Sustaining evidence-based practice for young people who self-harm: a 4-year follow-up

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This report is dedicated to our late co-author Margaret Tobin, to honour her contribution to advancing the quality of mental health services.

Abstract

Objective: In 1998 and 1999, two NSW Area Health Services conducted the Youth At Risk of Deliberate Self Harm (YARDS) project. The YARDS project was designed to implement evidence-based service enhancements for the clinical management of young people with Deliberate Self Harm. This paper examines the extent to which service enhancements implemented during YARDS were maintained 4 years after the conclusion of the project and compares service quality with another NSW Area Health Service that did not participate in the YARDS project.

Method: Staff from mental health services and emergency departments completed the Service Activity Scale, a measure developed for the YARDS project to assess the quality of health service response to individuals who present following a suicide attempt.

Results: Results indicated that the service improvements made during the YARDS project were maintained 4 years after the project ended. Furthermore, a significant difference was found between scores for services that participated in YARDS and services that did not participate in YARDS.

Conclusions: These results suggest that projects such as YARDS which support evidence based service enhancements may be useful in improving the management of young people with deliberate self-harm, and that these improvements may be long-lasting.

In 1998 and 1999, South East Sydney Area Health service and Northern Rivers Area Health Service conducted the Youth At Risk of Deliberate Self Harm (YARDS) project. The YARDS project was aimed at enhancing the clinical management of young people presenting after an episode of Deliberate Self-Harm (DSH) (that is, suicidal behaviour). The project, and its short-term follow-up have been described previously in two papers in Australian Health Review (Tobin, et al 2001; Einfeld et al 2002). In summary, staff from the project team worked closely with mental health service providers and emergency departments to develop and implement

changes designed to enhance the service performance and clinical care for young people with DSH. Measures of service delivery were obtained at the start of the project, halfway through, at the end of the project and 9 months after the conclusion of the project. These measures tracked the development and implementation of service enhancements and measured the extent to which service enhancements were sustained following the conclusion of the project. A Service Activity Scale (SAS) was developed specifically for the YARDS project to quantify these changes.

The first report of the YARDS project (Tobin et al 2001) documented a significant increase in SAS scores across all services. This improvement in services was reflected in an improved process of referral of clients from crisis contact points and hospital emergency departments to specialist mental health services, an increase in the number of appropriate referrals, and improved convenience of appointments for clients. Staff feedback indicated that the project had been useful in helping to introduce more structured follow-up procedures, and in creating greater access to staff training.

One feature of the YARDS project that may have contributed to its success was that YARDS adopted Total Quality Management (TQM) as a tool for organisational change. This model focuses on the role of management in assisting employees to change their work practices and in ensuring the development of policies and procedures to support those changes (Tobin et al 2001).

SAS scores at the conclusion of the project were compared with SAS scores obtained from a 9-month follow-up (Einfeld et al 2002). No significant difference was found between SAS scores at the end of the YARDS project and SAS scores at the nine-month follow-up, indicating that, in the short-term at least, service enhancements developed during the YARDS project were sustained.

However, two limitations of this project were evident. First, the 9 months following the project was not a sufficient time period to assess the longer-term sustainability of service enhancements. This was particularly so, given that some or all of the staff involved in the initial YARDS project had left the services. Second, during the final 6 months of the YARDS project, the NSW Department of Health Issued Circular 98/31: "Policy guidelines for the management of patients with possible suicidal behaviour for NSW health staff and staff of private hospital facilities" (NSW Health, 1998). This circular required services to implement changes, some of which were the same as the changes suggested by YARDS. Due to the timing of this circular, it was not possible to be certain that the service enhancements and sustainability measured at the conclusion and 9-month follow-up were indeed due to the YARDS project or whether they may have been influenced by Circular 98/31.

The current project was therefore developed to address the following aims:

Aim 1: To assess the extent to which service enhancements developed during the YARDS project were sustained 4 years after the conclusion of the project.

Aim 2: To assess the extent to which service enhancements implemented during the YARDS project were reflected in another Area Health Service that did not participate in the YARDS project, and thereby to attempt to separate the effects of the YARDS project from the effects of a policy directive from the NSW Department of Health.

Method

Participants:

Participants were 26 staff of mental health services and emergency departments in three Area Health Services in NSW. These staff were the directors of mental health services and emergency departments and team leaders of mental health crisis teams and child and adolescent mental health services. Seventeen of the participants worked within South East Sydney Area Health Service (SESAHS), 5 within Northern Rivers Area Health Service (NRAHS) and 4 within another NSW metropolitan Area Health Service that did not participate in the YARDS project.

Measures:

The Service Activity Scale (SAS): The Service Activity Scale (SAS) was used to assess the degree to which services were implementing the service enhancements developed during the YARDS project. Details of this measure were published in the earlier reports in Australian Health Review (Tobin et al 2001, and Einfeld et al 2002). In brief, the SAS is divided into four sections assessing best practice in emergency response, specialist referral, ongoing treatment and discharge process. Items of the SAS were largely derived from the recommendations of the American Society for Suicidology. Table 1 lists example questions of each of these four sections of the SAS. The scale has good internal consistency and reflects service behaviour as documented in patient records.

Table 1: Example SAS items:

Section of SAS	Example SAS items
Section A: Response to Crisis	"Emergency department refer DSH presentations to mental health services irrespective of lethality"
Section B: Specialist Mental Health Services	"An assessment of client is performed by the specialist within 48 hours of first presentation to Emergency department of Acute Care Mental Health Team"
Section C: Ongoing Treatment & Rehabilitation	"Links with school are established unless specifically contraindicated"
Section D: Quality of Discharge Process	"The young person and their carers are provided with clear, written information on the range of relevant services and supports available in the community"

Procedure:

Participants were asked to again complete the SAS, 4 years after the YARDS project was completed.

Directors of mental health services in a NSW Area Health Service that did not participate in the YARDS project were asked to complete the SAS.

Data analysis:

In order to address Aim 1, a multivariate-model repeated measures ANOVA was performed across data collected at the start of the project, at the conclusion of the YARDS project, and at the 4-year follow-up, and post-hoc comparisons compared each of these time points separately. In order to assess Aim 2, the SAS scores for SESAHS and NRAHS staff were compared with scores for staff from the Area Health Service that did not participate in YARDS.

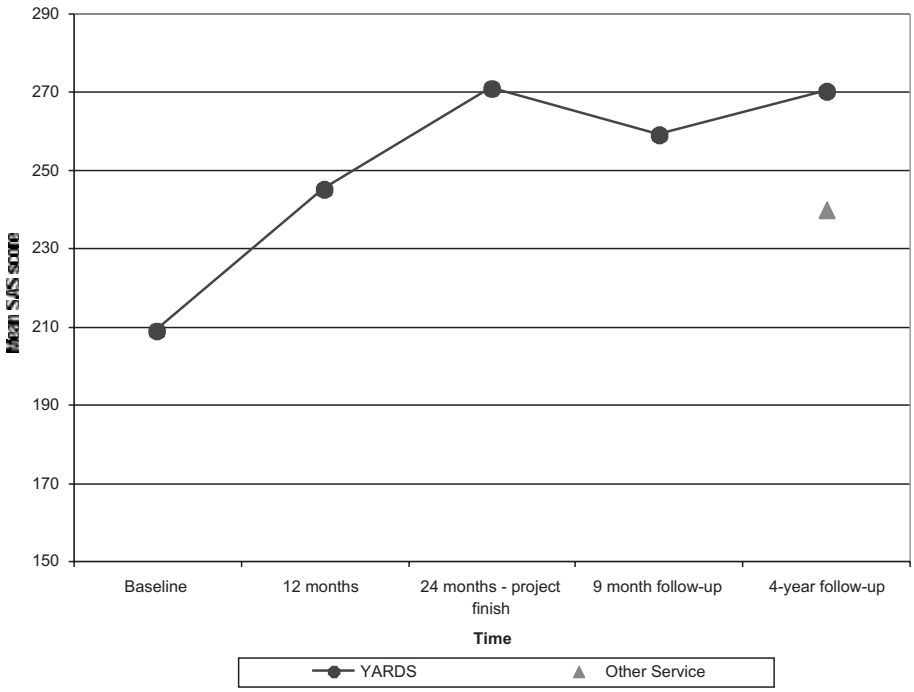
Results

The total SAS scores at each time point for each of the directors of services that participated in the YARDS project are displayed in Table 2, along with the means and standard deviations. Figure 1 displays the mean SAS scores at each time (averaged across all services that participated in YARDS), and the mean score at the 4-year follow-up for services that did not participate in YARDS.

Table 2: Total SAS scores as rated by the directors of the 10 services that participated in the YARDS project

Service	Baseline: Start of YARDS	Half way through YARDS	End of YARDS	9-month follow-up	4-years follow-up
1	211	254	285	275	Missing
2	275	271	341	300	278
3	174	173	219	225	260
4	248	257	259	missing	245
5	148	179	323	247	279
6	152	missing	216	234	233
7	263	308	341	319	289
8	242	282	255	293	296
9	170	258	248	245	292
10	210	231	229	201	259
Mean	209.3	245.8	271.6	259.9	270
SD	46.7	44.91	48.4	39.0	22.0

Figure 1: Mean SAS scores at each time point for the services that participated in YARDS. The triangle shows the mean score SAS for the services that did not participate in the YARDS project.



Aim 1

One of the 10 services did not return 4-year follow-up data and was excluded from analysis.

For the remaining 9 services, a multivariate-model repeated measures ANOVA was performed across data collected at the start of the project, at the conclusion of the YARDS project, and at the 4-year follow-up. This ANOVA revealed a significant overall effect ($F(2, 7) = 7.516$, $p = .018$).

Post-hoc comparisons showed a significant increase in mean SAS scores between the start of the project and the conclusion of the project ($F(2, 7) = 5.737$, $p = .033$) and a significant increase between the mean SAS scores at the start of the project and at the 4-year follow-up ($F(2, 7) = 6.328$). The mean SAS scores at the conclusion of the YARDS project and at the 4-year follow-up were not significantly different. ($F(2, 7) = 0.000$, $p = 1.0$).

This indicates that services did improve during the YARDS project, and suggests that the service improvements adopted during the YARDS project were maintained by services 4 years after the conclusion of the project.

Aim 2.

At the 4-year follow-up, the mean SAS score for services that participated in the YARDS project was 270.17, which was greater than the mean for services that did not participate in the YARDS project of 240.13. An independent samples t-test revealed that this difference was significant ($t(11) = 2.257$, $p<.05$).

Discussion

Previous findings (Einfeld et al 2002) indicated that the services involved in YARDS showed significant improvements in the management of young people with DSH behaviour, and that these service enhancements were maintained 9 months following the conclusion of the project. The results of the present study showed that the improvements made during the YARDS project were maintained during the 4 years following the project. Some individual services showed relatively small increases and others relatively small decreases, indicating that overall, there is no systematic trend for scores to change over the follow-up period.

This indicates that YARDS achieved its aim of introducing evidence-based clinical practice in a manner intended to be sustainable following the cessation of the project itself. In particular, YARDS focussed on improving the availability of staff education and training, developing written policies and standard procedures for the clinical management of people with DSH, and making cultural and attitudinal changes regarding DSH. Improvements in these areas of service activity, and most particularly in the development of specific policies and procedures, would have contributed to the longer-term success of the project.

As a result of NSW Health Department Circular 98/31 issued during final 6 months of the YARDS project, the service enhancements measured at the end of YARDS and in the 9-month follow-up could have been attributed to the effects of circular 98/31 and not the YARDS project. However, the present results show that services that participated in YARDS scored significantly higher on the SAS than did services from an Area Health Service that did not participate in the YARDS project. Because no data was obtained for the Area Health Service that did not participate in YARDS at any of the previous time points, it is not possible to be definitive regarding the extent to which Circular 98/31 affected the functioning of those services. However, this result does suggest the possibility that the YARDS project encouraged services to make improvements over and above any improvements made as a result of the 1998 NSW DOH circular 98/31.

Conclusion

A specific service enhancement project, using Total Quality Management methods can improve the clinical management of young people with Deliberate Self Harm. These service enhancements are sustainable 4 years after the completion of the project. Further, such a project may have a greater impact than an official policy requirement alone.

Acknowledgements

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