program logic developed as part of the evaluation framework (see Appendix F).

\textsuperscript{106} S Mathison, ‘Outcomes’.
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Figure 12-1: Overarching causal mechanism model

In the above causal mechanism model (Figure 12-1), Question 1 focuses on program/project inputs and outputs and thus falls primarily into the domain of process evaluation. Question 2 specifically relates to outcome measurement. To date, evaluations of NSPP-funded projects have largely addressed Question 1. For most projects, therefore, outcome measurement represents a further and unfamiliar step in the evaluation continuum.

In the context of NSPP-funded projects, it is also worth noting that issues related to outcome measurement at project level are overlaid by the broader questions of what works and what is likely to work according to the evidence base. As outlined in Section 7.2, the evidence base for effective suicide prevention activities that answer these broad questions is small and growing. This is coupled with the fact that:

- Suicide prevention is a dynamic, constantly changing field that generates new questions that need to be addressed
- There is often a time lag between innovation and evidence, which contributes to significant gaps within the evidence base. The impact of social media on suicide is one such example.

Therefore, while NSPP-funded projects currently engage in a diverse range of activities that, overall, are consistent with current best practice as indicated by the literature review and the LIFE Framework (see Chapters 5 and 6), the evidence base on which these best practices have been developed is incomplete. Consequently, outcome measurement is not only an issue for individual projects but also for the broader suicide prevention research community.

Outcome measurement at project level has the potential to:

- Contribute to the evidence base by highlighting innovative initiatives that show promise and thus warrant further investigation by the research community

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- Provide better understanding of the chain of effects related to short- and medium-term outcomes achieved by projects
- Provide a translational research environment where outcome measurement tools and evidence-based findings can be explored in specific settings and contexts in Australia. This could include involvement in case-control studies, quasi-experimental evaluation designs and randomised control trials being undertaken by the research community
- Provide ongoing quality control in service provision
- Identify initiatives that could potentially be expanded in terms of reach.

To achieve this potential and bridge the evidence–practice gaps, further collaboration and partnership between projects and the research community is required.

12.2 Where to start

While outcome measurement using validated tools is a new venture for most projects, outcome measurement of suicide prevention activities has been a focus of international and Australian efforts for some time.

Internationally this includes the WHO’s Towards Evidence-based Suicide Prevention Programmes\(^ {108}\), and, in Australia, Outcomes and indicators, measurement tools and databases for the National Action Plan for Promotion, Prevention and Early Intervention for Mental Health 2000.\(^ {109}\) Mitchell and Lewis’ A Manual to Guide the Development of Local Evaluation Plans was specifically designed to assist in the evaluation of the LIFE Framework.\(^ {110}\) Each of these publications provide a list of potential indicators and possible outcome measurement tools and thus serves as a useful starting point for addressing outcome measurement in the NSPP going forward. The LIFE website includes a list of program evaluation resources that could also assist with this process.\(^ {111}\)

It is important to acknowledge the need for the inclusion and/or development of culturally appropriate outcome measurement tools, particularly for projects that work with CALD and Aboriginal and Torres Strait Islander populations.

12.3 What, how and when to measure outcomes

The causal inference model presented in Figure 12-1 identifies four domains (types) of project outputs:

- Provision and consolidation of suicide prevention information resources and research
- Direct individual client services to high-risk groups
- Community focused services/activities for people at risk of suicide

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\(^ {109}\) Department of Health and Ageing, Outcomes and indicators, measurement tools and databases for the National Action Plan for Promotion, Prevention and Early Intervention for Mental Health 2000, report developed by SH Spence, M Donald, J Dower, R Woodward & P Lacherez, School of Psychology and Centre for Primary Health Care, University of Queensland for DoHA, Canberra, 2002.


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- **Training** in recognising and responding to risk for front line workers, families and community members, and workforce development.

Separate causal inference models have been developed for each of these four domains, and are presented as follows:

- Information resources, research and information provision (*Figure 12-2*)
- Individual client services (*Figure 12-3*)
- Community focused services (*Figure 12-4*)
- Training (*Figure 12-5*).

In each case, examples of possible data sources are provided. A full taxonomy of possible tools and questions has not been developed for each output domain as this is beyond the scope of this evaluation.

Output domains rather than LIFE Action Areas are used as the basis of these causal inference models because, from a project perspective, these output domains are more applied and less conceptual. As a result, projects can more easily identify with the output domains that relate to the modes of activities they provide.

Consistent with best practice advocated by the realist evaluation approach, a range of timeframes and tools/data are suggested in the following four models (*Figure 12-2 to Figure 12-5*). These include a mix of quantitative and qualitative measures that are designed to unpack ‘the long sequences of steps before the outcome’\(^\text{112}\) while at the same time ensuring the validity and reliability of the data collected.\(^\text{113}\) The qualitative component is essential to understanding lived experiences and the context-specific elements that serve as mediating factors in achieving outcomes.

\(^{112}\) Pawson & Tilley, *Realistic Evaluation*.

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**Figure 12-2: Causal mechanism model: Information resources, research and information provision**

Causal Mechanism Model: Information resources, research and information provision

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Outputs</th>
<th>Proximal Outcomes</th>
<th>Distal Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project logistics:</td>
<td>Research papers and presentations</td>
<td>Improved understanding of epidemiology of suicide</td>
<td>Increased incidence of suicidal behaviour (self harm/suicide attempts)</td>
</tr>
<tr>
<td>- Funding</td>
<td>Information resources</td>
<td>Increased access to information</td>
<td>Reduced incidence of completed suicide</td>
</tr>
<tr>
<td>- Staff</td>
<td>Policy/strategy development</td>
<td>Improved understanding of what works in practice</td>
<td></td>
</tr>
<tr>
<td>- Supportive mechanisms</td>
<td></td>
<td>Increased community understanding of suicide</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Improved capacity to respond at tipping points and points of imminent risk</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reduced incidence of completed suicide</td>
<td></td>
</tr>
</tbody>
</table>

**Examples of possible data sources**

- Funding Agreements
- Progress Reports
- MDS
- Number of publications
- Number of presentations
- Number of information resources developed
- Citation indexes
- Number of people attending presentations
- Number of information resources distributed
- Key informant interviews
- Survey of information resource users
- ABS Data
- State-based suicide registers (where they exist)
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Figure 12-3: Causal mechanism model: Individual client services

Causal Mechanism Model: Individual Client Services

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project logistics: - Funding - Staff - Supportive mechanisms</td>
<td>Strong referral pathways and coordinated care</td>
</tr>
<tr>
<td></td>
<td>Provision of appropriate range of direct support and care services</td>
</tr>
<tr>
<td></td>
<td>Engagement of high risk groups</td>
</tr>
<tr>
<td></td>
<td>Targeted suicide prevention activities in high risk groups</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Proximal Outcomes</th>
<th>Distal Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased help seeking</td>
<td>Improved individual resilience and wellbeing</td>
</tr>
<tr>
<td>Decreased suicidal ideation</td>
<td>Reduced incidence of suicidal behaviour (self harm/suicide attempts)</td>
</tr>
<tr>
<td>Improved QoL/SEWB</td>
<td>Reduced incidence of completed suicide</td>
</tr>
</tbody>
</table>

Examples of possible data sources

<table>
<thead>
<tr>
<th>Funding Agreements</th>
<th>Client Records</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress Reports</td>
<td>- Number of clients</td>
</tr>
<tr>
<td>MDS</td>
<td>- Demographics compared to target</td>
</tr>
<tr>
<td></td>
<td>Client satisfaction surveys</td>
</tr>
<tr>
<td></td>
<td>MDS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pre- and Post- K10</th>
<th>Pre- and post- QoL</th>
<th>Pre- and post- SEWB</th>
<th>Exit interviews</th>
</tr>
</thead>
</table>

| Client follow up 12 months after intervention (online pop-up survey, phone) | Focus groups Network analysis Surveys Interviews | ABS Data State-based suicide registers (where they exist) |

Key: QoL = Quality of Life; SEWB = Social and Emotional Wellbeing
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Figure 12-4: Causal mechanism model: Community focused activities

Causal Mechanism Model: Community* Focused Activities

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project logistics:</td>
<td>Community events/ activities</td>
</tr>
<tr>
<td>- Funding</td>
<td></td>
</tr>
<tr>
<td>- Staff</td>
<td></td>
</tr>
<tr>
<td>- Supportive mechanisms</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Monitoring Q1: Did interventions or program deliver what they said they would?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitoring Q2: What were the outcomes of these programs?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Proximal Outcomes</th>
<th>Distal Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased community awareness of what is needed to prevent suicide</td>
<td>Reduced incidence of suicidal behaviour (self harm/suicide attempts)</td>
</tr>
<tr>
<td>Improved community strength and resilience</td>
<td>Reduced incidence of completed suicide</td>
</tr>
<tr>
<td>Increased understanding of whole of community risk and protective factors and how best to build resilience of communities and individuals</td>
<td></td>
</tr>
<tr>
<td>An environment that encourages and supports individual help-seeking</td>
<td></td>
</tr>
</tbody>
</table>

Examples of possible data sources

<table>
<thead>
<tr>
<th>Funding Agreements</th>
<th>Event records</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Number of attendees</td>
</tr>
<tr>
<td></td>
<td>- Demographics compared to target</td>
</tr>
<tr>
<td></td>
<td>Satisfaction surveys</td>
</tr>
<tr>
<td></td>
<td>MDS</td>
</tr>
<tr>
<td>Progress Reports</td>
<td>Community survey (pre and post)</td>
</tr>
<tr>
<td>MDS</td>
<td>Interviews with key informants/stakeholders</td>
</tr>
</tbody>
</table>

Interviews with key informants/stakeholders

Community survey (pre and post), e.g. Community Readiness Questions Interview

ABS Data
State-based suicide registers (where they exist)

*Community refers to: either the general community (whole of Australia) or a more specific geographic community; or a community of shared interest or culture (Lewis and Mitchell, 2003)
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Figure 12-5: Causal mechanism model: training

Causal Mechanism Model: Training

**Process Evaluation**
Q1: Did interventions or program deliver what they said they would?

**Inputs**
- Project logistics:
  - Funding
  - Staff
  - Supportive mechanisms

**Outputs**
- Provision and consolidation of suicide prevention resources and information
- Provision of evidence based training
- People complete training

**Proximal Outcomes**
- Changes in understanding
- Changes in confidence

**Distal Outcomes**
- Application of knowledge
- Staff role post training
- Performance change
- Increased recognition of signs/symptoms
- Increased referrals
- Increased resilience
- Increased awareness
- Reduced incidence of suicidal behaviour (self harm/suicide attempts)
- Reduced incidence of completed suicide

**Outcome Evaluation**
Q2: What were the outcomes of these programs?

**Examples of possible data sources**
- Funding Agreements
- Progress Reports
- MDS
- Training content/ curriculum
- Trainee Records
  - Number of trainees
  - Demographics compared to target
  - Trainee satisfaction surveys
- MDS
- Pre- and post-training knowledge
- Pre- and post-training confidence
- Survey of trainees 12 months after training
- Survey of beneficiaries of original trainees (e.g. Teachers, students, workmates etc.)
- ABS Data
  - State-based suicide registers (where they exist)
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12.4 Barriers to outcome measurement in the NSPP

Outcome measurement presents a significant change and challenge for many projects and for the Department, as it represents a new and expanded mode of reporting. It is important, therefore, to highlight the key issues that may arise so that change can be appropriately managed. These issues were identified through consultation with the projects and the Department throughout this evaluation.

As indicated in each of the causal mechanism models (Figure 12-2 to Figure 12-5), outcome measurement in the NSPP context presupposes data collection at two levels:

- Project level
- National level.

The challenges related to outcome measurement at each level are examined below.

12.4.1 Project level

One of the key lessons learned from administering the MDS is that there is a general willingness among NSPP-funded projects to participate in data collection. This is evidenced by the fact that all 47 eligible projects submitted data during the snapshot period (October 2012 to March 2013). All required data was provided by 44 of the 47 projects (94%), and partial data by the remaining three projects.

Furthermore, positive feedback was provided either in writing or verbally from many of the projects. Examples of written feedback include:

- Overall, the portal is brilliant. It makes entering the data quick and simple.
- The reports are really useful for us. We'll be able to use them for our business purposes here.
- What you have designed is very comprehensive.

Discussions with project representatives at the workshops held in August 2012 also indicated a willingness to collect outcome data.

Despite this general willingness, a number of barriers were evident that could have implications for the introduction of outcome measurement at project level:

- Engagement with projects highlighted that the majority are focussed on the business of service delivery
- For some, outcome measurement is perceived as research and therefore outside their core business of service delivery
- Many lack training in outcome measurement, ie, selection, identification, administration and analysis of appropriate tools
- Project effects have generally been reported using narrative accounts or invalidated tools in the past
- Projects were generally unaware of the range of outcome measurement tools currently available. They also indicated that a repository of NSPP-appropriate outcome measurement tools and guidance in the use of these tools would be welcomed
- Where resistance occurs, it is likely to be on the grounds of inadequate time and limited staff availability. In some cases this may be justified, particularly among those projects with large volumes of clients and few staff
- For some projects, outcome measurement may be impractical, eg, those operating crisis lines where they do not have the capacity to follow-up
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- Loss to follow-up is likely to be raised as an issue by projects for establishing long-term outcomes.
- Non-compliance may be an issue. As noted above, not all projects completed the MDS. This is also likely to be the case with outcome measurement.

Addressing these issues with projects will be essential to securing project buy-in.

Additional considerations for the Department include:

- Cessation of funding will mean that project staff will be unable to follow up with service users in later years to establish the long-term outcomes of project activities. Funding duration at project level may need to be reviewed or alternative follow-up arrangement considered.
- Assessing NSPP-funding applicants to determine their capacity to undertake the required level of service delivery and data collection (including outcome measurement).
- Investment in capacity building at project level to ensure compliance with service delivery and data collection and outcome measurement requirements. This could involve expanding the role of existing NSPP-funded projects. For example, under its funding agreement, the National Centre of Excellence in Suicide Prevention is tasked, with "conducting educational workshops on a range of topics agreed by the Department to provide NSPP projects with additional support, for example, evaluation and data collection practices."
- Facilitating collaborations and partnerships between projects and the research sector to bridge the evidence–practice gap. Again, this could involve expanding the role of existing NSPP-funded projects. For example, in its funding agreement, the Suicide Prevention Australia (SPA) Strategic Partnership is tasked with "building and consolidating alliances with researchers and centres of excellence."
- Introduction of accountability measures for non-compliant projects.
- Outcome evaluation at state/territory and national levels is a matter for public health specialists.

12.4.2 National level

While the introduction of outcome measurement at project level will do much to address the lack of information on project-specific outcomes, it is important to note that no matter how well outcome measurement is undertaken at project level, it is not possible to establish a direct correlation between individual project-level activities and reductions in the suicide rate nationally. It is for this reason that "governments look at suicide rates as the main outcome measure to determine the efficacy of their policies" in the absence of other more proximal measures being available.114

Much has been written on the problematic nature of suicide data in Australia (see Section 4.10.2). If changes in national suicide statistics are to serve as a surrogate measure of long-term project outcomes, reliable national suicide statistics are as crucial to outcome measurement in the NSPP.

Consultations with key stakeholders in the preparation of this report highlighted the need to include suicide attempts, not just completed suicides, as key indicators of change. This would require consideration of implementing a suicide attempt register and the follow-up of people who used services as a result of attempted suicide or self-harm, to establish what happens in the 12 months after contact with the service or emergency department.

Data linkages are crucial if an analysis at this level is to be achieved.

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12.5 Summary of possible improvements

Based on the preceding analysis of outcome measurement in the NSPP, key areas of possible program improvement are summarised below.

At project level:

- A taxonomy of practical, evidence-based outcome measures that could be used by NSPP-funded projects needs to be created. Once established, this taxonomy needs to be updated as new tools and measures become available and the evidence base evolves.

- A repository of NSPP-appropriate outcome measurement tools and guidance in the use of these tools would be useful. Projects were generally unaware of the range of outcome measurement tools currently available and indicated that such a repository of tools would be welcome.

- An advisory group needs to be established to provide direction on the best measures to be used by individual projects.

- Capacity building is needed at project level in terms of instrument selection, administration, analysis and reporting of outcome measures. Opportunities should be provided for information sharing among projects regarding best practice strategies to implement outcome measures. This could take the form of a best practice register.

- While validated tools are important, a mix of qualitative and quantitative outcome measures is essential to understanding lived experiences and the context-specific elements that serve as mediating factors in achieving outcomes.

- Project engagement and consultation is essential throughout this change process to ensure project buy-in.

- Oversight is needed to determine the extent to which measures have been appropriately implemented.

- Projects that apply for NSPP-funding should be assessed in terms of their capacity to conduct and report on outcome measures.

- Collaborations and partnerships between projects and the research sector need to be further developed to bridge the evidence–practice gap.

- Accountability measures need to be introduced for non-compliant projects.

- Outcome evaluation at state/territory and national levels is a matter for public health specialists.

At a national level:

- Outcome measurement needs to include suicide attempts, not just completed suicides.

- Data linkages are essential to facilitate outcome measurement.

- Ongoing improvements are needed in suicide death data.