J.Ross, S. Darke, E. Kelly &
K. Hetherington

Suicide risk assessment and intervention strategies: Current practices in Australian residential drug and alcohol rehabilitation services

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SUICIDE RISK ASSESSMENT AND INTERVENTION STRATEGIES: CURRENT PRACTICES IN AUSTRALIAN RESIDENTIAL DRUG AND ALCOHOL REHABILITATION SERVICES

Joanne Ross, Shane Darke, Erin Kelly and Kate Hetherington

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GLOSSARY

ABS: Australian Bureau of Statistics

ADHD: Attention Deficit Hyperactivity Disorder

AOD: Alcohol and Other Drugs

ASIST: Applied Suicide Intervention Skills Training

ATSI: Aboriginal and Torres Strait Islander

A&E: Accident and Emergency

BPD: Borderline Personality Disorder

CEO: Chief Executive Officer

CI: Confidence interval

CPR: Cardiopulmonary resuscitation

CSAT: Centre for Substance Abuse Treatment

DASSA: Drug and Alcohol Services South Australia

GP: General Practitioner

HBRR: Hospital based residential rehabilitation services

IDU: Injecting drug user

MH: Mental health

MOU: Memorandum of Understanding

NADA: Network of Alcohol and other Drug Agencies

NEAF: National Ethics Application Form

OR: Odds ratio

RBRR: Religion based residential rehabilitation services

SD: Standard deviation

SPSS: Statistical Package for the Social Sciences

SRA: Suicide risk assessment

Suicide-PPP: Suicide Policies and Procedures Pro-forma

Suicide-AS: Acute suicide risk Screener

Suicide-RFT: Suicide Risk Formulation Template

TCRR: Therapeutic Communities and other (non religion-based) residential rehabilitation services

TIP: Treatment Improvement Protocol

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Dedicated to the memory of Jen McLaren.

EXECUTIVE SUMMARY

Introduction

Suicide is a leading cause of death among people who misuse drugs and alcohol. The annual prevalence of attempted suicide among dependent drug users is equivalent to the lifetime prevalence in the general population. Clearly suicide represents a major clinical challenge to those treating drug dependent users, yet little is known about how suicide risk is currently managed in Australian drug and alcohol treatment settings.
Research has identified a number of risk factors for suicide and established that individuals with drug and alcohol use disorders have a very high prevalence of these risk factors. As suicide risk is a dynamic phenomenon it needs to be assessed continuously throughout treatment, from intake through to discharge. Currently there is no tool available that reliably predicts suicide. The most valid method of determining risk is to conduct a thorough assessment of the individual.

A Treatment Improvement Protocol (TIP) for addressing suicidal thoughts and behaviours in substance misuse treatment settings has recently been developed in the United States. As a minimum requirement the TIP consensus panel recommends that all programs providing substance misuse treatment have the basic capacity to identify clients who are at risk and make appropriate referrals for formal risk assessment. In addition, it recommends that all programs have clear policies and procedures for the management of suicide crises.

The current study sought to examine current suicide risk assessment practices in Australian residential drug and alcohol treatment settings. Specifically, the aims of the study were:

1) To examine existing suicide risk assessment and intervention strategies used by drug and alcohol staff in residential rehabilitation programmes across Australia;
2) To determine the extent of staff training in suicide risk assessment;
3) To assess staff knowledge of suicide risk factors;
4) To describe the barriers to conducting suicide risk assessments;
5) To identify additional and/or under-utilised opportunities for intervention; and

6) To outline the core components of a potential suicide risk assessment tool for drug and alcohol workers, and make recommendations about the dissemination of the tool in order to maximise its usefulness.

Methodology

The study employed a cross-sectional design. Semi-structured interviews (30 minutes duration) were conducted with managers and staff responsible for case management/treatment of clients at drug and alcohol residential rehabilitation services across Australia. Seventy-one residential rehabilitation services were identified and invited to participate in the study. Of these, 64 (90%) agreed to participate. At each participating agency a request was made for 1 manager and 3 staff volunteers to participate in the interview. In total, 64 manager interviews and 142 staff interviews were conducted.

The Manager Interview assessed agency policy and procedures around suicide risk assessment (SRA), agency staffing and capacity, perceived needs in terms of assessment tools, and staff training in SRA. In addition, managers were asked to provide a copy of the organisation's current SRA policy or guidelines, any assessment tools used to assess acute suicide risk, and any general tools used as part of routine clinical assessment.
The Staff Interview assessed knowledge of suicide risk factors, the frequency and extent of current screening practices, personal experiences of managing clients deemed to be a high suicide risk, barriers to conducting SRAs, and perceived needs in terms of assessment tools.

Data from interviews was analysed using the Statistical Package for the Social Sciences (SPSS). Descriptive analyses were used to report current practices for assessing and managing suicide risk. Inferential statistics (t-test and chi square analyses) were used to examine group differences.

Results

Characteristics of the residential rehabilitation services/staff

Participating agencies fell in to three broad categories; hospital based residential services (HBRR; n=8), religion based services (RBRR; n=18), and Therapeutic Communities and other residential rehabilitation services (TCRR; n=38). The majority (84%) of services

employed paraprofessionals, and approximately half employed Allied Health (53%) or Medical/Nursing (45%) staff. The median proportion of Aboriginal and Torres Strait Islander (ATSI) clients reportedly seen was 5% (range 0-99%).

Formal training in SRA

According to managers, 25% of agencies had not provided staff with training in SRA. Consistent with this, 23% of staff interviewed reported they had never been formally trained in SRA. The majority of staff (77%) had received SRA training on a median of 2 occasions, typically around 12 months prior to interview. The majority of staff (94%) reported being confident or very confident in SRA, however, 96% acknowledged they would gain some benefit from further training.

Suicide risk assessment policy

Two thirds of agencies reportedly had a written policy relating to the management of suicide risk. A review of the policy documents indicated that 35% of these did not clearly document the procedure for assessing and responding to suicide risk. In agencies where the manager indicated there was a policy relating to SRA, 26% of staff were unaware of the policy's existence, and 30% of staff were not at all familiar with it.

Suicide risk assessment practices

Typically staff reported assessing suicide risk in response to an observation of the client (87%) and/or at a procedural time-point in treatment (68%). The majority of SRAs were conducted either prior to treatment (often for referral purposes), or early in treatment. Most staff (81%) reported having had a client at some stage whom they considered to be a high suicide risk.

A fifth of staff (20%) reported having lost a client to suicide, at a median of 36 months prior to interview (range 1-360 months).

The majority of managers and staff expressed a willingness to use a new tool to assess acute suicide risk if one were developed.

Approximately two-thirds of managers and half of staff interviewed reported some form of barrier to conducting suicide risk assessment with clients.

Knowledge of risk and impact of training on knowledge

Staff scored a mean of 7.4 correct responses when asked 10 knowledge questions on suicide risk factors. Fourteen per cent of staff correctly answered 5 or fewer questions. Staff who had undergone SRA training endorsed significantly more factors when asked what information they would gather from a client they believed to be acutely suicidal. Staff who had not undergone SRA training were more likely to hold the view that raising the topic of suicide with a client would increase the likelihood of them attempting suicide.

Discussion

The major findings of the study were that:

1) A third of agencies have no documented policy for managing suicide risk;
2) A quarter of staff have never been formally trained in SRA;
3) One in five staff report having lost a client to suicide;
4) In more than a third of agencies, staff are not expected to use structured assessment tools when assessing acute suicide risk; and
5) To varying degrees, agencies are gathering information about psychiatric comorbidity but this information does not appear to be routinely integrated into the client's SRA.

The current study confirms the challenging role of front-line drug and alcohol workers, who work with clients at high risk for suicide, often without regular formal training and clear policies/procedures in SRA.

The study results identified a clear need for regular training in SRA for drug and alcohol staff. Almost a quarter of staff reported never having received formal training in the area, a significant proportion were unaware of important risk factors for suicide, and the majority of participants indicated that further training in SRA would be beneficial. Staff reported numerous logistical difficulties in accessing training, such as being located in rural/remote areas. The provision of computerised training in SRA, which staff could complete when convenient, is one way these difficulties could be overcome.
According to the study participants, SRAs are not conducted consistently throughout treatment, with discharge being a particularly neglected time-point despite being a

significant transition period. The use of structured SRA measures was not routine across participating agencies, however, almost all Managers indicated that if a new tool was designed for assessing acute suicide risk their agency would be likely to use it.
While agencies typically reported that only a small proportion of their clients were of ATSI background, staff made several suggestions for modifying SRA practices for this client group. SRA among this group requires considerable cultural sensitivity on the part of the drug and alcohol worker.

Recommendations for the development of new resources

The current study identified the need for several new resources to improve the management of suicide risk in residential drug and alcohol treatment settings: a Suicide Policies and Procedures Pro-forma (Suicide–PPP), an Acute suicide risk Screener (Suicide-AS), and a standardised Suicide Risk Formulation Template (Suicide-RFT).

Suicide–PPP. To be used by managers to assist them in drafting guidelines for SRA, including suggestions for establishing formal links with local mental health services, clarifying what information such services require for referral, and key considerations for managing suicidal crises.

Suicide-AS. To help all staff (irrespective of level of training or experience) to identify high risk clients who require further evaluation and/or treatment. This tool would not replace formal clinical assessment, but would act as a means of ensuring that key information is routinely collected for each individual client, both at set procedural time points in treatment and when staff identify warning signs for suicide.

Suicide-RFT. To integrate all of the available information in order to identify the known risk factors for a particular client, to determine how these risk factors are being addressed by the current treatment plan (where possible), and to highlight what risk factors are yet to be assessed. The template would also be useful in conveying information to external services about a client's known suicide risk factors.

Development and pilot-testing of resources

The Suicide-PPP, Suicide-AS and Suicide-RFT should be designed in consultation with the Network of Alcohol and other Drug Agencies (NADA). A brief information booklet

should be produced explaining why suicide screening is important and raising awareness of the new resources. An instruction manual should be produced to accompany the resources. It is also recommended that a pilot study be conducted with a random selection of residential rehabilitation services from across Australia as a means of determining the acceptability of the Suicide-AS, and Suicide-RFT.

Conclusion

This study confirms that suicide is an important clinical issue confronting drug and alcohol treatment staff, and highlights several gaps in suicide risk assessment practice. Many services are lacking clearly documented policies and procedures relating to the management of suicide risk, and do not provide staff with access to regular suicide risk assessment training. Staff in residential drug and alcohol services have a unique opportunity to gather information about a client's acute and chronic suicide risk, and to involve other services in treatment as appropriate. The development of structured assessment tools for use in residential drug and alcohol treatment settings would significantly assist staff in fulfilling this important role.

1. INTRODUCTION

Suicide is a leading cause of death among people who misuse drugs and alcohol (Wilcox et al, 2004), and the relative risk of completed suicide across a range of drugs is significantly higher than that of the general population (ABS, 2007; Harris & Barraclough, 1997; Wilcox et al, 2004). Opioid dependence, for instance, is associated with a completed suicide risk 14 times that of the general population; alcohol dependence has been found to increase suicide risk by 6 times, and cannabis dependence nearly 4 times (Harris & Barraclough, 1997). The *annual* prevalence of attempted suicide among dependent drug users is equivalent to the *lifetime* prevalence in the general population (Darke & Ross, 2002). Clearly, suicide represents a major clinical challenge to those treating drug dependent users but, to date, little is known about how suicide risk is managed in drug and alcohol treatment settings.

Drug and alcohol treatment has been found to be effective in reducing drug use, overdose rates and psychopathology (Darke et al, 2005a; Gossop et al, 1999; Hubbard et al, 1989; Teesson et al, 2006), but the evidence for its efficacy in reducing suicidality is more equivocal. Ravndal and Vaglum (1999) reported that successful completion of a drug free therapeutic community programme substantially reduced the odds of a suicide attempt over the ensuing 5 years. By contrast, Johnsson and Fridell (1997) found no association between treatment provision and likelihood of a suicide attempt across 5 years. Similarly, a recent Australian study of the impact of drug treatment on suicide risk indicated no significant reduction in attempted suicide in the 12 months post treatment entry (Darke et al, 2005b). Individuals with substance use disorders often seek treatment at times when their substance use difficulties are at their peak (Ross et al, 2005). This represents a vulnerable period that may be accompanied by suicidal thoughts and behaviours (CSAT, 2009). It is evident that drug and alcohol treatment services need to have clear guidelines around the management of suicide risk, and that all front-line workers should be aware of the warning signs and risk factors for suicide.

Risk factors for suicidal thoughts and behaviours among individuals with substance use disorders have been well researched (Connor, Beautrais & Conwell, 2003; Conner et al, 2007; Darke & Ross, 2002; Ilgen et al, 2007; Murphy et al, 1992). Apart from substance dependence, risk factors for suicide fall into four broad areas: demographic

characteristics (being young; female for attempted suicide/ male for completed suicide), psychopathology (especially Major Depression/Dysthymia, Borderline Personality Disorder, Conduct Disorder and Post Traumatic Stress Disorder), family dysfunction, and social isolation/dysfunction (Darke et al, 2007). Prior suicide attempts are also strongly predictive of subsequent attempts (Darke & Ross, 2002; Darke et al, 2007).

Regular dependent users of opioids, cocaine and methamphetamine all have an extremely high prevalence of these risk factors when compared to the general population (Darke et al, 2007; Darke & Kaye, 2004). Similarly, among individuals with problematic alcohol use, a prior suicide attempt, younger age, unmarried status, dependence on other substances, and the presence of a substance-induced psychiatric disorder have been associated with a greater likelihood of a future suicide attempt (Preuss et al, 2003). Given their widespread exposure to multiple suicide risk factors, it is not surprising that the rates of completed and attempted suicide amongst individuals with substance use disorders are many times greater than those observed among the general community. Although drug and alcohol clients presenting with numerous risk factors may not necessarily represent an immediate risk of suicide, they should be periodically screened for the emergence of suicidal ideation as they may constitute a chronic suicide risk (Shea, 2002).

The NSW Health 'Framework for Suicide Risk Assessment and Management for NSW Health Staff' (NSW Department of Health, 2004) specifies that, as suicide risk is a dynamic phenomenon, assessment should be conducted continuously throughout treatment, from the first presentation until discharge. Currently, however, there is no tool available that reliably predicts suicide. Given that many high-risk clients never kill themselves, prediction of suicide is extremely difficult, and so it is unlikely that such an instrument will ever be developed (CSAT, 2009). As such, the purpose of suicide-related screening is to identify at risk individuals who require further assessment and/or treatment, and to provide information that will help formulate a treatment plan, rather than to make 'predictions.'

The most valid method of determining risk is to conduct a thorough assessment of the individual, including both background and current risk factors, and the interaction between these. At a minimum, generalist health workers should conduct a preliminary

suicide risk assessment to determine the current level of risk prior to making a referral to a mental health service or other appropriate, specialist services if necessary (NSW Department of Health, 2004). The components of a suicide risk assessment relevant to general health staff include engagement, detection of risk factors for suicide, acute suicide risk assessment, and immediate management, such as ensuring safety, observation, and referral (NSW Department of Health, 2004). Furthermore, the assessment and management plan should be well documented.

A Treatment Improvement Protocol (TIP) for addressing suicidal thoughts and behaviours in substance misuse treatment settings has recently been developed in the United States, and acknowledges some variation in the ability of services to respond to the needs of clients at risk of suicidal thoughts and behaviours (CSAT, 2009). As a minimum requirement, the TIP consensus panel recommends that all programs providing substance misuse treatment to clients have the basic capacity to identify clients who are at risk and identify warning signs for suicide as they emerge. It is expected that clinical staff have the skills to talk comfortably with clients about their suicidal thoughts and behaviours, are knowledgeable about warning signs and risk factors for suicide among clients in treatment for substance dependence, and, with appropriate supervisory support, can make referrals for formal suicide risk assessment. The program is required to have clear policies and procedures for referral in place, and these procedures and policies for managing suicidal crises are available to all staff (CSAT, 2009). The extent to which these minimum requirements would be met by Australian drug and alcohol services is unclear as, to date, no Australian study of suicide risk assessment practices has been conducted in drug and alcohol treatment settings.

The current study seeks to answer several questions. To what extent do drug and alcohol treatment agencies screen for acute and chronic suicide risk? How is suicide risk managed? Does an opportunity exist to improve the assessment of suicide risk through the development of a structured assessment tool that can be used to guide follow-up treatment?

Specifically, the aims of the current study were:

1. To examine existing suicide risk assessment and intervention strategies used by drug and alcohol treatment staff in residential rehabilitation programmes across Australia[1];
2. To determine the extent of staff training in suicide risk assessment;
3. To assess staff knowledge of suicide risk factors;
4. To describe the barriers to conducting suicide risk assessments;
5. To identify additional and/or under-utilised opportunities for intervention; and
6. To outline the core components of a potential suicide risk assessment tool for drug and alcohol workers, and make recommendations about the dissemination of the tool in order to maximise its usefulness.

[1] *NB: Initially, this study also sought to examine current practices in detoxification and maintenance pharmacotherapy services. Unfortunately, obtaining a Site Specific Agreement for each government treatment agency in NSW (as part of the NEAF process) proved too onerous and unworkable for a multi-site study such as this. After 5 months of attempting to navigate the system, it was considered more productive to broaden the recruitment of non-government residential rehabilitation services across Australia, and to exclude detoxification and maintenance programmes from the study.*

2. METHODS

2.1 Study design

The study employed a cross-sectional design. Semi-structured interviews were conducted with managers and staff responsible for case management /treatment of clients at drug and alcohol residential rehabilitation services across Australia. In addition, managers were asked to provide a copy of the organisations current suicide risk assessment policy or guidelines, any assessment tools used to assess acute suicide risk, and any general tools used as part of routine client assessment (e.g. tools used to collect information at intake, measures used to assess symptoms of depression). Ethics approval for the study was obtained from the University of New South Wales Human Research Ethics Committee. Approval was also obtained through the Drug and Alcohol Services South Australia (DASSA) Executive Committee to enable participation of residential services in South Australia.

2.2 Selection of treatment agencies

A comprehensive list of residential drug and alcohol rehabilitation services in Australia was compiled based on the Australian National Council on Drugs report *Mapping National Drug Treatment Capacity* (2005) and the NADA (Network of Alcohol and other Drug Agencies) list of Member Agencies. Residential rehabilitation was defined as a service offering a live-in drug and alcohol treatment program; inpatient detoxification and supported accommodation were not included. When it was unclear, based on the above sources, whether or not a service was a residential rehabilitation the agency was contacted by phone and the nature of the service clarified. Seventy-one residential rehabilitation services were identified, including 30 from New South Wales, 2 from the Australian Capital Territory, 3 from the Northern Territory, 15 from Queensland, 4 from South Australia, 2 from Tasmania, 8 from Victoria, and 7 from Western Australia.

Of the 71 agencies identified, 64 (90%) agreed to participate and 7 declined. Managers at all seven of the agencies that did not participate indicated it was because staff were too busy to allocate time to do the interview.

Participating services fell in to three broad categories; hospital based residential rehabilitation services (HBRR; n=8), religion based residential rehabilitation services

(RBRR; n=18), and Therapeutic Communities and other residential rehabilitation services (TCRR; n=38). A number of participating services catered for men or women only (9 agencies men only; 8 agencies women only).

2.3 Procedure

Managers at all identified services were contacted by phone and/or email, provided with information about the study and invited to have their treatment agency participate. When managers indicated that their agency would participate they were asked to forward information about the study to relevant staff and request volunteers. A request was made for 1 manager and approximately 3 staff to participate per service; however, this was flexible, depending on the size of a service, the number of staff volunteers, and staff availability. Once information about the study was distributed, staff volunteers either contacted a member of the research team directly, or were contacted by a member of the research team. All managers and staff were advised that participation in the study was completely voluntary.

2.3.1 Interviews

Manager and staff interviews took approximately 30 minutes per participant. In the greater metropolitan Sydney area interviews were conducted either face to face or over the telephone. In locations outside of Sydney, interviews were conducted over the phone.

The 'Manager Interview' assessed agency policy and procedures around suicide risk assessment, agency staffing and capacity, perceived needs in terms of assessment tools, and staff training in suicide risk assessment. This interview was completed by the manager of the service or by a staff member identified as having responsibility for the management of clinical staff.

The 'Staff Interview' assessed knowledge of suicide risk factors, the frequency and extent of current screening practices, personal experiences of managing clients considered to be a high suicide risk, barriers to conducting suicide assessments, and perceived needs in terms of assessment tools (e.g. Would they be likely to use a structured assessment tool for assessing acute suicide risk? What is the preferred mode of delivery for assessment tools e.g. pen and paper or computer-based?). This interview was completed by staff responsible for the case management and/or treatment of clients.

2.3.2 Participants

One manager and a mean of 2.3 staff members (SD 1.1, range: 0-5) from each agency participated in the study. In total, 64 *Manager Interviews* and 142 *Staff Interviews* were conducted. In five agencies only the *Manager Interview* was completed.

2.4 Statistical analyses

Data were analysed using SPSS (2009)(PASW Statistics 18). Descriptive analyses (including proportions, means, standard deviations, ranges, and medians for skewed data) were used to report current practices for assessing and managing suicide risk. A t-test was used for comparison of means. Categorical variables were analysed using chi square, with corresponding odds ratios (OR) and 95% confidence intervals.

3. RESULTS

3.1 Description of treatment agencies

Of 71 generalist drug and alcohol residential rehabilitation services identified across Australia, 64 (90%) participated in the current study. These agencies were recruited from: NSW (42%), Queensland (20%), Victoria (13%), Western Australia (11%), South Australia (5%), Northern Territory (5%), Tasmania (3%), and the ACT (2%). The majority of agencies (59%) were therapeutic communities or residential rehabilitation services with no religious affiliations (TCRR), and not operating within a medical hospital based model (Table 1). More than a quarter (28%) were religion based non-government organisations (RBRR), and 13% were privately operated hospital based services (HBRR).

The median capacity of agencies was 22 clients, with approximately one tenth of services having capacity for 45 or more clients (Table 1). Eighty percent of services reported that 15% or less of their clients were of ATSI background, including 39% who reported that less than 5% of their clientele were of ATSI origin. The designations of staff completing the Manager Interview appear in Table 1. These interviews were most commonly completed by managers, co-ordinators/team leaders, or directors. The individuals completing the manager questionnaire had been employed in their current role for a median of 2 years.

Based on the Manager Interviews, it appears that the majority (84%) of rehabilitation services employ paraprofessionals, and approximately a half employ allied health or medical/nursing staff. Medical/nursing staff were defined as those employees with either a medical or nursing qualification, allied health staff were defined as having completed a professional clinical qualification (e.g. Masters of Counselling, Masters of Psychology, social work degree, or psychologist registration program) and paraprofessional staff were defined as having undergone other training (e.g. Certificate IV in Alcohol and Other Drugs (AOD), undergraduate degree in arts/counselling/psychology, currently studying towards a professional clinical degree). The profile of staff differed between the three types of residential rehabilitation services identified, with HBRR appearing less likely to employ para-professionals, and more likely to employ allied health or medical/nursing staff, than RBRR or TCRR.

Almost all services reported having exclusion criteria when assessing new clients. The most commonly cited criterion were 'unstable or demanding mental health issues' and 'client aggression or history of violence and/or of sex offending'. Notably, one in five agencies indicated that 'recent suicidal ideation and/or a recent attempt' were sufficient grounds to exclude a client from treatment. A similar proportion of agencies indicated that their services were not equipped to care for clients with physical disabilities. Responses in the 'other' category were varied, and included examples such as: using certain types of medications (e.g. benzodiazepines, methadone, buprenorphine, mood altering drugs, Attention Deficit Hyperactivity Disorder (ADHD) medications, anti-psychotics); being heavily pregnant; not fitting with the current client mix in the service; a history of significant mental health difficulties in a client from outside the local area health service (support services have reportedly refused to assist with clients from out of area in the past); no private health insurance and an inability to pay up-front; and one service indicated that they did not have set exclusion criteria, but assessed each client on a casuistic basis.

Table 1: Characteristics of the residential rehabilitation services (based on Manager Interview)

	TCRR (N=38)	RBRR (N =18)	PHRR (N=8)	Total (N=64)
Manager Interview completed by (%):				
Manager (Unit/Program/Site/Clinical)	44	33	50	41
Coordinator/Team Leader (incl. Acting)	27	28	25	27
Director/ Deputy Director/ Program Director	16	33	25	22
CEO	8	0	0	5
Clinical Nurse Consultant/ Project Officer/Senior Project Officer	5	6	0	5
Client capacity – median (range)	22.5 (4-90)	23 (8-110)	17 (12-36)	22 (4-110)
Median proportion of ATSI clients (range)	9 (0-99)	3 (0-20)	1 (0-5)	5 (0-99)
Type of Staff employed by agencies (%)*:				
Paraprofessional	95	100	13	84
Administrative	74	61	63	69
Allied Health	47	44	100	53
Medical/Nursing	47	17	100	45
Exclusion criteria for treatment program (%)*:				
Any	95	94	100	95
Unstable/ demanding mental health issues	71	67	25	64
Aggressive/ history of violence and/or of sex offending	55	33	50	48
Recent suicide attempt/ ideation	24	11	50	23
Demographic e.g. certain age, sex, ethnicity	24	22	25	23
Physical disability	24	22	13	22
Incapable of completing program e.g. cognitive impairment, language problems, not accepting of treatment philosophy	18	33	13	22
Drug use criteria e.g. don't accept Injecting Drug Users (IDU)	16	0	50	16
On pharmacotherapy	24	0	0	14
Other	58	28	88	53

**Multiple responses permitted*

3.2 Staff demographics and work history

Interviews were conducted with 142 staff, most of whom were female (56%), and reported having a degree qualification (56%), including a significant proportion who had

a post graduate degree (Table 2). A further 17% reported that a Diploma was their highest qualification, and 15% had attained the Certificate IV in Alcohol and Other Drugs (or similar). A small proportion of staff reported having no qualifications.

The majority of staff were recruited through TCRR, one quarter through RBRR, and the remainder through PHRR. The current designation of the staff interviewed was most commonly Case-worker/D&A worker, Counsellor, Nurse, or Coordinator/Team Leader (Table 2). Staff reported having worked in their current role for a median of 2.5 years. The median length of time spent working in the current treatment agency was 3 years, with almost one fifth of staff having worked for their current employer for 12 months or less. Staff had worked in the drug and alcohol field for a median of 4.8 years. The mean age of staff was 43 years.

Table 2: Staff characteristics (based on Staff Interview)

	TCRR (N=86)	**RBRR (N=36)**	**PHRR (N=20)**	**Total (N=142)**
Designation of staff who completed the interview (%):				
Case-worker/D&A worker	30	67	0	35
Counsellor	40	17	15	30
Nurse	4	3	65	12
Coordinator/Team Leader	14	6	0	10
Psychologist	4	0	0	2
Social Worker	0	0	5	1
Other	8	7	15	10
Years worked in current role (median; range)	2.0 (< 1-31)	2.0 (< 1-30)	10 (1-42)	2.5 (< 1-42)
Years worked for current treatment agency (median; range)	3.0 (< 1-20)	3.0 (< 1-13)	3.0 (1-18)	3.0 (< 1-20)
Years worked in drug & alcohol field (median; range)	5.0 (< 1-25)	4.0 (< 1-13)	4.3 (1.5-27)	4.8 (< 1-27)
Highest qualification since leaving school (%):				
Degree	40	29	35	36
Post graduate degree	17	11	45	20
Diploma	18	16	15	17
Certificate IV AOD or similar	12	30	5	15
Certificate/trade/technical	7	6	0	6
Nil	6	8	0	6
Mean age (SD; range)	42.2 (11.2; 22-68)	43.9 (12.2; 26-69)	44.3 (11.8; 21-65)	43.0 (11.6; 21-69)

3.3 Policies and procedures relating to suicide risk assessment

In the majority of agencies, staff are reportedly expected to assess clients for suicide risk at one or more procedural time-points in treatment, or in response to an observation of the client. Despite this expectation, only 63% of agencies reportedly have a written policy relating to the management of suicide risk (Table 3). Of the 29 policy documents forwarded to the research team (representing 73% of the 40 policy documents in existence), over a third did not clearly document when and how clients were to be assessed, and what procedures were to be followed in the event of risk being identified. Hence, 16% of agencies have a policy document that would be unhelpful to anyone new to the service. Staff are most commonly made aware of the existence of a suicide risk assessment (SRA) policy through their orientation to the agency, and through staff discussions/policy review meetings.

Sixty five percent of staff (n=92) worked in an agency where the manager had indicated that the service had a policy relating to SRA. Of these staff, 26% reported being unaware of the existence of such a policy. In services that had an SRA policy, 30% of staff reported being not at all familiar with it, 15% a little familiar, 34% quite familiar, and 21% very familiar.

The majority of agencies refer clients considered to be a high suicide risk to crisis/mental health services and admit them once stable (Table 3). Anecdotally, several staff mentioned that clients were likely to conceal their suicidal ideation, because they were aware that it often meant that they would be referred elsewhere, even when reassured that they would be permitted to return to the service once stabilised.

When managers were asked whether staff were expected to vary their SRA in any way based on the sex of the client, the majority (73%) responded 'no,' 22% were in an agency that only provided treatment for one sex, 3% did not expect staff to conduct SRAs, and 2% indicated that, where possible, a therapist of the same sex as the client should conduct the assessment. A similar response was obtained from staff, with the majority (82%) not altering their practices according to the client's sex, 16% reporting working with a single sex, and 3% stating that they would change their practice (e.g. asking more probing questions of males because they were in a higher risk group, putting a female

therapist with female clients, changing the focus of the assessment i.e. being more likely to ask women about sexual abuse and men about unemployment pressures).

When asked whether it was anticipated that the ethnicity of the client would alter the SRA practices of clients, again the majority of managers (83%) replied 'no.' A further 3% did not expect SRAs to be conducted, but 13% indicated that they would expect ethnicity to influence SRA practices. For instance, several issues were raised in relation to working with clients of ATSI background e.g. the need to involve ATSI services, sit alongside rather than opposite the client, avoid eye contact, change the language and terminology used, and have a therapist of the client's sex conduct the assessment. Again, the staff's responses were consistent with the manager's, with 87% stating that they did not change their practice based on the ethnicity of the client, and 13% indicating that they did. The examples given were similar to those provided by the managers.

While 84% of managers expected that staff would ask clients about self harm as part of their SRAs, only 63% expected staff to ask about homicidal thoughts. A notable proportion of managers (35%) did not expect staff to use a structured assessment tool when assessing suicide risk. In the majority of cases (62%), however, staff were expected to use a structured tool. It should be noted that this figure includes 17% who were referring to the agency's internal general assessment tool, typically used for assessing clients early in their admission to the service.

Table 3: Policies and procedures regarding suicide risk assessment

	TCRR (N=38) %	RBRR (N=18) %	PHRR (N=8) %	Total (N=64) %
Does the treatment agency have a policy on Suicide Risk Assessment and Management?				
Yes	58	56	100	63
No	29	33	0	27
Unsure	8	0	0	5
No written policy, but a generally known procedure	5	11	0	5
How does the agency manage clients considered to be at high risk of suicide?				
Refer to crisis/mental health team & admit once stable	47	50	38	46
Refer (no mention of admitting later)	16	17	25	17
Admit & manage suicide risk	11	0	0	6
Decide on case by case basis/ combination of the above	18	22	25	20
Other (eg. don't admit them; manage client with Mental Health (MH) team)	8	11	12	11
	(N=22)	**(N=10)**	**(N=8)**	**(N=40)**
Of those with a policy, what proportion of agencies provided a copy?	86	50	63	73
Where is the policy kept?*				
In policy manual in centralised location	77	60	88	75
On a shared computer drive	50	60	50	53
On website	5	0	13	5
Other (eg. on wall, attached to assessments, copies kept on ward, on a cd, discharge folder)	27	0	25	20
How are staff made aware of the policy's existence?*				
Shown during orientation	77	80	75	78
Staff discussions/policy review meetings	71	44	71	65
Written in orientation manual	36	50	13	35
Covered during staff training	23	20	25	23
Other	14	0	25	13
	(N=19)	**(N=5)**	**(N=5)**	**(N=29)**
Would policy be useful to a staff member unfamiliar with the agency?				
Yes	63	40	100	65
No	37	60	0	35

**Multiple responses permitted*

3.4 Training in suicide risk assessment

While three quarters of agencies offer their staff SRA training, only approximately half of agencies provide compulsory training, with PHRR appearing more likely to do so (Table 4). Among the quarter of agencies not offering SRA training, the main reasons given were that the agency was in the process of developing SRA training and policies, that SRA was considered a low priority for their clients, and that staff were considered to be trained to a level where they should have the necessary skills.

While a quarter of agencies reportedly offer training at least annually, notable proportions suggested that it was offered in a more haphazard fashion (Table 4). PHRR appear to offer SRA training more regularly than the other rehabilitation services, which is perhaps made feasible by the shorter duration of the SRA training sessions offered by PHRRs. For instance, 63% of PHRR offer training sessions of 3 hours or less, whereas only 10% of RBRR and 11% of TCRR offer such brief training sessions. Anecdotally, some staff did mention that even when SRA training is offered, minimal staffing levels need to be maintained, so not everyone is able to attend. Presumably the longer the training session, the more difficult this would make it for all staff to get time away from clinical duties.

A notable proportion of managers indicated that SRA training addressed the assessment of acute risk and clinical management strategies, with referral options and policies being less commonly addressed (Table 4). This may be because agencies sometimes used external services to access training. For instance, 11% of agencies reported using the ASIST (Applied Suicide Intervention Skills Training) program. More surprising is the fact that only one fifth of managers mentioned the documentation of risk management, and only one in ten managers mentioned coverage of the suicide risk and protective factors. It needs to be borne in mind, however, that these responses from managers were unprompted.

Consistent with the findings from the Manager Interview, over one fifth of the staff interviewed indicated that they had never been formally trained in SRA (Table 5). More than three quarters of staff had received SRA training on a median of 2 occasions, with the most recent training session having been a median of 13 months prior to interview. RBRR appear less likely than TCRR and PHRR to have completed SRA training as a

compulsory work requirement. While 57% of all staff interviewed indicated that their workplace had offered them SRA training at some point, only 39% had been trained within the preceding 12 months.

It is noteworthy that the vast majority of staff reported being confident or very confident in conducting suicide risk assessments. Nonetheless, 96% acknowledged that they would gain some benefit from further training. The most common topic areas suggested by staff for future training were a general update on suicide risk management, intervention strategies, assessment of risk, and comorbidity.

Table 4: Suicide risk assessment training in residential rehabilitation services (based on Manager Interview)

	TCRR (N=38) %	RBRR (N=18) %	PHRR (N=8) %	Total (N=64) %
Do employees receive any training on suicide risk assessment (SRA)?				
Yes	74	72	87	75
No	26	28	13	25
Is SRA training compulsory?				
Yes	50	39	62	48
No	24	33	25	27
No training	26	28	13	25
How often is SRA training conducted?				
At least annually	26	22	38	27
Irregularly – 'one off'	24	22	0	20
'As needed'	8	11	0	8
Whenever it is offered e.g. by government health department	8	0	0	5
Regularly, but < once a year	0	6	13	3
On commencing employment only	0	0	13	2
Other e.g. ongoing in the ward, don't know, it's random, clinical supervision is done monthly	8	11	23	10
No training conducted	26	28	13	25
How long does the training go for?				
Less than an hour	3	0	38	6
1-3 hours	8	10	25	11
> 3 hours, but < 1 day	29	17	24	25
> 1 day	26	28	0	24
Don't know	8	17	0	9
No training conducted	26	28	13	25
What does training entail? * (*unprompted*)				
Assessment of acute risk	58	44	75	56
Clinical management strategies (e.g. coping plans, no suicide contracts)	50	28	38	42
Referral options	37	28	38	34
Documentation of risk management	18	22	38	22
Overview of policies	16	0	63	19
Role plays & exploring real cases	5	0	50	11
Risk & protective factors	18	0	0	11
Mental health overview	13	11	0	11
N/A no training	26	28	13	25

**Multiple responses permitted*

Table 5: Staff training in suicide risk assessment (based on Staff Interview)

	TCRR (N=86)	RBRR (N=36)	PHRR (N=20)	Total (N=142)
Have staff been specifically trained in SRA? (%)				
Yes	79	69	80	77
No	21	31	20	23
Median number of times SRA training received (range)*	2 (1-12)	1 (1-8)	2 (1-10)	2 (1-12)
Median number of months since last SRA training (range)*	12 (< 1-84)	18 (1-96)	42 (1-276)	13 (< 1-276)
Was any of the SRA training received compulsory? (%)				
Yes, some of it	16	11	10	14
Yes, all of it	45	39	45	44
No	18	19	25	19
N/A never had SRA training	21	31	20	23
Proportion of staff for whom SRA training has been a compulsory work requirement (%)	47	25	40	40
Proportion of staff for whom SRA training has been a compulsory requirement of tertiary studies (%)	27	31	25	28
Has current employer offered SRA training? (%)				
Yes	65	42	50	57
No	35	58	50	43
General level of confidence in conducting SRAs (%)				
Very confident	15	19	40	20
Confident	80	67	60	74
Unconfident	5	14	0	6
Very unconfident	0	0	0	0
How much do staff feel they would benefit from further SRA training? (%)				
Not at all	5	0	10	4
A little	31	14	15	25
Quite a lot	36	28	45	35
A great deal	28	58	30	36

*****_Among those who had received SRA training_

3.5 Knowledge of risk factors

When asked 10 knowledge questions on risk factors for suicide, staff scored a mean of 7.4 correct responses (SD 1.9, range 1-10), with 14% of staff correctly answering 5 or fewer. The most well known suicide risk factors were prior suicide attempts, psychosis, having a family member who had died from suicide, and drug or alcohol dependence (Table 6). Nonetheless, it is disturbing that 15% of staff were unaware that their drug and alcohol clients represent a high risk group for suicide. Only one third of staff correctly identified that female drug and alcohol clients were more likely to 'attempt' suicide than male clients, while three quarters correctly indicated that male clients are more likely to 'die' from suicide than female clients. It was noteworthy that almost a third of staff did not identify hopelessness to be a significant risk factor for suicide.

Staff who reported having been formally trained in suicide risk assessment were not significantly more likely to have knowledge of risk factors than those who reported no formal training in the area (7.6 versus 7.0; $t_{140} = -1.5$, $p=0.125$). Consistent with this finding, only 11% of managers reported that staff training covered suicide risk factors.

Table 6: Knowledge of suicide risk factors (based on Staff Interview)

	TCRR (N=86) % correct	RBRR (N =36) % correct	PHRR (N=20) % correct	Total (N=142) % correct
A prior suicide attempt increases the likelihood of future attempts	91	97	100	94
Psychosis is considered a risk factor for suicide	90	100	80	91
Having a family member who has died from suicide increases a client's risk of suicide	86	78	100	86
People with drug or alcohol dependence are at greater risk of suicide than the general population	86	81	90	85
There are gender differences in the methods of suicide used	80	75	85	80
Male drug and alcohol clients are more likely to die from suicide than female clients	78	64	85	75
Panic disorder with agoraphobia may increase suicide risk	74	78	65	74
Hopelessness predicts suicidality	72	61	60	68
Poisoning by pharmaceuticals is the most common method of suicide employed by illicit drug users	57	56	55	56
Female drug and alcohol clients are more likely to attempt suicide than males clients	35	31	30	33

3.6 Barriers to suicide risk assessment

Approximately two thirds of the managers interviewed reported some form of barrier to staff conducting suicide risk assessments with clients (Table 7). The most common barriers identified were lack of training, and lack of confidence / experience / skills/ knowledge. Almost one fifth of managers reported that client factors were a barrier, including such things as client resistance and intoxication. 'Other' barriers reported included a wide range of factors, such as having inadequate policies and procedures in regards to suicide risk assessment, lacking a good assessment tool, the 'contagion effect', in which some clients may start reporting suicidal ideation if other clients talk about suicide, doing assessments over the phone, and fears/discomfort related to asking about suicide.

Table 7: Barriers to staff conducting suicide risk assessments (based on Manager Interview)*

	TCRR (N=38) %	RBRR (N=18) %	PHRR (N=8) %	Total (N=64) %
Lack of time/staff	18	6	13	14
Lack of confidence/experience/skills/ knowledge	29	11	25	23
Lack of training	29	22	13	25
Insufficient referral options when high risk is identified	13	6	0	9
Client factors	8	22	38	16
Other	11	17	13	13
None	29	39	25	31

**Multiple responses permitted*

Staff were less likely to report barriers to conducting suicide risk assessments than managers (Table 8), with half reporting some type of barrier. The most common obstacle reported by staff was client factors, which included resistance or denial, intoxication, psychosis or other significant mental health issues and culture/language. Factors such as lack of time/staff, lack of confidence, lack of training/skills/knowledge, and lack of referral options were not commonly reported by staff. One fifth of staff interviewed nominated 'other' barriers to conducting suicide risk assessments with their clients. This category included a wide range of factors, such as structural limitations (e.g. lack of policies and procedures), inclusion/exclusion criteria (e.g. clients fearing not being accepted into the service if they reported suicidality), lack of rapport with the client, and doing assessments over the phone.

Table 8: Barriers to conducting suicide risk assessments (based on Staff Interview)*

	TCRR (N=86) %	RBRR (N=36) %	PHRR (N=20) %	Total (N=142) %
Client factors	25	22	40	29
Lack of time/staff	9	6	5	8
Lack of training/ skills/knowledge	11	6	0	8
Insufficient referral options when high risk is identified	4	6	0	4
Lack of confidence	1	8	0	3
Other	23	19	10	20
None	45	53	55	49

**Multiple responses permitted*

3.7 Assessment of acute suicide risk

A small minority of staff reported never conducting suicide risk assessments with clients (Table 9). More typically staff reported that they assessed suicide risk in response to an observation about the client, and/or at a procedural time-point in treatment. Staff in TCRR and RBRR appeared more inclined to conduct assessments in response to client observations, than as a result of procedural time-points (Table 9). While procedural time points were commonly cited by staff as triggers for conducting SRAs it cannot be assumed that this was done consistently throughout treatment. The majority of suicide risk assessments were conducted either prior to treatment entry (often in order to refer currently suicidal clients to alternate services), or early in treatment. For instance, while 54% of staff indicated that a risk assessment would be conducted at the initial assessment interview, only 4% of staff mentioned conducting SRAs on discharge.

The majority of staff reported that they did not subscribe to the idea that raising the topic of suicide with a client would increase the likelihood of them attempting suicide. It is noteworthy, however, that staff who had not been trained in suicide risk assessment were significantly more likely to hold this view (49% versus 23%; OR 3.16, 95% CI: 1.40-7.15).

When asked what information staff would gather about a client that they considered to be acutely suicidal the majority indicated that they would gather details about the plan, and close to half mentioned asking about the availability of means, and previous attempts. The other factors listed in Table 9 were endorsed by less than a third of staff, with the mean number of factors cited being 3.5 (SD 1.9, range: 0-9). Staff who had received SRA training endorsed significantly more factors than those who had not (3.8 versus 2.8; $t_{140} = -2.66$, $p<0.01$).

Table 9: Suicide risk assessment practices

	TCRR (N=86) %	RBRR (N =36) %	PHRR (N=20) %	Total (N=142) %
When do staff conduct SRA assessments?*				
Never	2	0	0	1
In response to a client observation e.g. change in mood, withdrawn, reporting ideation	86	94	80	87
At a procedural time-point e.g. within 1-2 weeks of admission to rehab.	59	78	85	68
How true is it that staff worry that raising the subject of suicide with a client will increase the likelihood of them attempting suicide?				
Very true of staff	0	3	0	1
Somewhat true	8	3	10	7
Not very true	17	36	10	21
Not at all true	75	58	80	71
Information staff would gather from an acutely suicidal client * - **(*unprompted)***				
1. Suicide plan				
a. Details e.g. how, where	87	78	95	86
b. Availability of means	56	39	70	54
c. Time	27	31	35	29
d. Lethality of method	17	6	25	16
e. Chance of intervention	4	3	5	4
2. Prior attempts	57	39	55	52
3. Family history of completed suicide	24	11	15	20
4. Other stressors	28	22	40	28
5. Symptoms – depression and daily functioning	29	11	35	25
6. Resources	34	19	40	31
7. Medical status	4	0	0	2
8. Other – stability of relationships, personality, substance use	6	8	10	7
Mean factors endorsed (SD; range)	3.7 (2.1; 0-9)	2.7 (1.6; 0-7)	4.3 (1.4; 0-7)	3.5 (1.9; 0-9)
% endorsing < 3 factors	28	50	10	31

* *Multiple responses permitted*

The majority of staff reported having had a client at some stage whom they considered to be a high suicide risk, typically in recent months (Table 10). Interestingly, 10% of the last high risk cases were being managed over the phone or off-site. This reportedly occurred during intake assessments over the phone, or when ex-clients rang the service in distress, or when transporting a client off-site. Anecdotally, staff reported finding suicide risk management over the telephone particularly stressful, especially when the caller is interstate, and/or is unwilling to provide their details.

The most commonly used management strategies the last time staff had a high risk client were the involvement of a crisis and/or mental health team, regular observations of the client by staff, referral to a GP/psychiatrist/psychologist, referral to a hospital emergency department, and the use of 'no suicide' contracts (Table 10). Staff in services where policies and procedures clearly outline how suicide risk is to be managed appear to report less stress in the crisis situation than other staff. Not surprisingly PHRR seem more likely than other services to refer clients to psychiatrists, GPs or psychologists.

Over a third of staff reported experiencing problems with the management strategies used on the last occasion, with such problems appearing more likely to be reported by the staff of TCRR and PHRR. The most commonly reported problems among staff who had ever had a client they considered high risk, were lengthy delays with support services, and being unhappy with the treatment the client received following the referral.

A fifth of staff reported having lost a client to suicide, with 6% reporting a client suicide within the preceding 12 months (Table 10). One in ten of the most recent completed suicides were reported to be of clients from the staff member's current treatment agency. PHRR staff appear more likely to have experienced the loss of a client to suicide, which may reflect a more severe clinical profile of clients attending hospital based services versus non-hospital based services. Approximately a third (32%, n=9) of staff who had experienced a client suicide reported needing more support than they received from their employer at the time, in the form of more structured debriefing or counselling.

Although not specifically asked about, one quarter of all staff mentioned that they knew of ex-clients of their current agency who had completed suicide at some stage post discharge (Table 10).

Table 10: Management strategies used by staff the last time they had a client considered to be a high suicide risk

	TCRR (N=86)	RBRR (N=36)	PHRR (N=20)	Total (N=142)
Ever had a client they considered high risk (%)	84	69	90	81
Median months since last had a high risk client (range)#	6 (< 1-60)	6 (< 1-24)	6 (< 1-60)	6 (< 1-60)
Proportion whose last high risk case was being managed over the phone or off-site (%)#	8	8	17	10
Management strategies used (%)#*				
- Involved a Crisis &/or Mental Health team	50	48	39	48
- Visuals i.e. regular observations by staff	15	24	72	26
- Referred to GP / psychiatrist / psychologist	21	20	44	24
- Accident & Emergency (A&E)	22	20	11	20
- No suicide contract	22	16	11	19
- Ambulance	15	24	0	15
- Reviewed medication	7	20	17	11
- Involved police	7	4	11	7
- Shadowing by fellow resident	5	4	0	4
- Provided client with phone numbers e.g. Lifeline, local A&E	10	0	6	7
- Involved family	6	8	6	6
Problems in relation to any of the strategies used (%):#*				
-Any problems	**38**	**36**	**22**	**35**
- Lengthy delays with support services	15	12	6	13
- Unhappy with the treatment following referral	8	20	11	11
- Lack of resources e.g. supervisors, other staff, referral options	11	4	0	8
- Client related e.g. intoxicated, aggressive, uncooperative	6	4	6	5
- Other e.g. contract didn't work, client slept on counselling room floor because staff concerned but MH not, hard to gauge seriousness of intent, trying to keep suicidal person on the phone	13	4	6	10
Loss of clients to suicide				
- Ever lost a client to suicide (% yes)	13	14	60	20
- Median recency in months of the last completed suicide (range)**	48 (9-300)	36 (1-360)	15 (3-180)	36 (1-360)
- Was the last suicide completed by a client of the current agency (% yes) **	2	11	40	10
- Mentioned completed suicide of ex-clients	26	31	20	26

\# *Of those staff who had ever had a client that they considered to be a high suicide risk (N=115).*

* *Multiple responses permitted*

** *Of those staff who had ever lost a client to suicide (N=28)*

3.8 Assessment of background suicide risk factors

The extent to which background suicide risk factors are assessed was determined based on the Manager Interviews, Staff Interviews and through examining the tools provided by some agencies. The vast majority of services asked clients a global question about

previous mental health diagnoses, rather than routinely screening for a range of psychiatric disorders (Table 11). More than two thirds of agencies indicated that if a client reported having a psychiatric history or being on psychiatric medication copies of past psychiatric reports would be obtained and/or the client would be referred to a clinician for further assessment.

Close to half of agencies reported routinely asking about problems in the client's family of origin, including parental separation, social disadvantage, parental psychopathology, childhood sexual abuse, and childhood physical abuse. Problems in the client's family of origin are reportedly identified using a range of methods across the different agencies, such as completion of a genogram and family history, initial assessment interviews, multiple assessments by doctors and nurses, counselling sessions, completion of questionnaires, and being talked about within a particular stage of the program or during 'probes' (which are intensive interviews with client about their life). Almost all agencies reported routinely assessing the level of drug use, social supports, employment status, and homelessness.

Table 11: Assessment of background suicide risk factors (based on Manager Interviews, Staff Interviews and assessment tools provided by some treatment agencies)

	TCRR (N=38) %	RBRR (N=18) %	PHRR (N=8) %	Total (N=64) %
Global question asked about previous mental health diagnoses	95	89	100	94
For clients with a MH history: Obtain copies of past psychiatric reports &/or refer for further assessment	66	72	75	69
Routinely screen for:*				
Psychopathology:				
Depression	34	33	25	33
Bipolar	18	28	38	23
Psychosis	18	22	38	22
Post Traumatic Stress Disorder	16	28	38	22
Other anxiety	24	28	38	27
Borderline Personality Disorder	13	11	38	16
History of attempted suicide	74	83	88	78
Problems in family of origin:				
Parental separation during childhood	45	44	38	44
Family social disadvantage	37	50	38	41
Parental psychopathology	40	44	63	44
Childhood sexual abuse	47	56	63	52
Childhood physical abuse	47	56	63	52
Drug Use:				
Level of polydrug use	97	100	100	98
Current social isolation/disadvantage:				
Lack of social support	92	94	100	94
Unemployment	95	94	100	95
Homelessness	97	94	100	97

***** *Multiple responses permitted*

3.9 Structured suicide risk assessment tools used by agency staff

Approximately a half (56%) of staff reported using a structured assessment tool when assessing acute suicide risk, most commonly a tool developed within the service (16%), *Psycheck* developed by Turning Pont (13%), a tool of unknown name developed outside the service (9%), a tool provided by the ASIST program (2%) and a broad range of

other tools (17%). Of those staff using a structured tool, only 3% reported not finding them useful.

All agencies were asked to provide a copy of their routine assessment tools to the researchers, and approximately two thirds (66%; n=42) complied. The provision of tools did not vary greatly across type of agency (PHRR 75%; RBRR 67%; TCRR 63%). Of the agencies who supplied tools, 42% (n=18) provided a specific risk assessment tool, 56% (n=24) provided a copy of their intake assessment form, 56% (n=24) provided a copy of the initial/admission assessment form, and 21% (n=9) provided other structured tools, including the Addiction Severity Index, Mental State Examination and Depression Anxiety Stress Scales, and two discharge assessment forms.

According to NSW Health guidelines (NSW Department of Health, 2004), a preliminary risk assessment should include an assessment of the person's physical health, history of suicidal behaviour, alcohol and other drug use, current mental state, history of mental illness, and questions regarding the person's current level of risk, such as current thoughts about suicide, the presence of a plan for suicide, and access to the means to commit suicide. In addition, all people for whom a suicide risk is detected should receive a comprehensive mental health assessment by a mental health specialist that includes a psychiatric assessment, psychosocial assessment and a corroborative detailed suicide risk assessment.

All of the 'risk assessment forms' provided (n=18) included questions on the person's current suicidal behaviour, and all but one asked about the person's history of suicidal behaviour (94%; n=17). Further, 89% (n=16) of the risk assessments included questions to determine the degree of acute suicide risk, and 78% (n=14) had questions regarding the person's current mental state. The majority of the risk assessment tools (72%; n=13) explicitly linked at least some risk factors to the acute suicide risk assessment, but only 54% (n=7) included questions on coping capacity/protective factors, 62% (n=8) on the person's history of mental illness, 69% (n=9) on physical health, and 69% (n=9) on drug and alcohol use.

Most of the 'intake tools' provided included questions on the person's physical health (83%; n=20) and history of mental illness (83%; n=20), and three quarters (71%; n=17)

asked about the person's alcohol and other drug use. Surprisingly, only 58% (n=14) included questions on the person's history of suicidal behaviour, less than half (42%; n=10) asked about 'current' suicidality (suicidal thoughts, actions or plans), and only a fifth (20%; n=4) included questions aimed to determine the level of acute suicide risk (e.g. intent, access to means). Almost half (44%; n=11) of the intake assessment tools included questions on the person's current mental state (e.g. hopelessness, distress, anger, psychotic symptoms), and 15% (n=3) included questions on coping capacity/protective factors. Only one intake form (5%) explicitly linked risk factors to suicide risk. That is, often questions were asked about factors known to be risk factors for suicide, such as psychiatric diagnoses, level of polydrug use, childhood abuse, and lack of social support, but these were not referred to in the assessment of acute suicide risk.

All of the 'initial/admission assessment tools' included global questions on the person's history of mental illness (n=24), and the vast majority (96%; n=23) had questions on the person's physical health, alcohol and other drug use (96%; n=23), and history of suicidal behaviour (88%: n=21). Questions about the client's current suicidal behaviour were included in a much higher proportion of the initial assessment forms (83%) than the intake forms (42%). Most initial assessment forms asked about the person's current mental state (79%; n=19), half included questions on the degree of current suicide risk (50%; n=12), and over a quarter asked about coping capacity/protective factors (29%; n=7). Notably, only a third (33%; n=8) explicitly addressed risk factors for suicide in the section about current suicidality.

While not explicitly asked, 41% (n=26) of agencies reported requesting collateral information for the client, such as psychiatric reports or GP referral letters, either if concerned about the client's suicide risk or as a routine part of their treatment. Some agencies (n=20) also indicated that clients may be given more comprehensive assessments if suicide risk or mental health issues were identified by external psychiatrists or internal psychiatric nurses or psychologists.

3.10 Staff suggestions regarding resources to assist them with suicide risk assessment

Staff were asked what resources they considered would assist workers in drug and alcohol settings to conduct suicide risk assessments with clients. The most commonly suggested resource was training (32%), including both specific training in assessing and

managing suicide risk, and more general training in mental health. Almost one quarter (23%) of staff stated that suicide risk assessment tools and scales for rating suicide risk would be helpful. Staff also suggested the use of clear policies and protocols for suicide risk assessment and management (18%), on-site resources such as DVDs demonstrating suicide assessment and management, websites and reading materials (18%), and access, or improved access, to mental health services, psychiatrists and psychologists (14%). In addition, a wide range of other resources were suggested such as comorbidity guidelines, supervision, better access to client's previous medical/psychiatric/social history, support from other staff members, adequate infrastructure such as phones and internet access, and better relationships between drug and alcohol agencies and mental health services.

3.11 Perceived need for a new acute suicide risk assessment tool

In more than a third of agencies, Managers indicated that staff were not currently expected to use a structured suicide risk assessment tool when assessing a client's risk, yet the majority indicated that if a new tool was designed for assessing acute suicide risk their agency would be likely to use it (Table 12). Even in PHRR where all of the agencies already expect staff to be using structured measures, two thirds indicated that it was likely that they would try a new acute assessment tool if one were created. Consistent with current practice in the majority of agencies, when asked at what points in treatment such an assessment tool would be useful, most procedural time-points were endorsed by approximately half of the agencies, and less than a third mentioned discharge, suggesting once again that SRAs are not conducted consistently throughout treatment. PHRR appeared somewhat more consistent than the other services.

While more than half of staff interviewed reported using a structured tool when conducting acute SRAs, almost all showed some willingness to use a new tool if one were developed (Table 12). It should be noted that staff also made clarifying statements, for instance, showed willingness to try a new tool, but indicated that it would depend how good it was (28%), and whether or not the service as a whole adopted the tool (7%). While the current use of structured tools for acute assessment appeared to vary considerably between the types of services (Table 12), similar proportions of staff expressed some likelihood that they would use a new tool if developed. The majority

(65%) of staff indicated that their preferred mode of delivery for suicide risk assessment tools was a pen and paper version, administered by the drug and alcohol worker.

Table 12: Perceived need for a new acute suicide risk assessment tool (based on Manager and Staff Interviews)

Agencies:	**TCRR (N=38) %**	**RBRR (N=18) %**	**PHRR (N=8) %**	**Total (N=64) %**
Agency currently expects staff to use a structured tool for assessing acute suicide risk	53	39	100	38
Expressed some likelihood that the agency would use a new SRA tool if one were developed	87	94	63	86
	N=33	**N=17**	**N=5**	**N=55**
When would such a tool be considered useful #*				
Admission	52	59	80	56
Intake	52	35	60	47
In response to an observation of the client	52	41	20	46
Regular Intervals	42	35	80	44
Discharge	27	24	60	29
Other e.g. once settled, at follow-up, transition in treatment	18	6	40	16
Staff:	**(N=86) %**	**(N=36) %**	**(N=20) %**	**(N=142) %**
Staff currently using structured tools for assessing acute suicide risk	48	61	85	56
Staff expressed some likelihood that they would use a new acute SRA tool if one were developed	88	97	85	90

 # Only includes managers who considered it likely that a new acute SRA tool would be used by their agency
** Multiple responses permitted*

3.12 Referral options

All staff reported having referral options available when a client presented with acute suicide risk (Table 13). Staff identified a median of 4 referral options (range 1-8). The referral options identified varied across type of service. For example, the majority of staff in both TCRRs and RBRRs identified Crisis Teams/Mental health services as an available referral option compared with just 35% of PHRR staff, while 90% of PHRR staff identified Psychiatrists as a referral option compared with only 20% and 31% of staff in TCRRs and RBRRs respectively. It is likely that the different referral options

identified by staff reflect differences in service approach to the management of suicide risk as well as availability of referral options.

Table 13: Referral options available for acute suicide risk (based on Staff Interview)

	TCRR (N=86) %	RBRR (N=36) %	PHRR (N=20) %	Total (N=142) %
Any	**100**	**100**	**100**	**100**
Crisis team/Mental health service	77	83	35	73
A&E	76	69	45	70
Ambulance	59	75	65	64
Police	38	53	55	44
GP	29	36	50	34
Psychiatrist	20	31	90	32
Psychologist	21	25	40	25
Other professionals/ paraprofessionals	20	14	20	18
Hospital/Psychiatric ward	1	8	40	9
Other	8	8	5	8

Staff were also asked about the availability of referral options for comorbid mental health problems, such as self-harming behaviour, depression, anxiety disorders, psychosis and borderline personality disorder. While it was difficult to collate this due to the lack of formal assessments for such pathology, it was apparent that most staff had access to some form of referral option for such disorders, such as specialists within the service (e.g. psychiatrists and psychologists on staff), and external services such as general practitioners, psychiatrists, psychologists, mental health services, and specialised group treatment programs.

The majority of staff reported experiencing some difficulties with referral options for acute suicide risk and/or other comorbid mental health problems in the previous 12 months (Table 14). A variety of difficulties were identified, most frequently in relation to

accessing Crisis Teams/Mental Health services and Psychiatrists. Staff at TCRR and RBRR were more likely to report having experienced any difficulties with referral than staff at PHRR.

Anecdotally, one factor which influenced whether staff experienced difficulty referring to external agencies was whether their agency had established relationships and procedures for coordinating with other services. Staff and Managers at agencies who had Memorandum's of Understanding (MOUs) with local service providers (e.g. the local mental health crisis team, the local Ambulance service) reported less difficulty coordinating with these services since setting up such agreements. Such MOUs helped establish relationships between services, clarify how services would coordinate with one another, and facilitate the communication of necessary clinical information between services.

The referral difficulties identified by staff were also likely to be influenced by the staffing and resources available internally at their agency as well as agency procedures regarding how to respond to various client problems/presentations.

Table 14: Reported difficulties with referral options during the past 12 months (based on Staff Interview)

	TCRR (N=86) %	RBRR (N=36) %	PHRR (N=20) %	Total (N=142) %
Any	**67**	**61**	**45**	**63**
Crisis teams or local mental health service (e.g. long delays, have to be very severe to be seen)	34	28	15	30
Psychiatrists (e.g. none in area, long waiting lists)	16	14	25	17
General access difficulties (e.g. geographical isolation, boundary problems, affordability)	13	8	5	11
A&E (e.g. long waits)	12	11	0	10
Comorbidity (e.g. problems finding programs for Borderline Personality Disorder (BPD), eating disorders)	9	8	0	8
Police or ambulance (e.g. delays)	7	0	10	6
GPs (e.g. delays, prescribing medication)	6	3	0	4
Psychologists (e.g. long delays)	5	8	0	5
Client resistance	2	3	0	2
Lack of knowledge/time to find referral options	5	0	0	3
Other	7	14	20	11

4. DISCUSSION

4.1 Major findings

The major findings of the current study were that:

1. A third of agencies have no documented policy for managing suicide risk;
2. A quarter of staff have never been formally trained in SRA;
3. One in five staff report having lost a client to suicide;
4. In more than a third of agencies staff are not expected to use structured assessment tools when assessing acute suicide risk; and
5. To varying degrees, agencies are gathering information about psychiatric comorbidity but this information does not appear to be routinely integrated into the client's SRA.

The current study confirms the challenging role of the front-line drug and alcohol worker. These staff are commonly paraprofessionals working with a group who are at high risk for suicide, in many cases without the benefit of formal suicide risk assessment training, and often in the absence of clearly documented policies and procedures. One in five staff interviewed reported personal experience of having lost a client to suicide, highlighting the need for these staff to be given every support possible in managing their high risk clientele.

Despite the elevated risk of suicide among drug and alcohol clients, at least a third of generalist residential drug and alcohol rehabilitation programs in Australia were found to be without a written policy for staff to follow in managing acutely suicidal clients. In addition, a notable proportion were identified as having a policy that was vague, and did not clearly specify what procedures should be followed when a client is suspected of being suicidal. In agencies in which the manager had indicated the existence of a policy, it was not uncommon for staff to be unaware of it, suggesting some breakdown in the communication of policies to staff. With almost a fifth of the staff interviewed having been employed by their treatment agency for 12 months or less, it is clear that there is a high turn-over of staff in drug and alcohol services, which further highlights the need for explicitly documented policies around suicide risk assessment.

When asked about current suicide risk assessment (SRA) practices, both managers and staff most commonly reported that SRAs were conducted in response to an observation

of the client. While risk assessments were also commonly reported as occurring at procedural time points, they did not appear to occur consistently throughout treatment. Discharge seems to be a particularly neglected time-point with regards to SRA. All transition points in treatment represent periods during which suicidal thoughts and behaviours may surface (Center for Substance Abuse Treatment, 2009), as such the policies and procedures of the agency should explicitly state the need to conduct SRAs at these time-points.

In more than a third of agencies, managers indicated that staff were not currently expected to use a structured suicide risk assessment measure when assessing a client's risk, yet a large majority indicated that if a new tool was designed for assessing acute suicide risk their agency would be likely to use it. A structured screening tool would facilitate the collection of information relevant to an acute suicide risk assessment, in addition to providing good documentation of the risk assessment process.

Almost a quarter of the staff members interviewed indicated that they had never been formally trained in suicide risk assessment and, surprisingly, 15% did not consider that drug and alcohol dependence increased an individual's risk of suicide. This is serious cause for concern. In addition, staff who had not been formally trained were more likely to report some belief in the idea that raising the subject of suicide with a client will increase the likelihood of them attempting suicide. While the vast majority of staff reported feeling confident in conducting suicide risk assessments, almost all of them acknowledged that there would be some benefit in further training. Managers also highlighted training as one of the key resources that would be useful for staff in conducting suicide risk assessments. Anecdotally, some staff, particularly in remote areas or in agencies with small staff numbers, mentioned that it can be difficult for all staff to get time away from clinical duties to attend training.

Staff who had been formally trained performed significantly better than those that had not when asked to spontaneously list the information that they would gather from a client they suspected of being acutely suicidal. This exercise clearly demonstrated the advantage to staff (and their clients) of suicide risk assessment training.

While the majority of staff had received training, it was noted that it was frequently on an

'ad hoc' basis, with only a quarter of staff reporting being trained annually. Given this, and the other logistical difficulties in staff accessing training, it would appear that staff in residential rehabilitation services across Australia would benefit from a computerised training programme, which they could complete at a time convenient to them within their workplace. A programme such as this is currently used within NSW Health, and it is the understanding of the authors that all staff working in mental health are required to complete the programme annually, in the same routine fashion as CPR training. With staff in the current study reporting that ten percent of the most recent suicide risk management situations were being managed over the phone or off-site, it would be important that the staff training covers the unique difficulties that this type of assessment entails, and how best to manage them.

While agencies typically reported that only approximately 5% of their clients are of ATSI background, staff raised several considerations for modifying SRA practices for this client group. For instance, the need to have a staff member of the same sex as the client, sitting beside rather than in front of the client, involving ATSI workers where available, the importance of not looking the client in the eye, the need for male therapists to address any questions to a married woman through her husband, and the impact of low literacy rates on the client's understanding of language used in assessment forms. One staff member also highlighted how difficult it was to collect any family or personal history, as clients of ATSI background would usually only share their story with people close to them. Clearly, SRA among this group is likely to require considerable cultural sensitivity on the part of the therapist.

4.2 Recommendations for the development of new resources

The current study has identified the need for three new resources to improve the management of suicide risk in residential drug and alcohol treatment settings. These include a Policies and Procedures Pro-forma **(*Suicide–PPP*)**, an Acute suicide risk Screener **(*Suicide-AS*)**, and a standardised Suicide Risk Formulation Template **(*Suicide-RFT*)**.

4.2.1 Suicide Policies and Procedures Pro-forma (Suicide–PPP)

Given the large proportion of agencies currently operating without a clear documented policy outlining how suicide risk is to be managed, it is proposed that a pro-forma be

developed to guide managers in drafting such guidelines for their treatment agency. The template would include suggestions for establishing formal links with local mental health services, and would clarify for staff exactly what information these services require when a suicidal client is being referred to them. The pro-forma would also outline the components of effective policy and procedures for suicidal crises that need to be considered. Examples of these include defining a situation requiring a crisis response; specific actions the drug and alcohol worker should take to ensure the client's safety; the kinds of consultation or clinical supervision that should occur and how these should be requested; how clients should be monitored during the crisis; how to address a client's resistance in receiving care for suicidality; and how clients should be transported to other services if required (Center for Substance Abuse Treatment, 2009).

4.2.2 Acute Suicide risk Screener (Suicide-AS)

The introduction of a mandatory screener for suicide risk would assist all staff to identify high risk clients irrespective of their level of training and experience. While there is no substitute for sound clinical judgement, structured assessment tools provide a much needed framework for less experienced staff, and act as useful cross-checking mechanism for staff who are more proficient in risk assessment. This tool is not intended to replace formal clinical assessment, but would act as a means of ensuring that some key information, required as part of a basic screening process for suicide risk, was routinely collected for each individual client. The screener would be used at set procedural time points in treatment (e.g. intake, admission, transitions in treatment, and discharge), and at times when staff identified warning signs which suggested that a client might be at risk (e.g. expressing suicidal ideation, change in mood). The tool would contain core questions to be asked of all clients, as well as follow up questions for use where appropriate.

It is noteworthy that when asked to indicate what information they would gather from a client they considered to be potentially suicidal, the majority of staff made reference to obtaining details about any plans (i.e. where and how), but significantly smaller proportions nominated other factors such as the availability of means, history of prior attempts, resources or strengths, the time-frame being considered, current stressors, symptoms of depression and level of daily functioning, family history of suicide, and medical status. A structured assessment tool has the potential to increase the likelihood

of these less commonly endorsed factors being assessed. As indicated earlier, the purpose of suicide-related screening is to identify at risk individuals who require further evaluation and/or treatment, and to provide information that will help to plan such treatment (Center for Substance Abuse Treatment, 2009).

4.2.3 Suicide Risk Formulation Template (Suicide-RFT)

It is noteworthy that the staff composition, and hence their ability to assess for comorbid psychopathology and other background suicide risk factors, differed markedly across the services. While multidisciplinary teams operating within a medical model were able to provide comprehensive psychiatric assessment, only a small proportion of residential rehabilitation services exist within a hospital setting. A large proportion of services had no medical or allied health staff on their teams. While agencies were, to varying degrees, assessing some background suicide risk factors (e.g. anxiety, depression, level of polydrug use etc), it was not always apparent that these background factors were being conceptualised by staff as being 'suicide' risk factors.

While it is unrealistic to expect staff with little or no training in mental health to embark on comprehensive screening for psychopathology as a means of improving suicide risk assessment and intervention, there does appear to be a marked opportunity to make better use of the information that is already being collected by services. It was noted that the majority of agencies reported asking potential clients a global question about their previous mental health diagnoses, and many reported seeking copies of reports from previous mental health services. Some clients were also seen by allied health and medical staff who would conduct further assessments of mental health. It is proposed that a Standardised Risk Formulation Template (Suicide-RFT) be designed to integrate all of the available information, to identify the known risk factors for a particular client, and where possible, to determine how these are being addressed by the current treatment plan. The Risk Formulation Template would also highlight what risk factors are yet to be assessed. This structure would make staff more cognisant of gaps in their knowledge of their client's suicide risk profile, and increase the likelihood of clients being referred for further assessment. The Suicide-RFT would also be useful in conveying information to external services about a client's known background suicide risk factors.

4.2.4 Development and pilot-testing of resources

In order to maximise the acceptability of the Suicide-PPP, Suicide-AS and Suicide-RFT to front-line drug and alcohol workers, these should be designed in consultation with the Network of Alcohol and other Drug Agencies (NADA). To promote the uptake and sustainability of the resources, a brief information booklet should be produced explaining why suicide screening is important and raising awareness of the new resources. An instruction manual should also be produced to accompany them. As a means of determining the acceptability of the Suicide-AS, and Suicide-RFT, it is also recommended that a pilot study be conducted with a random selection of residential rehabilitation services from across Australia.

4.3 Conclusion

This study confirms the significance of suicide as a clinical issue among drug and alcohol treatment staff, and highlights many gaps in suicide risk assessment practice. Clearly documented policies and procedures are an essential requirement in supporting front-line drug and alcohol workers in managing suicide risk, yet these are lacking in many services. Access to regular suicide risk assessment training also needs to be improved. Staff in residential drug and alcohol services have a unique opportunity to gather information about a client's acute and chronic suicide risk, and to involve other services in treatment as appropriate. The development of structured assessment tools for use in residential drug and alcohol treatment settings would significantly assist staff in fulfilling this important role.

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