

SUMISSION TO THE SENATE COMMUNITY AFFAIRS COMMITTEE INQUIRY INTO SUICIDE IN AUSTRALIA 2009

This submission will address the impact of suicide and need for postvention model of response for Indigenous communities in the Northern Territory. It will address the following Terms of Reference of the Senate Inquiry with particular reference to: (a) (b) (c) (e) and (g).

(a) Indigenous communities are undergoing rapid social change and members of those communities can show increased vulnerability, particularly when they enter into a situational crisis. The person at risk is not receiving adequate feedback or warnings from family and friends that their actions are leading them on a pathway to suicide. The probable consequences of the behaviour are not realized by the person at risk because they are not used to the warnings or expectations of the collective in which they are now living. This is because the community has dramatically changed its social structure. Therefore they are more susceptible to, for example, contagion and imitative suicide than those living in a situation or society that they are familiar with.

Once the community adapts to new circumstances and changes within their collective their health and wellbeing can improve but this may take a generation or more to occur. Family solidarity is an important factor in building and maintaining resilience to buffer the family and community against the negative aspects of social change. As rapid changes are made in Indigenous communities, particularly in the Northern Territory with pressure to move quickly, besides the concerns for environmental pollution an understanding must include the human pollution these changes can produce. The boom and bust approach can have major social fallout on the local Indigenous people, for example, community disintegration, family breakdown, alcohol and substance abuse and suicidal behaviour.

(b) The accuracy of suicide reporting Australia, factors that may impede accurate identification and recording of possible suicides.

The accuracy of suicide reporting in regional and remote Australia is fraught with difficulty and contributes to underreporting of suicide. Reporting of Indigenous suicide is particularly problematic as increasing Indigenous rates may be hidden within statistics of overall suicide rates of jurisdictions that appear stable. This is because non-Indigenous suicide rates are falling, and which contributes to the anomaly. Indigenous status is usually well recorded in health system demographic data in the Northern Territory but the Indigenous (Aboriginal) status is not recorded in the National Coroners Information System demographic data and as yet there is no requirement for, or ability to record Indigenous status. All jurisdictions in Australia are now using the Victorian Institute of Forensic Medicine's National Coroners Information System (NCIS) electronic database but it requires manual examination of each electronic record to determine Indigenous status and therefore is a barrier to accurate research and reporting of Indigenous suicide in each jurisdiction in Australia. This is a grave disadvantage for rural and remote

Australian Indigenous people who have had dramatically high rates of suicide which have occurred virtually unnoticed by the mainstream decision makers.

The increasing trend of Indigenous suicide is currently stabilizing with some annual fluctuations but overall the rate of Indigenous suicide is still four times the Australian national rate. The underreporting of the antecedents of Indigenous suicide is problematic. Suicide contagion, particularly behavioral contagion is endemic particularly substance abuse, and familial contagion appears to be universal in most Indigenous communities, even the urban settings. This contagion results in imitative suicides which then produce suicide clusters.

When suicide occurs in such close knit communities the ‘reach of news’ is widespread and is quickly communicated, which also spreads the contagion. The consequences of underreporting mean that the postvention support systems and services that could be set in place are not activated and imitative suicides ensue and clusters occur. Therefore suicide clustering may be considered a risk factor for suicide in Indigenous settings which distinguishes suicide clustering from all other clusters of fatal diseases or illness.

(c) The appropriate role and effectiveness of agencies, such as police, emergency departments, law enforcement and general health services in assisting people at risk of suicide.

The role of agencies in responding and assisting people at risk of suicide or in the aftermath of suicide requires a seamless and systematic approach. The Inter-Agency Suicide Response Task Group (I-ASRTG) developed in collaboration with the Northern Territory Coroner’s Office 1999 – 2006 provides a model of response to include persons at risk, families who have lost loved ones to suicide, groups and communities. The Indigenous Postvention Response and Suicide Safe Community (Hanssens 2008) is a model of response that links with I-ASRTG for suicide response and bereavement support Indigenous communities.

(e) The efficacy of suicide prevention training and support for frontline health and community workers providing services to people at risk.

The training and support for frontline workers in Indigenous settings is inadequate and staff are at real risk of suicide themselves with high levels of burnout, blame and vicarious trauma. They require critical incident debriefing regularly but as a rule rarely receive it. Yet they are consistently at the coal face even when finished their daily work because of the high rates of attempted suicides in the Indigenous settings where they can be called upon at any time, night or day. Therefore the risk for these frontline workers and their families is manifold as they often live in a community “at risk” and contagion is always a factor.

As frontline workers they are being exposed to “sorry business” grief and loss in the most existential way, yet there is no systematic process for the postvention response and self care guidelines to safeguard them from burnout and vicarious suicide risk.

Leonore Hanssens, PhD Researcher Indigenous Suicide Northern Territory.

(g) The adequacy of the current programs of research into suicide and suicide prevention, and the manner in which findings are disseminated to practitioners and incorporated into government policy.

There is a dearth of research into suicide contagion and clustering of suicides particularly in traditional Indigenous communities across Australia. There appears to be a reluctance to investigate the suicide deaths that are occurring in the Northern Territory particularly since the rates of suicide have been accelerating dramatically.

The Coronial Inquest in the Kimberley region has provided some invaluable insight into the antecedents of Indigenous suicide in that region. While there are some recommendations from coronial inquests that make it into policy, the transfer of knowledge from academic research and coronial inquests into policy is still inadequate. It is unfortunate that the National Coroners Information System (NCIS) is not utilized more effectively to provide timely analysis of suicide data particularly for Indigenous settings. NCIS data should be accessible to researchers with or without the approval and / or support of the local coroner in each jurisdiction. Only then can there be transparency and the timely reporting of the impact of suicide in each jurisdiction, which can then have an immediate impact on policy decisions. For example, reduce alcohol availability in certain situations (during 'sorry business' related to suicide or sudden unexpected deaths), increase policing in certain jurisdictions, increased mental health personnel, increase grief & trauma counselors and critical incident debriefing in postvention support.

Brief Overview of Indigenous Suicide Research in the Northern Territory

Leonore Hanssens, PhD Researcher Indigenous Suicide Northern Territory.

Suicide clusters

My research began with the hypothesis that “suicide contagion and clusters have been an enduring feature Indigenous suicide within urban, rural and remote Indigenous populations in the Northern Territory” since Indigenous suicide began to appear in the late nineteen eighties and then rapidly escalate in the nineteen nineties. After rigorous scrutiny of coroners’ records, academic literature and grey literature to piece together the pattern of suicide it became clear there was a clustering of suicide and a contagion effect operating within those clusters. Suicide clustering has been a consistent feature of Indigenous suicide and persistent over time, with clusters continuing to occur in urban, rural and remote Indigenous communities for well over two decades. Suicide clusters occur with exposure to another person’s suicide, assuming close temporal, geographic, interpersonal proximity and reach of news which precipitates imitative suicidal behaviour and further suicides.

Analysis of data from Northern Territory Coroners Office and National Coroners Information System relating to 230 suicides occurring from 1996-2006, was conducted for Space-Time and Space-Time-Method clustering using the enhanced Knox statistical test. Highly significant clustering was found suggesting that imitation rises (using space-time cluster analysis) to 12.5% and (using space-time-method cluster analysis) to about 21% both with a time window of 360 days and still rising at 540 days indicative of ‘Echo Cluster phenomenon’. Concurrent with the clustering of suicides, this research has identified high levels of suicide contagion and imitation, high levels of alcohol and substance abuse, and severe and enduring economic hardship and deprivation.

In 1989 the first recorded cluster of two suicides, by the same method of hanging, occurred on the Tiwi Islands with four serious suicide attempts between the two deaths. This pattern of a cluster of completed suicides within a cluster of attempted suicides continues until the “Echo Cluster” phenomenon was identified on the Tiwi Islands. Echo clusters are subsequent but distinct clusters of suicide occurring after the initial suicide cluster and this phenomenon has contributed to and resulted in forty-four (44) suicide deaths in two decades. It has also resulted in serious suicide attempts too numerous to count most of whom now have a lifetime risk of suicide. A researcher prior to 1990 who investigated mourning rituals of the Tiwi people observed that because of the collective nature of the mourning ritual that comes to bear on a suicide death, there is a real risk of further self-destruction. Indigenous suicide deaths occurred later in other regions of the Northern Territory but with just as much intensity resulting from clustering.

Contagion

Primary concern following an Indigenous suicide is the potential for contagion which can lead to further cluster suicides. When high rates of suicidal behaviour, attempts and completed suicides occur within discrete Indigenous communities and defined geographical areas, it immediately raises the possibility of clusters or imitation suicide, resulting from a contagion operating. There have been several types of contagion identified, for example, behavioural contagion and familial contagion throughout the research period 1989 -2009. Early examples of familial suicide contagion were recorded in East Arnhem and the Tiwi Islands in the late eighties with family linked suicides in the early nineteen nineties. Similar familial contagion has occurred particularly in Central

Leonore Hanssens, PhD Researcher Indigenous Suicide Northern Territory.

Australia which has experience the worst effects of familial contagion. It also occurs in certain age cohorts, that is, 15 to 35 years where 82% of suicide between those ages with this age group four times as likely to complete suicide. Contagion is a process whereby exposure to suicidal behaviour influences other members of the family, group or community either directly or indirectly to attempt or complete suicide.

Hanging method as a behavioural contagion has emerged as the most enduring feature in Indigenous suicide with 86% of suicides by hanging. Hanging method was used in 100% of suicides in children 10 – 14 years of age from 1996 – 2006. All childhood external cause of death are by hanging, including suicides and accidental deaths, and is evidence of intergenerational behavioural contagion. While Indigenous females don't attempt nearly as frequently as non-Indigenous females, when they do attempt they use a lethal method of hanging resulting in death. Another behavioural contagion is 'location of suicide' with 65% of Indigenous suicides occurring in or around the home, and 22% in camps, bush land or beaches close to the community. The link between alcohol and hanging is also shown to be evidence of powerful contagion within drinking circles in Indigenous communities, with 77% of hanging suicides in the context of alcohol intoxication. Suicide in relation to gender and contagion shows that 91% percent of Indigenous suicides were male; in relation to age 82% of victims were aged 15-34years; in relation to marital status 52% were married or defacto relationships; and in relation to employment 72% of Indigenous suicide victims were unemployed. Being an Indigenous young adult male, married and unemployed appears to increase contagion and risk of suicide. This is a converse situation where Indigenous "married" men are at risk of suicide possibly through there lack of employment.

In the younger age groups the link between cannabis and hanging contributes to impulsivity particularly when intoxicated, in states of withdrawal, or when drug seeking with 25% of hangings in the context of cannabis intoxication. This result could be a underestimation due to lack of forensic testing or underreporting of toxicology results to NCIS. Descriptions of cannabis use are suggestive of behavioural contagion in the use of bucket bonges by groups of youth in Indigenous communities. Recent reports suggest that cannabis use among youth in the NT is escalating with as many as 62-76% using cannabis in Arnhemland communities. There is also evidence of drug substitution from alcohol to cannabis use in some communities that are now alcohol restricted. Massive amounts of cannabis are finding their way into Indigenous communities with resultant persistent suicide clustering. Clusters of suicide are persisting in communities which are alcohol is restricted, with evidence suggesting that suicide attempts and completions are in the context of increasingly heavy cannabis use. For example, Elcho Islands with a recent suicide cluster in 2009 and Nhulunbuy with three suicide clusters in 2006-2009 and elsewhere in the NT. There also current examples of communities still experience persistent suicide attempts providing a real risk of burn out, vicarious trauma and suicide risk to staff who are constantly in a state of suicide watch and alert. An examination of the toxicology results from "near hangings" which were assessed in the Emergency Department in the NT from 1996 - 2001 found that 50% had a positive toxicology result or a history of cannabis use.

In some suicide narratives analyzed, the proof of contagion is convincing with a statement from a young suicide victim to his friend saying "I want to be with my brother" who completed just some years prior to his own suicide. Numerous accounts and other examples are documented throughout the suicide narratives. Often attempted and completed suicides occur at a particular location using for example, the same tree to

hang themselves until the tree is cut down. Some other cases contagion appears as a distal factor in the case of a twelve year old who completed on his birthday after being teased by siblings. He lived with his family in a very remote outstation and had been otherwise well and working with his father the day of his suicide but there had been accounts of hanging attempts of children from the community he visited from time to time and certainly adults who had completed by hanging.

The 'age cohort' as a feature of contagion is rarely considered but needs to be explored further with my research identifying that most suicides occur in the young adults (15-35 years) there were no Indigenous suicides over the age of 55 years. When Indigenous suicide is compared with the same non-Indigenous cohort from aged 10 – 55 years the gap has consistently widened throughout the past decade. Indigenous people die almost two decades younger than non-Indigenous people from chronic disease and poverty. The elders who survive are steeped in their tradition, spiritual and cultural beliefs and appears as a strong protective factor.

Socio-economic deprivation

Evidence is emerging that the suicide gap is widening between Indigenous and non-Indigenous suicide rates over the past two decades from 1989 to 2009 in direct correlation to the widening economic gap between Indigenous and non-Indigenous people. The gap has been most apparent between the most and least deprived areas of the Northern Territory. We know from recent research conducted in Scotland that "suicide clusters in economically deprived communities" whether they are urban, rural or remote. Factors which are known to influence suicide, such as drug misuse, divorce and family breakdown, and unemployment are likely to be more common in such deprived areas. Economic deprivation is part of the explanation for the persistent and consistent geographical concentration of suicide, particularly suicide clusters, in the Northern Territory.

Recent research in the NT by Zhao & Guthridge (2009) identifies that of all the major risk factors investigated that low socio-economic status was assessed to be the most important risk for Burden of Disease and that most Indigenous people live in socio-economically deprived areas in the NT. The low SEIFA indexes indicates the low socio-economic status at 26.8% associated with a higher burden of disease, and being the main risk factor contributing to chronic conditions / injuries including mental health and suicide ahead of all other factors including alcohol 4.5% and substance use 2%. When comparing the top ten causes of burden of disease in 1994-1998 and 1999-2003 with the number of DALY's used to rank disease and injury categories, suicide & self-inflicted conditions rank increased from 19th in 1994-1998 to 7th in 1999-2003. While fatal outcomes contributed to the minority (43%) of total burden of disease and injury, suicides' contribution by major disease category in the NT 1999 -2003 was 84% fatal and 16% non-fatal ahead of all other categories including cancer and cardiovascular conditions. Mental health conditions were the leading category of Burden of Disease for both NT males and females.

Around a third (30%) of all NT residents are Indigenous people and 15% of these live in Darwin. The 85% of these Indigenous people who live outside of Darwin, are less educated, less likely to be employed or participating in the work force, more likely to be in lower skilled occupations, more likely to be earning very little, and far more likely to be living in overcrowded dwellings. There is a complex and entrenched relationship

Leonore Hanssens, PhD Researcher Indigenous Suicide Northern Territory.

between health, housing, education, and employment in remote areas of the NT. Most of the low income earners live in rural and remote areas in the NT with those earning less than \$250.00 per week, 37% living in Darwin and 63% living in rural and remote areas. Young Indigenous adults in the poorest areas of the NT aged 15 to 35 years are almost four times as likely to complete suicide than those in its least deprived areas and this can be explained by the high levels of deprivation in these areas.

Circles of Vulnerability

The four circles of vulnerability for the person, family and community at risk after suicide are close 'geographic proximity' to the suicide victim; close 'temporal proximity' having been with the victim recently, there is 'interpersonal proximity' (psycho-social-emotional) to the suicide victim, and the 'reach of news' is fast and widespread having heard of the suicide soon after the death. The remaining circles involve cultural vulnerability, spiritual vulnerability, alcohol availability, substance abuse, economic deprivation, interpersonal conflicts, being young, male and married, unemployed, availability of means, heightened emotions particularly anger with overwhelming blame, shame and grief.

The family, community and population at risk are those people who have been exposed to the suicide death either directly or vicariously and who may have either one or more preexisting vulnerabilities that may influence the psychological or emotional impact of the suicide or have a social or cultural responsibility for the suicide victim.

Goals of a Postvention Response

My proposed model of Indigenous Postvention Response and Suicide Safe Community used a population approach with a "community at risk" model where the whole community is invited to be involved in a community meeting to discuss, plan and provide a safety net within the community. This involves resolving the issues around shame, blame, cultural responsibility, conflict, anger and heightened emotional outpouring of grief. (See model below)

Postvention responses need to be timely, efficient and targeted responses to prevent cluster suicides and contain contagion. They require the utilization of local networks when available and expert intervention. The response should include the following: confirm the facts, mobilize a crisis response team, identify at risk people, support members of the family and community; prevent imitative suicides by identifying others in family / group / community members who are at risk; connect those at risk to a support person within the family / community until expert help arrives to provide intervention services; reduce the friends and family identification with the deceased by talking about what happened to prevent imitation and contagion; provide long term surveillance and support; reduce or restrict alcohol availability; restrict cannabis use; support community expression of grief either before, during or after funeral in a way that can be expressed safely.

Indigenous culture and connected provides a potential safety-net after a sudden death but lies dormant while a large proportion of the community are under the influence of alcohol, cannabis and other drugs, or under the influence of the intoxicated person. The cultural safety net which is still active in some communities needs to be activated with the support of the Inter-Agency Suicide Response Task Group and the Indigenous

Leonore Hanssens, PhD Researcher Indigenous Suicide Northern Territory.

Postvention Response and Suicide Safe Community Model. The community should have alcohol restrictions and drug interdiction activated during the funeral ceremonies with a suicide watch activated for 'at risk' members of the community. Suicide bereavement is often disabling and can result in an emotional paralysis which is difficult to overcome. This acute response to grief can reoccur at any time with little or no warning, and with unpredictable triggers.

Word of caution – telling the story of suicide without adequate safety nets and suicide response plans in communities is fraught with danger. Point clusters from news media stories are a well known phenomena, but while news spreads differently in Indigenous communities, the news of a completed suicide spreads like a bush fire and is just as catastrophic in a tight knit community. Therefore, any education about suicide needs to be set in the context of an established safety net or suicide safe community.

Furthermore, any suicide prevention, intervention and post vention response, information or training should be in the context of knowledge of the past and present suicidal activity within that community. Suicide prevention, intervention and post vention can only be done if there are collaborative links between the Coroner's Office, Mental Health Services being the conduit for information in a responsible and confidential format to Remote Health Centres, General Practitioners, Schools, other institutions, the family and communities within which suicides occur.

Indigenous suicide is also strongly connected with socio-economic deprivation and the social determinants of Indigenous health and wellbeing in the Northern Territory. A response to suicide clusters requires broader strategies, intersectoral collaboration and social changes to address the root causes of economic stress, hardship, vulnerability, family and community dysfunction and disintegration, but which are culturally and spiritually sensitive and appropriate to Indigenous people.

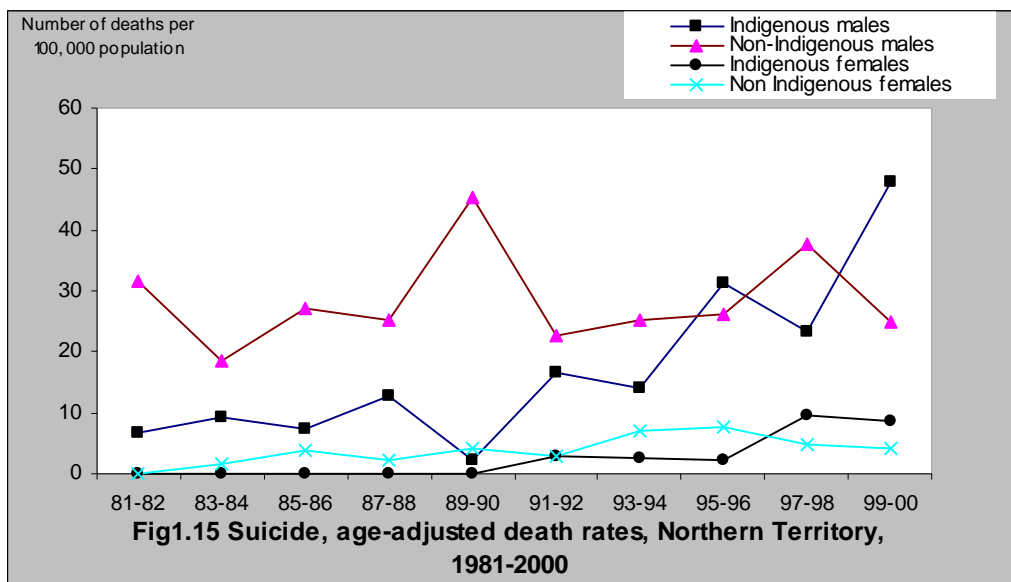
Reference List

1. Hanssens L. The Search to Identify Contagion Operating within Suicide Clusters in Indigenous Communities, Northern Territory, Australia. *Aboriginal & Islander Health Worker Journal* September / October 2007(a); 31 (5) 27 – 33.
2. Hanssens L. Imitation and Contagion Contributing to Suicide Clustering in Indigenous Communities: Time-Space-Method Cluster Analysis. *Aboriginal & Islander Health Worker Journal*. May / June 2008 (b), 32 (3) 28 – 35.
3. Hanssens L & Hanssens P. Research into the Clustering Effect of Suicide within Indigenous communities, Northern Territory, Australia. *Aboriginal & Islander Health Worker Journal* May / June 2007; 31(3) 3–11.
4. Hanssens L. Indigenous Dreaming: how suicide in the context of substance abuse has impacted on and shattered the dreams and reality of Indigenous communities in Northern Territory, Australia. *Aboriginal & Islander Health Worker Journal*. November / December 2007(b); 31 (6) 5 – 12.
5. Hanssens L. Clusters of Suicide. The need for a comprehensive postvention response to sorrow in Indigenous communities in the Northern Territory.

Leonore Hanssens, PhD Researcher Indigenous Suicide Northern Territory.

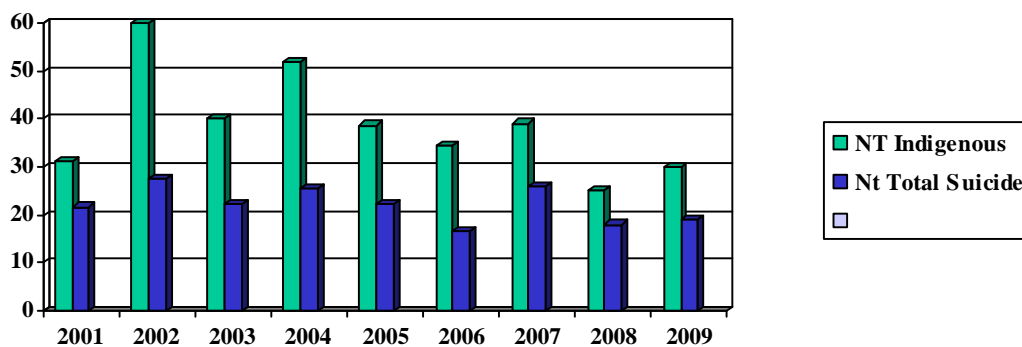
- Aboriginal & Islander Health Worker Journal. March / April 2008(a); 32. (2) 25 – 33.
6. Hanssens L. "Echo Clusters" – Are they a Unique Phenomenon of Indigenous Attempted and Completed Suicide? Aboriginal & Islander Health Worker Journal. January / February 2010(a); 34. (1) 3 – 12.
 7. Robinson G. Mourning rites and rituals. Oceania. 1990.
 8. Parker R. An Audit of Colonial Records for the "Top End" of the Northern Territory comparing factors in Aboriginal Suicide against Other Suicides in the Region. Section 11 Dissertation. Royal Australian and New Zealand /college of Psychiatrists. 1999.
 9. Measey ML, Li SQ, Parker R, Wang Z. Suicide in the Northern Territory, 1981-1992. Med J Aust. 2006 Sep 18;185 (6):315-9.
 10. Parker R. Presentation at the "Suicide is Everyone's Business" Forum. Mirrambeena Resort Conference Room. Darwin. May 2005.
 11. Aputimi A. Addressing Suicide in the Tiwi Islands and Beyond. Inaugural Postvention Conference "Living Hope" in Sydney. Unpublished. 2007.
 12. Bates A. "Suicide in Aboriginal Communities" SBS Living Black. 17th May 2006. Series 5; Episode 11. www.livingblack.com
 13. Zhao Y, You J. & Guthridge S. Burden of Disease and injury in the Northern Territory, 1999-2003. Department of Health and Families, Darwin, 2009.
 14. Exeter DJ & Boyle PJ. Does young adult suicide cluster geographically in Scotland? Journal of Epidemiology Community Health 2007: 61:731-736.
 15. Taylor A & Macdonald S. Indigenous Darwin and the Rest of the Northern Territory. Population studies group research brief issue 2009026. Charles Darwin University.

Fig 1. Suicide, age-adjusted death rate per 100,000 population, two-year average, Northern Territory population, 1981-2000



*Sources of the data: 1981-1999 death registration data, unpublished; 2000 used NT coroner’s data, unpublished.

Fig 2. Suicide death rate per 100,000 population Northern Territory population, 2000 – 2007.



* Source of data: 2001 - 2007 National Coroners Information System. Hanssens L. 2010 “Echo Clusters” – are they a unique phenomenon of Indigenous attempted & completed suicide? Aboriginal & Islander Health Worker Journal. January / February. 34 (1) (in print).

Indigenous Postvention Response and Suicide Safe Community			
Crisis intervention committee – coordinates	Primary (Whole of community)	Secondary (Monitor at-risk groups)	Tertiary (High risk individuals identified)
Prevention (Population approach: broad community education, promote help seeking)	Broad education for community: night patrol, youth groups, schools, clinics, prisons, probation and parole, community groups and church groups.	Identify groups at risk and workers remain on suicide risk alert: Aboriginal (mental) health workers, Aboriginal community police officers, youth workers, teachers, nurses and doctors.	Clear protocols for risk assessment and admission: for emergency department staff, ambulance officers, police officers, clinical psychiatric nurses, doctors and allied health staff.
Intervention (Skills training undertaken for community members and professional gatekeepers)	Suicide-aware trained: community members, groups, agencies, organisations, voluntary groups and church groups.	Applied suicide interventions skills training (ASIST) Aboriginal (mental) health workers, Aboriginal community police officers, youth workers, teachers, etc	Clinical suicide risk assessment skills: emergency department staff, clinical psychiatric nurses, ambulance, police, psychiatrist, psychologist.
Postvention (Support for bereaved with sorry camps, healing circles, support groups or other bereavement services)	General bereavement information, support, training in listening skills for community supporters and crisis intervention committee members	Active support for the bereaved from Aboriginal mental health workers and Aboriginal community police officers – give assistance and referral if necessary	Referral pathway to agencies for bereaved families with complicated grief; suicide watch and risk assesment if necessary for those 'at risk' of self-harm.

(Adapted from the Top End Life Promotion Program TEMHS DHCS 1999 – 2006 Northern Territory) (Hanssens 2007)

*Source of table: Hanssens L. (2008) Clusters of Suicide, The need for a comprehensive postvention response to Sorrow in Indigenous communities in the Northern Territory. Aboriginal & Islander Health Worker Journal. March / April. 32 (2) 25 – 33.

Table 1 ECHO CLUSTERS TIWI ISLANDS (Population 2,400) Indigenous Suicides (n = 44)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
DEC									▲			▲	▲		▲	◆		
NOV								▲		◆		▲	▲	▲	▲		▲	▲
OCT								▲	▲			▲	▲	▲	▲			▲
SEP						◆	▲					▲	▲	◆	▲	▲	▲	
AUG								▲	▲			◆	▲				◆	
JUL												◆	▲		60			
JUN												▲			▲			
MAY						▲	▲					▲						
APR			◆							◆		▲				▲	▲	
MAR		▲										▲				▲	▲	◆
FEB												◆	◆			▲		▲
JAN	▲	▲								▲		▲	▲			▲	▲	

Legend: Clustering of Completed Suicides on Tiwi Islands communities

- ▲ Nguu
- ▲ Wuranku
- ◆ did not complete suicide on Tiwi Islands but contagion verified
- ▲ Milikapiti
- ◆ Pitimgimpi
- ** non-Indigenous partnered with Indigenous Tiwi Islander
- *** Tiwi youth grew up in Darwin but completed suicide on Tiwi Islands
- ◆ Body found in December

Examples of Clustering of Attempted Suicides

in 2002 and July 2005 – April 2006:

- ▲ 7 attempts per week
- 60 60 attempts in July 2005

Table 2 TRACKING CLUSTERS OF ATTEMPTED AND COMPLETED SUICIDE IN ARNHEM LAND

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
DEC			◆											▲▲▲▲	▲	◆		
NOV											◆	▲	▲▲	▲▲	▲▲			▲
OCT									◆		◆	▲	▲	+ MVA				
SEP						◆			◆					▲▲▲	▲			◆
AUG								▲	◆	◆	◆		▲	◆	◆			▲
JUL													▲▲					▲
JUN	◆							◆					▲					◆
MAY										◆			▲	▲	◆	▲		
APR												▲		▲	▲	◆		
MAR		◆											▲▲					
FEB		◆					▲			◆	◆	◆		▲				
JAN									▲	◆	▲	▲	◆	▲	◆	▲▲▲	▲▲▲	

Legend:

- ▲ Nkulnbuy Completed Suicides
- ▲ East Arnhem Suicide
- ▲ Nkulnbuy Attempted Suicides 2003-2004
- ▲ West Arnhem Suicide
- + MVA of young male but Traditional Land Owner

Table 3 TRACKING CLUSTERS INDIGENOUS SUICIDE – KATHERINE & TOP END WEST REGION

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
DEC								▲▲▲			▼			●		◆***	
NOV								(▲)*				■			◆	◆***	
OCT																●	◆◆
SEP				●								●	●				
AUG								✕			✕	▲		■			◆
JUL				◆										●			▲ ●
JUN						▼							●	■		▲	
MAY												◆					
APR																	
MAR													✕ ●	◆			
FEB				◆							▼			●			●
JAN								●									

Legend: Completed Suicides

- ◆ Daly River
 - Timber Ck/Lajamanu
 - Katherine
 - ▲ Bulman / Beswick
 - ✕ Ngukurr
 - ▼ Borroloola
- (▲) Serious suicide attempt, jumped from top of power pole – survived as a paraplegic but died some time later.
 * Katherine floods had an immediate impact on attempted and completed suicide
 ** Adelaide River completed suicide of 14-year-old male child by hanging
 *** Outstation via Daly River completed suicide of male child on his 12th birthday
 **** Katherine Aboriginal Alcohol Rehabilitation, accidental death by hanging of a 9-year-old female child, witnessed by a group of children.
 ***** Aboriginal community via Katherine, accidental death by hanging of a 6-year-old male while playing with another child, witnessed by family.

Table 4 TRACKING SUICIDE CLUSTERS & FAMILIAL SUICIDE CONTAGION – CENTRAL AUSTRALIA

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
DEC						▲						▲	1*		▲	▲▲	▲
NOV								▲▲▲			▲	▲ 3	1			▲	
OCT			▲				▲		▲	▲		▲▲▲ 3	3	▲▲		▲	
SEP				▲					▲	▲		▲			2 (3/4)	▲	▲
AUG									▲▲						▲ 2/3	▲	1
JUL						▲▲	▲				▲						▲
JUN														3			
MAY								▲		▲		▲▲▲	▲		▲	▲	
APR								▲					▲	▲ 2 3 2*		▲	
MAR								1	▲		▲	▲	2	▲		▲	
FEB								▲				4	▲				
JAN						▲▲		▲		▲▲		▲		▲▲	2**		▲

Legend:

- ▲ Suicides – Alice Springs/ Central Australia
- Family 1, 2, 3 & 4 Completed Suicides and Familial Contagion
- 1 Girlfriend of deceased male of Family 1
- 2 Female homicide victim of Family 2
- 3 Non-Indigenous female of Family 2