Implementation plan for the systems approach to suicide prevention in NSW

Summary paper

October 2015
IMPLEMENTATION PLAN FOR THE SYSTEMS APPROACH TO SUICIDE PREVENTION IN NSW

Rationale

Every year, approximately 700 people die by suicide in NSW, and about 21,000 make a suicide attempt. Suicide rates have remained stable over the last decade in NSW at 9.2 per 100,000 – highlighting a need for strategic change. The Mental Health Commission of NSW, the NSW Ministry of Health, and many other stakeholders across Australia recognise that a new approach to suicide prevention is vital if lives are to be saved. A new approach, the ‘systems-approach’ has never been done before in Australia. It has three key components:

1. The inclusion of nine evidence-based strategies, targeting population to individual-level risk (refer Figure 1);
2. Simultaneous implementation of all strategies in selected localised regions (identified suicide ‘hot spots’); and
3. Governance at a local level (integration of non-government organisations (NGOs), primary health care, education, police and community groups to coordinate action).

The systems-approach recognises that multiple strategies implemented at the same time are likely to generate bigger effects than just the sum of its parts (i.e., due to synergistic effects). A systems intervention offers a data driven, evidence-based approach, setting it apart from what is currently being done and raising the bar in suicide prevention.

![Figure 1: The nine strategies that make up the systems-approach to suicide prevention](image-url)
Expected impact of the approach: Lives saved

It is estimated that full implementation of a nine strategy systems-based intervention will result in reductions of 21% of suicide deaths and 30% of suicide attempts. At the NSW population level this equates to a saving of 145 lives, while averting 6,300 suicide attempts per year. It has been estimated that suicide costs Australia approximately $17.5 billion per year in direct and indirect costs (including premature death, hospitalisations for non-fatal suicide and lost productivity).

By reducing the burden of suicide by 20% (as the systems-approach proposes to do), it may be possible to save the Australian economy $3.5 billion per year. For NSW alone, which has a population approximately one-third of Australia’s total population, the potential savings could be $1.12 billion.

The potential percent by which suicide deaths and attempts could be reduced by if the nine suicide prevention strategies were fully implemented were estimated using existing best-evidence research.

Figures 2 and 3 highlight what strategies should be a priority and where they are likely to have the biggest impact. As the systems-approach proposes to reduce suicide by 20% in 24 - 48 months, it is clear that no single strategy by itself can produce substantial reductions in suicidal acts. A multilevel approach is necessary.

**Figure 2: Percent by which strategies are estimated to reduce suicide deaths**

**Figure 3: Percent by which strategies are estimated to reduce suicide attempts**
Early analysis of what suicide prevention activities are currently being undertaken in NSW indicates that the NGO sector is not delivering programs that are evidence-based, and that what is being delivered aligns poorly with the nine strategies. Many deliver programs that have the least impact on suicide prevention – such as public awareness campaigns and media guidelines (Figure 4).

![Diagram showing alignment between NGO programs and estimated reduction effect of each strategy](image)

**Figure 4: Alignment between NGO programs and estimated reduction effect of each strategy**

Successful implementation of the systems-approach will therefore require the sector to upskill, train, develop, promote and implement new or improved (and accredited) programs. Some NGOs interested in suicide prevention will need to change the focus of their current activities in order to engage in evidence-based suicide prevention.
How and where will a systems-approach be implemented?

The where:
Suicide death and attempt data was geospatially mapped to identify suicide hot spots in NSW. Eleven candidate sites were identified that would be suitable for a systems-approach intervention (Figures 5 and 6 overleaf):

*Figure 5: Suicide ‘hot spot’ Local Government Areas (LGAs) as potential intervention site*
Implementing the systems-approach intervention in the full 11 candidate sites is not considered feasible, given the enormity of the infrastructure, time and fiscal resources required. As such, four sites are recommended for implementation. The sites in which a systems-approach intervention should be implemented will be decided based on meeting certain inclusion criteria, such as having appropriate population size to detect an intervention effect (>75,000), high mortality rates, necessary infrastructure (i.e., hospitals, GP networks) to implement the strategies through, and the level of community readiness to accept an intervention. The sites which best fit these conditions will be candidates for intervention.

**The how:**

The preferred design of the study is a stepped wedge-design with sequential roll out across all four sites over three years. The order in which sites will receive the intervention will be decided through a randomisation process. To ensure that there is fidelity and integrity across the four sites we propose that:

1. Interventions in each region **must contain the same core elements** (i.e., each site must implement programs that align with all nine strategies) for evaluative purposes. There will be flexibility in the specific programs employed in each community in order to appropriately address unique local cultural needs and issues; and

2. Rigorous evaluation is undertaken. A four-arm evaluation model is proposed, which includes evaluation of primary outcomes (i.e., reductions in deaths and attempts) and intermediary outcomes (e.g. increases in GP referrals, prescribing changes, increased public awareness).
In addition, process and economic evaluations are needed to identify which measures are most effective and which could be optimised.

The governance of the systems-approach must include both local and central components to ensure success. Local governance structures will provide leadership in the planning, implementation and evaluation of local suicide prevention action plans. Central governance will be responsible for resourcing and monitoring local suicide prevention teams.

**Funding considerations for implementation**

Implementation of the systems-approach requires coordination of a number of integrated components across multiple governance structures. Funding for the implementation of the systems-approach in NSW should be largely derived from current expenditure. That is, NSW and Commonwealth agencies and health services retain funding to continue to provide the core services needed to implement the strategy. However it is noted that these services may need to be realigned around the nine evidence-based strategies outlined in the implementation plan.

Funding related to the central and localised coordination of the systems-approach will need to be secured externally, and will need to be substantial (estimation of minimum funding needed: $10 million). This funding amount will ensure that a central governance agency will be able to provide the high level operational support needed to coordinate the multiple localised agencies responsible for the development, implementation and maintenance of the intervention within each intervention community. It will also provide for a comprehensive evaluation framework to be embedded within the planned approach. This would include resources to establish a NSW Suicide Register and a dedicated unit with responsibility for ongoing outcome evaluation using geospatial mapping and health economic evaluation, as well as the provision of support and assistance in undertaking process evaluation at a local level. This external funding does not factor in the activities currently undertaken by the health system or the non-profit sector.

The systems-approach framework must be sustainable into the future. NSW and Commonwealth ‘suicide prevention’ funds must be used to develop the infrastructure and communication channels that make the services work well together, that integrate services across general practice, schools, hospitals, NGOs and emergency services, so that suicide prevention remains a core activity within NSW services and a core part of business of the NSW Ministry of Health into the future. No data is available for real costing of internal government resources, or funding currently spent by NSW or Commonwealth governments directly or indirectly on ‘suicide prevention activities’. As such the proposed budget provides an estimate only for the internal resourcing required to support the central governance and coordination structure, and excludes costing of current direct services.

The first five years of the implementation plan will require structured oversight of the development of training materials and resources, realignment of agency work and development of the culture of integration and innovation. Funds would be expected to be phased out over time, with the central governance structure and management of the state-wide suicide registry funded on an ongoing basis. The latter would enable the hosting and maintenance of dedicated databases with associated interactive suicide prevalence mapping public portal, designed to:
• include relevant data in relation to deaths, ambulance-reported suicide attempts and hospital admission following suicide attempts across NSW, as it becomes available
• maintain a suite of selected spatial context data such as population age and gender structure, socioeconomic data and service availability
• provide spatial analysis to generate information on attribute clustering, including the identification of suicide/attempted suicide hot spots, along with the identification of emerging and declining hot spots to assess contagion behaviour patterns and seasonal factors
• provide analysis to identify contributing environmental and demographic factors that may contribute to the development of risk models
• provide data management and support data access to researchers and policy makers seeking to use data for specific and targeted programs and projects.

The ongoing data collection and analysis of trends in suicide deaths and attempts in NSW would be tracked on a continuing basis to monitor progress toward achieving the objectives of the systems-approach, and provide dynamic open access information to all key stakeholders through the public suicide prevention portal.

**Conclusion**

Suicide in Australia is a grave concern. With over 2,500 Australians taking their life annually and more than 25-fold this number making an attempt, it is a community-wide crisis which must be addressed using a community-wide approach.

We know that a systems-based approach to suicide prevention has been highly effective in overseas models. It has a strong focus on using an evidence-based and data-driven approach, to identify what strategies should be prioritised and where they should be implemented.

Over the past thirty years, Australia has decreased road fatalities by over 60% to an all-time low in 2014, through public awareness campaigns and appropriate interventions by community groups, services and government working together.

Over the same period suicide rates have remained fairly consistent.

We believe that the community is ready to see change. What is now required is the political will and leadership across health, community agencies, business and government to take this approach forward.

There is a strong case for this new direction in suicide prevention due to the estimated $1.12 billion savings that could be incurred by reducing suicide by 20% in NSW. Aside from any financial savings, there is the unquantifiable emotional suffering that would be spared for individuals, families, communities and the nation.