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The Secretary of the Committee,
House of Representatives Standing Committee on Health and Ageing
Inquiry into Youth Suicide Prevention
Parliament House, Canberra.

Dear Sir,
I seek the opportunity to provide comment to the 'Inquiry into the need for and success of early intervention programs aimed at preventing youth suicide'.

I have been dedicated to suicide prevention since 1987, and am a member of the International Association for Suicide Prevention, the International Association for Suicide Research, and a Life Member of Suicide Prevention Australia (having been National Chair from 1995-2001, and convened 6 national suicide prevention conferences). In 2008, I received the SPA 'Lifetime Contribution to Suicide Prevention Research' Award. My research has been predominantly in the area of prevention of youth suicide.

I was a member of the National Advisory Group, and the Evaluation Working Group, for the Australian National Youth Suicide Prevention Strategy (NYSPS, 1994-99). Subsequently, I became a member of the writing teams for the Australian Suicide Prevention '*LiFe*' Strategy (2000, 2007), a member of the National Advisory Council for Suicide Prevention (from 2003-8), and was appointed National Advisor on Suicide Prevention to the Australian Government in early 2009.

I had the honour to lead development of the first national Media and Suicide Resource Kit ('Achieving the Balance', 1998), was an originator of the Australian Network for Promotion, Prevention and Early Intervention program (Auseinet, 1997-2009) – a main communication vehicle, nationally and internationally, for information about suicide prevention. I created 2 national programs under the NYSPS – 'Keep Yourself Alive' (a training program for GPs and community health personnel), and 'Out of the Blues' (a demonstration program for management of depression in Youth).

In Queensland, I chair the Mental Health Promotion, Prevention and Early Intervention committee, and am a member of the Queensland Expert Advisory Group on Suicide Prevention. I also have the privilege to be a board member for OzHelp Queensland, an extraordinary program for the building trades – an industry leader in suicide prevention.

On a day to day basis, at The University of Queensland, we have an active research program, and I have 2 psychology honours students and 6 PHD students this year investigating various aspects of prevention of suicide through our centre.

I carry a lot of baggage and history, but I believe I will be able to contribute usefully to your Inquiry.
Yours sincerely,

Graham Martin

Graham Martin OAM, MD, MBBS, FRANZCP, DPM

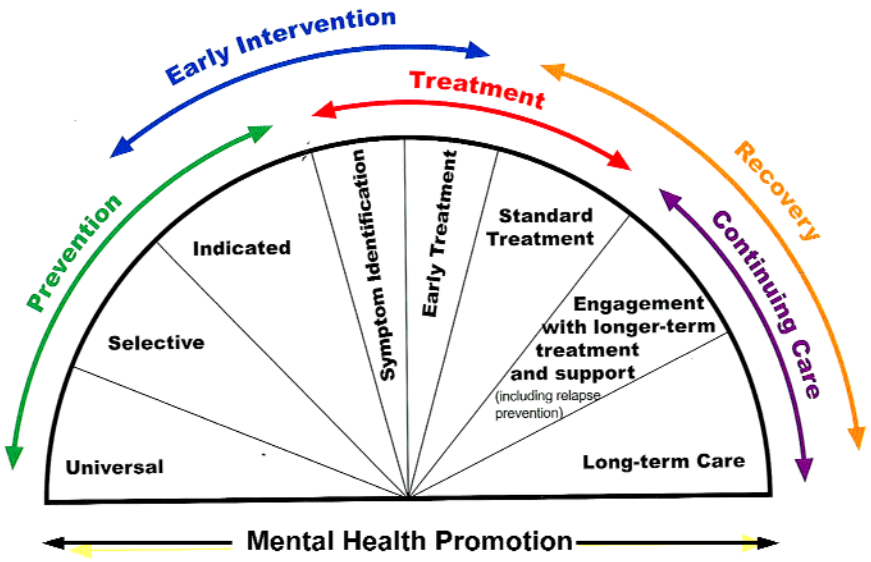
On Early Intervention and Suicide Prevention

It is of note that while youth suicide rates dropped steadily from a high in 1997 to 2006, with lows of 64 suicides in the 15-19 age group and 126 in the 20 to 24 age group, there were rises in 2007 to 82 and 138 respectively, with a decrease in 2008 aged 15-19 to 71, but a continued rise in the 20-24 age group to 149 young Australians. We often consider these 2 groups together, which means that there were overall rises from 190 for 15-24 years in 2006 to 220 in both 2007 and 2008 (15.8%). These are the first rises since the peak in 1997. Youth suicide has not gone away, and there remains a strong need to continue with effective programs, and/or create and implement appropriate new ways to reduce this loss of the future.

Early Intervention can be defined as preventing the full onset of a mental health problem (or adverse behavioural outcome such as suicide) by early recognition of a symptom pattern likely to develop into an illness, followed by management of the symptoms and their causes. Early Intervention was well defined by Mrazek and Haggerty (1994).

Early Intervention was described in Australia in 2 National Stocktakes completed and distributed by the Australian Early Intervention Network (Davis, Martin et al., 1998; Davis, Martin et al., 1999); these were largely driven by the need to understand what might be available for suicide prevention in Australia. It is a tragedy that these documents are no longer available through the national network since its defunding by DOHA in 2009. In addition, it is a tragedy that the Australian Early Intervention newsletter (Auseinetter 1997-2009), and the Australian eJournal for the Advancement of Mental Health (AeJAMH 2002-2009) both of which continually updated the field on Early Intervention, are no longer provided to Australians since the demise of Auseinet (Australian Early Intervention Network (1997-1999) which became the Australian Network for Promotion, Prevention and Early Intervention in Mental Health (1999-2010).

The ease of access to a considerable range of documents on Prevention in Mental Health has also disappeared from the Internet since the existence of Auseinet has been wiped from the record (A search on 'Auseinet.com' provides the following statement: "Auseinet Site Closed: We regret to advise that the Auseinet site was closed on 1 February 2010.For further information about Mental Health in Australia, please see the Department of Health and Ageing (DoHA) website").



Early Intervention fits into a model derived from Mrazek and Haggerty (1994), which has been used in any number of documents for Mental Health, both nationally and by the states and territories. Early Intervention is focused on individuals at risk for mental illness or in the early stages of illness, and/or (in the context of this Inquiry) individuals who have a high risk for suicide (Indicated Prevention), or have made a suicide attempt and come to professional notice. With regard to this latter point, it should be noted that up to 40% suicide attempts are hidden in the community and may not come to the notice of medical professionals.

Early intervention, as described, makes us focus on the development of, or pathways to ill health. We focus on risk factors and symptom patterns and try to understand questions like: "Under what circumstances will this young person

make a further attempt on their life?" In this we may take a broad view – perhaps using a bio- psycho- socio- cultural –political model, but only in recent years have we begun to understand how protective factors can act on risk to avert tragedy (Rowling et al., 2001; Krysinska and Martin, 2009; Martin, 2009).

Can we predict high or imminent risk?

The answer is 'yes', but whether at the individual level, group level or community, this is less a perfect science than we would like it to be. On the one hand we will find young people at apparently very high risk who stay alive. Conversely, there are young people who never flag any risk factors of note, but make a decision to suicide and complete the act.

Let me provide 2 contrasting examples:

M is a 16 year-old girl whose mother died when she was 6. The youngest of 4 children M has been through considerable family hardship, and was blamed for her mother's death, given mother contracted cancer shortly after the birth. There is a lengthy history of neglect and considerable physical (and possibly sexual) abuse. From the age of 12 M became a very difficult young person, was often in trouble with the law, and behaved as if she was much older than her years. At 13, drunk at a party, she was raped by several young men. The subsequent pregnancy was terminated. At 15 this circumstance occurred again. She has been intermittently in care.

M has a lengthy history of drug abuse, alcohol abuse, and self-injuring behaviour. She has unsightly scars on her arms, legs, thighs and abdomen. She has attempted suicide on several occasions. Towards the end of a lengthy inpatient interview to assess her safety to leave and return home, I felt her incredible despair, sympathised with her, and wondered why she had not completed her self-destruction. I asked her what kept her alive. In a very quiet voice she answered "My violin", a totally unexpected response. What, you play the violin? "Yes!" (offended). Have you had lessons? "Yes!" (very offended). What grade have

you reached? "Seven…" But that is only one short of teaching… "I would love to do that. I would love to learn to teach violin" What is your favourite piece of music? "Vivaldi's 4 Seasons".

Before these last few surprising responses I would have been certain that this young woman would have been dead within weeks. Finding this small area of hope for a future, we were able to build the beginnings of a changed life, and M is now living in independent supported accommodation, and regularly attending a new alternative school where she has made a group of friends, and continues with her violin training. There is a long way to go…

In contrast…

The experience which led to my involvement in Suicide Prevention as a passionate career choice within Child and Adolescent Psychiatry, was a 15 year old girl who forged her mother's signature on a request to go to the Orthodontist, left her private girls' school, travelled into Adelaide by bus, and jumped from the 9th floor car park of John Martin's Store on North Terrace. I subsequently came to work with the family - in part, at their request, to explore the history further, but also to provide grief work support for well over a year.

Christina's mother died from a heart attack (? 'A broken heart') some 18 months later; she just could not come to terms with her daughter's death. The older sister (the only surviving child) herself completed suicide about 3 years later, overwhelmed by the loss of her sister and mother. The father developed hypertension and died of renal failure 10 years later. They all suffered immensely emotionally, and just could not understand the death of a perfect daughter.

When Christina landed on the pavement of North Terrace, she was within 10 feet of a young male nurse. He did what he could, handed over to the Ambulance people when they arrived, and went on his way to work. By chance he was a friend of my younger son (Adelaide is a small place), and 3 months later on a visit to my home he began with "You knew that girl who killed herself…?" and

broke down and cried for the next 3 hours. He needed ongoing care for several months, and when we meet occasionally now he still recalls aspects of the trauma. An accidental bystander – like the 10-20 or so others I never met.

Two years later, I presented to a Rotary Club meeting one night (one of many), and told the story to engage the audience in the problem of suicide. After the meeting, the Ex-manager of John Martin's bailed me up for some time to tell his story, and weep. He had never sought care or support, but Christina's death was in many ways the last straw before leaving the job.

In Christina's school we set up a process of grief work with 30 teachers. Several teachers (about 10) were distraught, had taken time off school, and raised issues of their competence to look after young women. The class teacher was very traumatised, and raised one question that was very hard to consider: "What do I do with the desk?" The consensus was that she should ask the girls from the class; the desk was left for the next month, and then moved to the back of the class for the end of term. Every day a fresh flower was placed on the desk.

The work with the girls entailed 30 young women with whom we spent over 2 hours; they then completed questionnaires. Through this, the results from the scales, and from other discussion, we found out that 2 girls had attempted suicide on the day after, and one within the week after Christina's death ("If she can succeed, then I need to give it another go…"), at least 8 more deserved formal assessment, and 4 were placed in therapy.

This description of events is not unusual. Various estimates of the ripple effect out from a suicide have suggested it might be 6-10 people who are badly affected, including family members. My personal experience is that this is a gross underestimate, and the costs from inability to work are hidden and not accounted for in calculations that exist.

You will hear a wide range of estimates of the cost (perhaps somewhere around $250,000 per suicide), but the personal and social costs over time are immeasurable. Every thing we can do to reduce the numbers in Australia

reduces the pain, reduces the exposure, reduces the copycat behaviour, reduces the inner sense in all of our minds (and the pervasive belief in our society) that suicide is always an option.

Christina's case raises another issue that is rarely considered. She was never abused, came from a caring middle class family, was a straight A student, played second violin in the orchestra, and played in the school soccer team. She was well liked by staff and students, and despite an intense search through her writings to find some clue, one was never found. The dilemma is …. How do you prevent this kind of not so rare suicide, ostensibly a perfectly normal young person with no evidence for mental illness? There is no Early Intervention, we never get to analyse risks or get a risk form completed, we never get the opportunity to prevent – except afterward. To my mind this raises some fundamental issues about our society, how we parent, how we instil Resilience and Optimism in young people, how we keep them connected to family, friends and groups and clubs. You will hear lots about the Pathways to Suicide, about suicide in those with mental illness, or from special groups, and this is certainly about services, professional skill, the use of psychotherapy and medication. In the recent Senate Inquiry Discussion Paper (Table 1, page 10) it was noted that 60% or so of young suicides communicate their suicidal intent or have attempted before. This begs the question about the 40% who have not! It was rightly pointed out that 43% may have Mental Health issues. This begs the question about the 57% who have not!

We must improve our service responses across the board to ensure we are doing our very best for those who flag their ill health or their suicidality. This is sensible Early Intervention whatever the formal psychiatric diagnosis, and has formed the basis for many of my early studies. For instance, a nationally funded (NYSPS) program *Out of the Blues* explored what the barriers to referral were for youth with Depression, and also explored whether we could improve the access to services (Wright & Martin, 1998; Martin & Wright, 1999; Martin, Wright & Williams, 1999; Wright & Martin, 1999). Along the way we developed strong alliances with local general practitioners, and were able to provide a large

number of training sessions in suicide prevention through management of depression (Martin et al., 2000; Wright & Martin, 2000).

Much of this training work was based on a nationally funded (NYSPS) General Practitioner 2 day, video-based small group, training program *Keep Yourself Alive* offered in 150 seminars around Australia, and training in excess of 3500 GPs and an additional 5000 community workers (Martin et al 1997b, c, d, e, f, g; Ryan, Martin et al, 1997; Martin, G., Beckinsale, P. & Clark, S., 1999a, b; Clark et al., 1999; Beckinsale et al., 1999).

However, service improvements will never have any impact on those who do not flag their issues or have frank mental health issues. Personally I have come to the conclusion that *the most important way we can bring about change* (even perhaps in those with mental health problems) is through Mental Health Programs through parents and through schools or other groupings of young people (like our program for the Australian Defence Force Cadets – see below). By this I mean we have to target wellness, optimism, resilience, connectedness, and all of the other *protective factors* for which there is emerging evidence.

We will only stop the Christinas of our world by Universal programs (or tiered programs including Universal, Selective and Indicated approaches) in our communities, schools and families, through Mental Wellness Promotion, by developing a sane sensible and caring Australian society. If that sounds too broad or too loosely construed, so be it.

Building programs in Schools

Initial Studies on Early Detection of Risk for suicide in schools

Christina's death led my team (from 1988 at Flinders University; I moved to University of Queensland in 2001) to devise school-based Early Detection programs. First, we did 17 cross sectional studies that built to a large-scale 3-year longitudinal study of risk in young people (Martin et al, 1997a). We said to

ourselves: " If we can discover so many troubled and suicidal people after a suicide, why can't we find them before someone dies?" A list of papers deriving from this work appears in the publication list. Overall we came to believe that we could predict suicidality in 3rd year high school (aged 15 year olds) with a degree of accuracy.

The problem was then one of access to services. Of those we discovered and were anxious about (about 14%, given the combination of risk scores on several questionnaires), only 10% accepted referral to our Child and Adolescent Mental Health Services for assessment and possible intervention. The young people did not want to attend anywhere that had 'Mental' in the title, parents were very anxious about the stigma that might occur in attending mental health services, and schools actually questioned our scores suggesting that the problems were transitory, or not sufficient for referral. Of note over the next 5 years many young people were referred to our clinical services from other sources. A high percentage had been previously 'discovered' in our surveys, even if at the time they had refused referral. So we were 'right', but we were 'wrong' in our understanding of how to achieve mental health assessment and service.

Currently, 12 years later we still struggle with this problem of access to services and the possibilities of stigma. In the last 8 years we have devised a tiered program that is not about education around suicide; it is '*the program you use to prevent suicide when no-one actually mentions the word*'. It is about building strengths, optimism, connectedness, and social skills. A key part of this is a program on Pathways to Care for those young people who *do* show up as particularly disturbed and in need of further help. The tiers are therefore a basic non-stigmatising program for year 8 students in High School ('Universal'), with pre- and post testing which leads to discussion with school personnel about young people at high risk. A second tier of intervention then occurs within school ('Selective'). If this does not work, we refer to Child and Youth Mental Health Services ('Early Intervention').

The Universal process is 20 weeks (2 terms) of an internationally acceptable program based on 'Aussie Optimism' from Dr. Clare Roberts at Curtin University. We provide the training to teachers to run the program. We do pre- and post-testing, and then compare the results for the young people. Then we sit down with year coordinators and senior staff in the school, and work out in-school programs for those who need the help, and for those we are really concerned about we engineer referral to local child and youth service. We have found it hard to gain funds despite the successes of the program, so we are operating mostly in schools prepared to pay on a 'user-pays' basis (Swannell et al., 2009).

Building programs in Aboriginal Schools (Queensland)

We are in the process of developing a version of this program for Aboriginal young Australians. Two PHD students (a non-Aboriginal Matthew Hand, and an Aboriginal Australian Will Davis) have been engaged to use funding provided by Queensland Health to create the program (based on Aussie Optimism). We are one year into development with 2 more years to go, and are currently working with 3 schools in Queensland who are helping us to get the approach right.

On the face of it, this is not directly a suicide prevention program, but it *is* precisely that – suicide prevention taking a long-term view. It is also a long-term outcome from Christina's death.

Aboriginal Social and Emotional Wellbeing and Aboriginal Suicide

The work in Aboriginal Schools is in part an off-shoot from another piece of academic work in Aboriginal Suicide Prevention. With funding from Queensland Health we completed a Literature Review on Indigenous Suicide, and this is now available for download from our SuicidePreventionStudies site in pdf format. (a copy is attached to this submission).

Krysinska, K., Martin G. & Sheehan N., 2009. Identity, Voice, Place: A Framework for Suicide Prevention for Indigenous Australians based on a Social and Emotional Wellbeing Approach. The University of Queensland. (downloadable in pdf format from http://www.suicidepreventionstudies.org/index.html)

Respectfully, I hope that you will find time for this document, which comes with a clear Executive Summary and some Recommendations. I would value the opportunity to discuss these with you. Related to this Review, I have recently completed another piece of work for DOHA in my role as National Advisor in Suicide Prevention. This is a Review of National Strategies. The New Zealand Suicide Prevention Strategy can be demonstrated to have been very successful in the area of reducing Maori Suicide. This is in part because of a separate national Maori strategy with dedicated funding. Although Canada does not have a national strategy as such, they have taken a national approach, and again they have been quite successful with reducing Indigenous suicide. The conclusion is that Australia may need a National Aboriginal Suicide Prevention Strategy, if we are serious about reducing suicide in Aboriginal Australians. Perhaps Queensland needs a Queensland wide Indigenous Suicide Prevention Strategy, if we are to tackle the 28% of young people who are Aboriginal and Torres Straits Australians. Our literature review may go some way to inform such a strategy.

CadetLife

CadetLife is another program deriving directly from all the work emerging from the death of Christina.

In 2000 a young woman cadet hung herself, following repeated harassment. I was approached by The Australian Defence Force Cadets to devise a Suicide Awareness Raising Program for the ADFC. Giving my reasons for not doing such a program, instead I offered a Mental Health Promotion program, based on the existing Cadet program (ie a Youth Development Program), but adding specific features I considered might assist in long term suicide prevention. My proposal

was accepted. We have devised a program of 13 small group discussions spread over 2 years (Cadets only meet once a week for 3 hours). The discussions are facilitated by a staff member or senior cadet/under officer, and are based on video scenarios, 6 of which are about the development of health and wellness, and 7 of which are based on recognition of potential emotional problems based in self or another. The video probes are followed by guided discussion and then structured tasks.

To date we have trained over 180 Mentors and 500 facilitators in the 3 services, and the program begins formally for the 22,000 Cadets in January 2010. The program will be fully evaluated on line. We do not have documents to hand that can be put into a pdf. If you are interested in the program – essentially Suicide Prevention through Wellness training + Pathways to Care, I would be delighted to present a very brief powerpoint, and show some of the videos to demonstrate the program.

On Services

Since Gunnell and Frankel published their seminal report in 1994: (Gunnell D., Frankel S., 1994. Prevention of suicide: aspirations and evidence. British Medical Journal, 308:1227-1233), we have struggled to put in place programs in our services that might address the key times around hospitalisation of young people with mental disorders. It is clear that hospitalisation itself is a time of heightened risk of suicide, but it is the 2-4 weeks after discharge that provides the greatest risk – some 200 times the population risk. Overall, while there are demonstration programs that do well, mostly the connection between hospital and community services is not good or timely, the follow-up of the patient is erratic and poor, and we need to encourage services to put into place best practice.

International Strategies and the question of what works

In my recent review of National Strategies for the Australian Government, it is clear that those countries that have worked hard to educate the public have had good results. Where engagement has been poor, then program development has been less well received. Two recent papers have suggested the key issue of help-seeking may be central to reducing suicide:

Kapusta, N, Niederkrotenthaler, T, Etzersdorfer, E et al., 2009. Influence of psychotherapist density and antidepressant sales on suicide rates. Acta Psychiatrica Scandinavica, 119: 236-242.

Reseland, S., Bray, I., Gunnell, D., 2006. Relationship between antidepressant sales and secular trends in suicide rates in the Nordic countries. British Journal of Psychiatry, 188: 354-8.

In the review, I wrote: "Even where we do seem to have reasonable evidence [for an intervention], any interpretation about causality may be complex and arguments will continue. As an example, we think we know that antidepressants (particularly Selective Serotonin Reuptake Inhibitors - SSRIs) not only improve depression, but also reduce the likelihood of suicide attempts (eg Simon et al., 2006). Increased SSRI prescribing appears to have reduced suicide rates in some countries (eg Isaacson, 2000). However, autopsy studies of people prescribed antidepressants and who later suicide, often show a complete absence of antidepressants in the system prior to death, and recent research has disputed the direct causal effect on suicide rates, noting that rates began to fall *prior to* the onset of increased use of antidepressants (Reseland et al., 2006). This again may suggest that a third factor is involved. Perhaps with increased awareness of suicide and its prevention in a country, more people seek help and more are therefore prescribed antidepressants. However, it is actually the increased knowledge that help is at hand, and the act of help-seeking that leads to the reduction. Increased prescribing is associated, but may not be causal.

A similar example exists with psychotherapy. We think we know that Psychotherapy and psychosocial treatments (eg Cognitive Behavioural Therapy or Dialectical Behavioural Therapy) for mental disorders reduce suicidal behaviour (eg Brown et al., 2005). However, recent work suggests the impact of psychotherapy in a community or population could be simply the availability of psychotherapists (as a proxy for relevant healthcare services) in that community as much as the actual therapy (Kapusta et al., 2009). Perhaps people have heard that increased or improved services are available, and are more likely to stop and think, and then possibly seek help rather than going through with an impulsive act. Both of these cases suggest the importance of the third factor (help-seeking) as a possible cause of reduced suicide. At this point, these ideas are perhaps in the realm of conjecture, and deserve to be further evaluated. But if it were true it might make sense of why increased knowledge for the community and for professionals can make a difference, particularly when increased or improved services are available."

Self-Injury in Young People; an example of a high risk group

There are many high-risk groups that have been included in the various Australian strategies and for whom programs have been developed. Equally there are some groups that have been ignored. One of these groups consists of people who self-injure without necessarily wanting to die. Professor Keith Hawton from Oxford makes the point that as they continue to self-harm, self injurers become more likely to attempt suicide, and may eventually complete suicide (Hawton, K., Zahl, D. & Weatherall, R. (2003). Suicide following deliberate self-harm: long-term follow-up of patients who presented to a general hospital. *The British Journal of Psychiatry*, 182:537–54.). Our research group currently has 10 projects about self-injury, in process or recently completed. Some of these are small epidemiological studies of University students; some are studies on clinical groups, and one is an evaluation of a new therapy.

Prevalence estimates across the world vary, so it has been unclear just how big a problem self-injury might be in Australia. Clinical experience suggests that there may have been a recent increase in young people, and this has certainly been reported by schools. However, even within young people, rates vary between populations. Using funding from the Australian Government Suicide Prevention Strategy our group in Queensland has completed a study of a nationally representative sample of 12,006 Australians.

There are some surprises. First 1.1% of Australians claimed to have self-harmed in the previous month (more than 200,000). An average 15% may have sought medical care, 4% attended Emergency Departments, 5.6% were admitted. A conservative estimate suggests the cost of the behaviour may be some A$2.5 million a week!

The second surprise was that self-injury in Australia, as with international samples peaks in the 18-35 age group. However, there are a surprisingly large percentage of self-injurers who are damaging themselves even after age 55 years. Pertinent to this Inquiry), there were large numbers of young people. Overall we collected data from 583 young people aged 10-17, and after weighting the figure increases to 1475. 19 males (2.5% of males in that age group) and 16 females (2.2% of females in that age group) self-injured (weighted estimates). Of all respondents aged 10-17, 3 males (.39%) and 11 females (1.54%) reported a lifetime suicide attempt (weighted estimates). Of ONLY those who had also self-injured, 3 males (15.79%) and 2 females (12.50%) had attempted suicide (weighted estimates). In this age group, respondents who self-injured were 28.17 times more likely (95% CI 8.87 - 89.47) to attempt suicide than respondents who didn't self-injure.

The third surprise is that of those who had self-injured in the past month, – 53.7% had attempted suicide at some stage in their lifetime (compared to 7.7% of non self-injurers ; OR 13.8). This is a group at major risk for suicide attempts, and if Hawton is right, then this group may be making a substantial contribution to suicide rates. It may be crucial to understand self-injury better, and also develop a range of programs for the group. A pdf copy of our pre-publication

penultimate report is attached to this submission.

The Long term Effectiveness of the National Suicide Prevention Strategy

Having just completed a review of international strategies and compared them with Australia, it appears that our strategy (1995 to date) has been successful in reducing suicide rates – especially in men. This is demonstrated clearly for young men in the graph below.

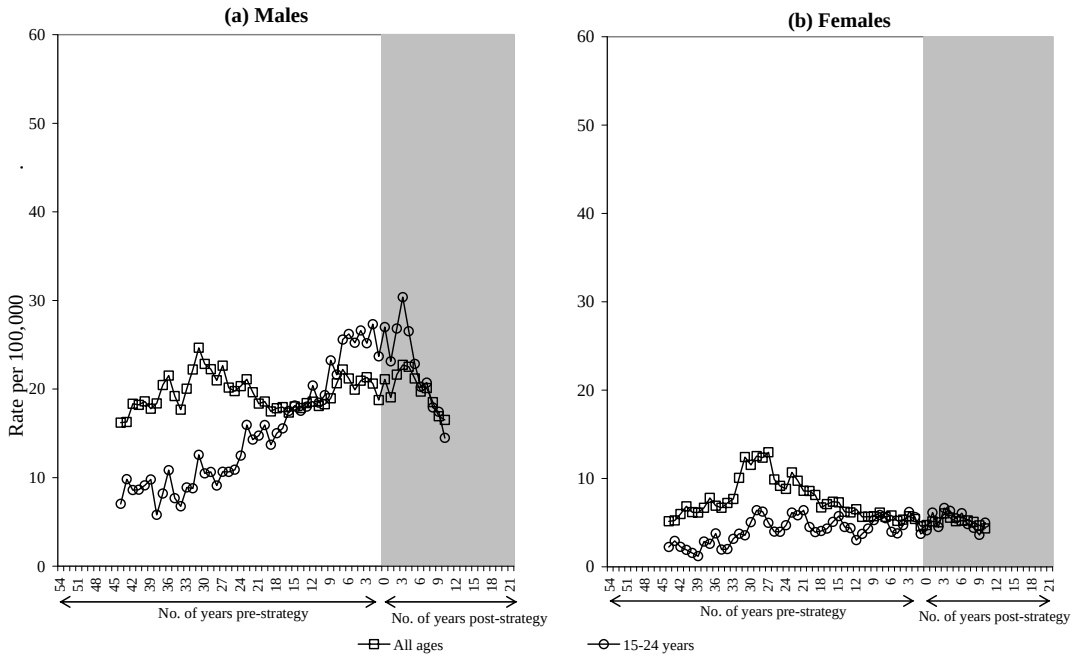
In Australia, the overall average suicide rate form 1950 for males was 21.5 per 100,000, and the average rate for the first 5 years post-strategy stayed 12.9% above this average, but has subsequently declined to 2.5% below the pre-strategy average. Within this the overall average youth male rate pre-strategy was 16.5 per 100,000, and because of the steep pre-strategy rise, even after the start of the strategy stayed at an average 62.5% above the pre-strategy rate, although this has dropped to an average 14.7% above pre-strategy rates in the last few years.

Overall from 1950, the female rate pre-strategy was an average 8 per 100,000, and the overall decline pre-strategy continued post-strategy with an average 26.1% lower rate in the first 5 years, and 31.9% average lower rate through the next few years. Within this the average youth female rate (4.4 per 100,000 pre-strategy) rose to be 26.3% higher on average for the 5 years after the strategy began, but then declined to be only 11.4% above the pre-strategy average rate for the last few years.

The slope for males overall pre-strategy shows a steady climb of 0.3% per annum pre-strategy, and this had accelerated to 1% per annum on average in the period prior to strategy implementation (a period equal to the years post-strategy). This changed to a 2.3% decline post-strategy ($p<0.02$). Within this male rate, the youth male rate shows a climb for all the years pre-strategy of an average 3.3% per annum for the period prior to the beginning of the strategy.

Post-strategy there has been a sharp reversal to a decline of an average 5.4% per annum since the start of the strategy that is highly significant ($p<0.001$).

Figure 8: Suicide rates in Australia for all ages (age-adjusted) and youth, pre- and post-strategy intervention.



For females overall, the slope for all of the years pre-strategy was an average 1.0% per annum decline overall since 1950. For the 12 years pre-strategy, this was very similar at a 1.1% average decline per annum, and this has stabilised post- strategy at 1.0% per annum (NS). Within this, the youth female slope pre-strategy was an overall increase of an average 1.2% per annum. In the pre-strategy years, this had slowed to a 0.7% increase per annum. Subsequent to the strategy beginning, and mirroring the youth male rate, the female youth rate shows a sharp reversal to a decline of 1.7% per annum average although because of somewhat small numbers this does not reach significance (NS).

It is worthy of note that there was a peak of suicide rates for all groups in 1997 - 2 years after the Australian strategy formally began. This points to a feature of strategies, which is that although there may have been a build-up of discussion in

the media, and publicly, prior to a strategy beginning, nevertheless there may be some lag time before a strategy begins to have impact."

Overall, it would appear from our reading that the best national strategies have a clear framework, explicitly stated. Within this there are broad goals, usually consistent with our best understanding of international research and wisdoms in the prevention of suicidal behaviour. For each of the goals, there are clearly stated outcomes, and these may be in the form of targets.

The best strategies take a nation-wide approach. They aim to provide a communication program to the whole population, with education targeted at all relevant groups. In particular there is specific education for all groups defined as 'gatekeepers'. There is an attempt to both improve existing services that may have to deal with suicidal people, as well as the linkages with the community in general. In addition, there is an attempt to provide a critical mass of clinical services with relevant and sufficient highly trained professionals at all levels.

The best strategies address the issue of access to means. This is true of Finland in particular. In addition, Australia was fortunate in that gun control (1996) almost coincided with the emergence of the strategies (from 1995), and has clearly contributed to Australian changes in suicide rates. The United States has not yet gone down this road, and 57% of their 30,000 suicides per annum continue to be from firearms. The US strategy is one of the most comprehensive and explicit documents, yet so far there has not been consistent change in suicide rates. But means are not only to do with guns, and the best strategies have considered barriers on high buildings and bridges, constraints on common poisons such as paracetamol, and suitable changes to reduce lethal emissions from the exhausts of cars.

The best strategies are clear on contributions to suicide from illicit drugs and from alcohol. In particular, the Nordic countries seem to have incorporated alcohol controls into their strategies, or at least developed strong links between different strategies.

Several other points are worth making. Some countries have decided on specific targeted reductions in suicide, and many might think this is risky. England and Wales do have such a target, and while they struggle to meet the target, they produce annual reports that are explicit about a number of matters, including how close they are to reaching the target. This may be a two-edged sword, on the one hand leading to criticism of government for not yet achieving a goal, but it also may very well help with public perceptions, and the public ownership of, and commitment to, suicide prevention. As we noted in the Introduction this may lead to improved help-seeking.

The Canadian experience, and New Zealand's strategy both developed specific strategies and programs for their Indigenous populations, and these would appear to have been successful. Australia should consider development of a national strategy and program for Aboriginal Australians, rather than the program based funding which has occurred to date.

Finally, we in Australia need to continue to struggle to evaluate every single program in order to contribute to International research. We do have one of the more comprehensive strategies of suicide prevention, but our evaluations are still at a lowly level from the scientific point of view. We need to better understand just what combination of programs seems to work best, and this might demand some form of large-scale community comparison study. We also need to better understand how specific programs achieve their results as part of the whole strategy.

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