(Extract from: "*LIFE* Framework – Learnings about Suicide").

What influences suicide -risk and protective factors

Though there is debate over the relative importance of different risk and protective factors in suicidal behaviour, some review studies suggest a range of factors that are associated with increased suicide risk for an individual. The most important of these is a history of mental illness (notably depression), particularly where more than one mental illness is present, or a mental illness is combined with harmful drug use (Beautrais 1998, De Leo et al 1999).

One of the strongest indicators of likely suicide is a previous suicide attempt or deliberate self-harm (Beautrais 1998, Brent et al 1993a, 1993b, Goldney 1998, Martin 1995). A Western Australian study showed that for young people who had attempted suicide, the risk of dying by suicide was around 30 times that of the general population in the same age bracket (Silburn et al 1990). A family history of suicide or suicidal behaviour is associated with significant personal grief as well as increased suicide risk (Beautrais 1998). Other important factors that contribute (often in a cumulative fashion) to suicide risk include:

- socio-economic disadvantage, including low educational achievement and unemployment (Beautrais 1998, De Leo et al 1999, Taylor et al 1998);
- legal problems, imprisonment or behaviour that brings the person into conflict with the law or society (Royal Commission into Aboriginal Deaths in Custody 1991);
- child abuse (Beautrais 1998);
- ease of access to guns (Resnick et al 1997) or other means; and
- losses, including loss of employment or physical health, marital breakdown, death and other interpersonal loss (De Leo et al 1999).

These factors are discussed further in the sections that follow.

While there has been comparatively little research into the factors that may protect individuals against suicide (Beautrais 1998, De Leo et al 1999), a range of protective factors can be extrapolated from the evidence on risk. It is important also to consider evidence from the study of other potentially relevant areas and associations between protective factors and proxy measures for suicide (for example, suicidal behaviours and depression).

Protective factors for individuals appear to include:

- connectedness to family and school (Resnick et al 1997);
- responsibility for children, family communication patterns (Smith et al 1988);
- the presence of a significant other, an adult for a young person, a spouse or partner (Hassan 1995, Smith et al 1988)
- personal resilience and problem-solving skills (Frederico et al 1999);
- good physical and mental health (De Leo et al 1999);
- economic security in older age (De Leo et al 1999);
- strong spiritual or religious faith (De Leo et al 1999), or a sense of meaning and purpose to life;
- community and social integration (De Leo et al 1999);
- early identification and appropriate treatment of psychiatric illness (Goldney
- 1998);
- belief that suicide is wrong; and
- lack of access to guns in the house (Resnick et al 1997).

Studies in Australia and overseas have identified the following broad social and economic factors that appear to influence the rates of suicide across the community:

- economic depression, sudden economic change, unemployment and the percentage of the population that is economically dependent (Hassan 1995,Hassan and Tan 1989, Morrell et al 1993);
- the availability of particularly lethal methods of suicide (Cantor et al 1996);
- the cultural background and religion of the country (Cantor et al 1998, Hassan 1995);
- modernisation and changes to family organisation (Hassan 1995);
- war (Hassan 1995);
- media presentations of suicide (Hassan 1995, Martin 1998);
- social and moral beliefs about suicide (Eckersley 1997);
- rates of marital breakdown (Eckersley 1997); and
- changes to the culture of society that influence the rates of psychosocial disorders in young people (Eckersley 1997).

Stress and crisis

Stress and crisis are part of everyday life. In reducing suicide, the challenge is to understand why for some people, in certain situations, these experiences can give rise to suicidal thoughts or behaviour.

Evidence suggests that the key lies not only in acknowledging events that may precipitate a suicidal episode, but more importantly in understanding the relationship between current stress and the underlying vulnerabilities and resourcefulness that a person brings to a crisis. In particular, it is important to be able to recognise when someone may be on a path to suicidal behaviour and to intervene in ways that give the person the resources to address their pain and difficulties in other ways.

Events or factors that may precipitate suicide or suicidal behaviour include relationship breakdown, a trauma in the family, financial problems, military service, marital separation or divorce, legal problems, imprisonment, interpersonal problems and disputes, sexual difficulties, moving house, school or job, or personal illness.
While a build-up of stressful circumstances or events, or a particularly acute crisis, may increase risk, the likelihood of suicidal behaviour is significantly raised if vulnerabilities such as a history of abuse, a mental disorder or a previous suicide attempt are present (Beautrais 1998).

Mental health factors

Most people with a mental health problem or disorder go on to live a normal life. Even those with more disabling conditions can often adapt to the situation. (Mental disorders, or mental illness, includes anxiety, depression, the psychoses and a range of other disorders affecting cognition, mood, functioning or personality). Regarding suicide, there is compelling evidence that having a mental disorder places a person, whatever their age, at considerably higher risk of suicide than the general population, and examples are provided below.

- ‘Psychological autopsy’ studies after suicide have found that a significant proportion of people who die by suicide had a mental disorder or mental illness.Estimates range from 28 per cent (Eisele et al 1987) to 98 per cent (Goldney 1991).
- A study of suicide in Victoria found that more than 33 per cent of young people who died and 40 per cent of those who attempted suicide had a previous psychiatric diagnosis (Tiller et al 1997).
- A study of suicides recorded over three years among New South Wales mental health clients found that the risk of suicide was 10 times greater than that of the general population (Chipps et al 1995).
- A study of suicide in Queensland found that at least 30 per cent of those who died had had psychiatric treatment (Baume et al 1998).
- About 90 per cent of older people who attempt suicide or die by suicide in Australia have a mental disorder, usually depression, which has often been inadequately treated (Draper 1995).
- It has been estimated that one in 10 people with schizophrenia die from suicide (Tehan and Murray 1996).

Psychiatric care provides a marker of this risk, and being an in-patient of or recently discharged from a mental health service is associated with increased risk for suicide (Beautrais 1998).

- International studies suggest that up to 41 per cent of people who die by suicide have been discharged from psychiatric in-patient care within the preceding 12 months, and up to 9 per cent are in-patients at the time of their death or die on the day of discharge from hospital (Pirkis and Burgess 1998).
- Around the time of discharge from in-patient care, mental health clients in New South Wales had a suicide risk about 100 times greater than that of the general population (Chipps et al 1995).
- In Queensland in the period 1990-1995, almost twice as many suicides occurred in hospital in-patients compared with those in custody (Baume et al 1998).

Depression is the most common mental illness associated with suicide (Beautrais 1998). Suicide rates are higher for people who are not receiving treatment, or whose current treatment is not effective (Chipps et al 1995), while there is strong evidence that appropriate pharmacological treatment can dramatically reduce the risk of suicide in people with depression and schizophrenia, and for adults with bipolar disorder (Goldney 1998).

People with a mental disorder and their families believe that discrimination is also a contributing factor to suicide risk, as it contributes to isolation, loneliness, unemployment and homelessness (Tehan and Murray 1996). Discrimination, fear of the mental health system and a belief that suicide and depression are normal parts of adolescence may cause delays in seeking help (Keys Young 1997) and therefore reduce the prospects for effective early intervention (National Health and Medical Research Council 1997).

Some evidence also suggests age-related patterns in the relationship of particular mental illnesses to suicide. For example, Conwell and colleagues (1996) found that harmful drug use and psychotic disorders were more prominently associated with suicides among young and middle-aged adults, reflecting the general prevalence of these disorders in the population. However, the relationship between depression and suicide becomes increasingly strong with

age, although depression becomes less common among older people. A similar pattern has been observed for suicidal behaviours (De Leo et al 1999).

Thus, while any person with a mental disorder is potentially more vulnerable to suicide, there is a particular need for vigilance with depressed older men . It has been suggested that most older people who die by suicide have a mood disorder that normally could be expected to respond well to treatment; and further, that the elimination of mood disorders could reduce the incidence of serious suicide attempts by up to 80 per cent, particularly among older adults (60 and over), where the associations between mood disorder and suicide attempts is stronger (Beautrais et al 1996, quoted in De Leo et al 1999).

Case control studies show that suicide and suicidal behaviours are clearly linked with harmful drug use (including alcohol) and behaviours that bring young people into conflict with society (Beautrais 1998). Alcohol abuse has been identified as a major risk factor for suicidal behaviour in adults, particularly when it occurs in association with other risk factors (De Leo et al 1999).

Suicidal thinking

As discussed earlier, suicidal thinking is common, particularly among young people, but in the absence of other risk factors for suicide, the evidence suggests that it is not a risk factor. For a small group, however, suicidal thinking is persistent, uncontrollable, and associated with significant mental health problems, and in this group of people it may indicate a serious risk of suicide or suicide attempt (Buddeberg et al 1996).

An Australian study of more than 1,000 people (median age 19.6) suggested that suicidal thinking in young people is related to longer-term issues of depression and self-esteem (Goldney et al 1989). Furthermore, a recent study found the population attributable risk of depression for suicidal thinking to be almost 50 per cent, that is, depression accounts for almost 50 per cent of suicidal thinking across the community (Goldney et al 2000).

A recent population survey of over 10,000 people of all ages found that about 12 per cent of those who reported having thought about suicide during the past 12 months had gone on to attempt it (J Pirkis, personal communication).

Problems with the law

People in custody experience loss of outside relationships and physical and emotional breakdown (Eyland et al 1997, Hayes 1995).

A recent overview of suicide in Australian prisons since 1980 has shown that suicide accounted for almost half of all deaths. Hanging was the method in more than 90 per cent of cases. For most years since 1980, the rate of suicide in Australian prisons has been more than 10 times that of the general population (Dalton 1999).

The suicide rate in custodial settings in Queensland during 1990-1995 was more than 12 times the male suicide rate for the State, with two thirds of these deaths Caucasians and one third (12 deaths) Aboriginal or Torres Strait Islander suicides (Baume et al 1998). Deaths in police custody have dropped since the Royal Commission into Aboriginal Deaths in Custody,

but deaths in correctional and juvenile justice services have continued to rise (Human Rights and Equal Opportunity Commission 1996).

It has been estimated that the rate of attempted suicide in correctional centres is up to 20 times greater than in the general population (Finlay-Jones 1993).

A study in Victoria found high rates of contact with the police among young males who died by suicide, with only slightly lower rates among those attempting suicide. For example, among those who died by suicide, 43 per cent of males aged 15-19, and 27 per cent of males aged 20-24 had had contact with the police for theft, burglary and property crimes (Tiller et al 1997). Studies have shown a link between experiences of bullying, harassment or abuse and suicidal behaviour in jails (Dear et al 1998).

Sexual orientation

Several recent studies have shown that gay, lesbian and bisexual people, particularly adolescents and young adults, are at substantially increased risk of suicidal behaviours and suicidal thinking. For gay, lesbian and bisexual young people (up to age 27), studies in the United States have found risk of suicide attempt ranging from 3.5 to nearly 14 times that experienced by heterosexual young people (Bagley and Tremblay 1997, Garofalo et al 1998, Remafedi et al 1998). A United States study of middle-aged male twins where one twin self-identified as homosexual and the other as heterosexual, found that the homosexual twins were 6.5 times more likely to have attempted suicide (Herrell et al 1999).

A recent Australian study found that gay-identified young men (aged 18-24) were 3.7 times more likely to attempt suicide. Most of these attempts occurred after the person had self-identified as gay, but before having a same-sex experience and before publicly identifying themselves as gay (Nicholas and Howard 1998).

A large New Zealand study of young people up to age 21 (Fergusson et al 1999) found that the gay, lesbian and bisexual young people in the study were substantially more likely to have a range of mental disorders. In particular, suicidal thinking was 5.4 times more likely than in heterosexual young people and suicide attempt 6.2 times more likely. The evidence of increased risk was strongest for males, but the results suggest that the risk is probably similar for males and females.

No study, however, has yet demonstrated an increased rate of suicide death among these groups, possibly due to difficulty in identifying sexual orientation after death by suicide (Beautrais 1998). Nevertheless, the extent to which suicide attempts in gay, lesbian and bisexual people result in actual deaths remains to be determined (Remafedi 1999).

Loss and grief

Losses inherent to mid and older adult life have been identified as one of the most serious risk factors for suicidal behaviour in adults. Losses may include declining physical health, financial difficulties, reduced career opportunities, death and marital breakdowns. Other losses associated with late-life suicide, suicidal behaviour or suicidal thinking include retirement, loss of autonomy (for example, the possibility of living in a nursing home), and physical disability (De Leo et al 1999).

The frequency and timing of losses are important, the essential factor being the inability to resolve grief before experiencing another loss. Multiple losses become more frequent with increasing age and may lead to isolation. Unresolved (but rarely acute) grief, usually over the death of a spouse, has been identified in 13 to 44 per cent of attempted suicides (De Leo et al 1999).

Physical illness

Physical illness has been singled out in several studies as a stressor in suicide, attempted suicide and suicidal thinking at all ages but particularly among older people. It appears, however, that the increase in risk occurs largely where physical illness is accompanied by mental disorder, harmful drug use (including alcohol), or both. Physical disorder may also carry more weight as a risk factor with increasing age and, when it affects lifestyle, requires multiple medication, or is accompanied by pain (De Leo et al 1999). Effective palliative care is an important factor in maintaining and improving the quality and dignity of life for people of any age with incurable disease (Commonwealth Department of Health and Family Services 1998).

Family background

Young people with suicidal behaviours are less likely to be living with their biological parents and are more likely to be from separated, divorced or single parent families, or from families with interpersonal conflicts (Beautrais 1998). They are likely to report poorer relationships with their parents (Martin 1996).

For young people and adults, suicide and self-destructive behaviour is associated with a history of childhood physical and sexual abuse, and with a family history of violence or assault, imprisonment, and harmful use of alcohol or other drugs (Beautrais 1998). Mental health problems suffered by family members can contribute to suicide risk (Kosky 1992, Silburn et al 1991).

An Australian study has estimated that the suicide rate among children of Vietnam veterans could be up to three times as high as the rate in corresponding age cohorts in the general population. These children therefore comprise a significant at-risk group (Australian Institute of Health and Welfare 1999).

Relationships,social networks and connectedness

It is of particular relevance to understand what enables some young people who are exposed to a range of risk factors to avoid symptoms of mental health problems or suicide risk, and to adapt and flourish (Garmezy 1993, Calvert 1997). In the Christchurch birth cohort study, teenagers who had experienced high exposure to family adversity during childhood yet remained resilient were characterised by significantly higher IQ levels, lower novelty seeking and lower affiliations with delinquent peers. These factors acted cumulatively to influence the probability of resilience to externalising problems (Fergusson and Lynskey 1996).

Community ‘connectedness’ has been linked to the development of health and well-being, and has been the focus of considerable interest over recent years, given the social dislocation and alienation experienced by some in our communities, including many who are at high risk of suicide. Borowsky et al (1999), for example, found that for American Indian/Alaskan

young people, male and female, discussing problems with friends or family, emotional health and connectedness to family were protective against suicide attempts.

Longitudinal studies have emphasised the centrality of caring relationships between young people and adults, within and outside the family, for the development of resilience (Resnick et al 1993, Resnick et al 1997, Blum and Rinehart 1997, Joiner and Rudd, 1996). A study of more than 12,000 secondary school students in the United States showed that a strong connection to family and school, and perceived caring and connectedness to others, protected teenagers against a range of health risk behaviours, including suicidal thinking and behaviours and harmful drug use. The protective factors identified in this large study included family support, and parents who are involved in activities with their children and adolescents, are present in the home, and have high expectations for educational success. Similarly, feelings of connection to school and lack of prejudice by other students have been shown to decrease the risk of emotional distress, suicidal thinking and drug and alcohol use (Blum and Rinehart 1997). On the other hand, studies have shown a link between experiences of bullying, harassment or abuse and suicidal behaviour among young people (Keys Young 1997, Resnick et al 1997).

More broadly, it has been convincingly demonstrated that social support and good social relations make an important contribution to health (Wilkinson and Marmot 1998). Family connectedness or responsibilities also appear to provide some protection against suicide for adults and older people. Marriage may be protective, particularly for men, and is associated with lower levels of suicide and mental health problems (Hassan 1995) and with lower levels of suicide attempt and suicidal thinking (J Pirkis, personal communication). On the other hand, suicide often closely follows the breakdown of family or personal relationships or marriage, particularly for men (Baume et al 1998).

Several studies have associated living alone with an increased risk of suicide in older people, but a high proportion of older people live alone and this in itself does not result in social isolation. Social integration rather than place of residence appears to be more significant. However, the extent and nature of psychosocial factors and life events in older people with suicidal behaviour and thinking have not been systematically explored. (De Leo et al 1999) Mental disorders and harmful drug use may lead to relationship difficulties and are most common among people living alone (Australian Bureau of Statistics 1998).

Socio-economic status and employment

Epidemiological studies consistently show a link between suicide and social disadvantage (Beautrais 1998, Cantor et al 1998), including low socio-economic status, limited educational achievement and homelessness (Beautrais 1998).

Several Australian studies have demonstrated a link between employment status and suicide risk, particularly for males (Hassan 1995). A recent Queensland study, for example, found that 60 per cent of people who died by suicide were unemployed or not in the workforce (Baume et al 1998). A New South Wales study looking at suicide rates from 1985-1994 found that socio-economic status was related to rates among young people (15-24 years) and males of all ages (Taylor et al 1998). It has been suggested that socio-economic disadvantage may account in part for higher rates of suicide in rural and remote areas (Dudley et al 1998, National Rural Health Alliance 1998). Morrell and colleagues (1993) pointed to the correlation between periods of relatively high unemployment in Australia since 1907 and

peaks in suicide rates for males, and Hassan and Tan (1989) found a link between suicide rates and the percentage of the population that is economically dependent.

Another study, however, found no association between the increase in suicide among young people and the rise in unemployment through the 1980s (Krupinski et al 1994), and a recent case control study found no statistically significant link between suicide and unemployment in young men aged 17-25 years (Morrell et al 1999a).

Where a link is demonstrated, it is still unclear whether unemployment is a cause of suicide and mental disorders, or whether suicide and unemployment both arise from similar causal factors (Goldney et al 1995). A New Zealand study looking specifically at the association between unemployment and risk of medically serious suicide attempt concluded that the association between unemployment and suicidal behaviour largely reflects the common factors that contribute to both (Beautrais et al1998).

A link has also been demonstrated between unemployment or part-time employment and higher rates of mental disorders, particularly harmful drug use, anxiety disorders and depression (Australian Bureau of Statistics 1998). Furthermore, Morrell and colleagues (1994) found unemployment to be a significant cause of psychological disturbance in young people (15-24 years) across Australia. They also found that re-employment reversed this effect.

Societal and cultural factors

It has been suggested, based on the changing patterns of suicide over time and across cultures, that a number of broad cultural and social factors influence suicide rates. These include:

- the effect of religious attitudes: for example, the Islamic and Catholic religions strongly disapprove of suicide, and suicide rates in countries adhering to orthodox teachings tend to be low (Burvill 1998);
- aspects of modern youth culture that portray suicide positively; and
- moral attitudes towards suicide (De Leo et al 1999).

Similarly, as discussed earlier, Eckersley (1996, 1999a, b) considers that a range of social factors has contributed to rising suicide rates among young people, including: changes in social values; increasing inequality, disadvantage and unemployment; creating a perception of lack of opportunities in mainstream society; and increased individualism and higher expectations, without an adequate cultural framework of values, hope, meaning and belonging. While such links are difficult to prove, they articulate concerns expressed frequently in the public consultations undertaken in the development of the *LIFE* Framework.

The concepts of social capital and community capacity have received increasing attention over recent years. There is no evidence directly linking these concepts with suicide rates, but community capacity describes the contextual factors that support well-being in communities over and above the characteristics of individuals, for example, the existence of, and connectedness to, groups and organisations in local communities (Macintyre et al 1993). As discussed earlier, the importance of connectedness has been demonstrated in protecting young people against suicidal behaviours. Skinner (1997) defines community capacity as ‘the ability of community organizations and groups to build their structures, systems, people and skills so that they are better able to define and achieve their objectives and engage in

consultation and planning, manage community projects and take part in partnerships and community enterprises... [It reflects] the principles of empowerment and equality'. Community capacity is reflected in social environments at home, work and play, as well as public and private support services, socio-cultural aspects, the physical environment (for example, availability of parks), and neighbourhood reputation (for example, safety).

Media presentations of suicide

There is evidence that media presentations of suicide can increase rates of suicide (Baume et al 1997, Etzerdorfer et al 1992, Hassan 1995, Martin 1998). Increased suicide rates have been reported after media reporting of celebrity suicides (for example, Phillips et al 1992, Wasserman 1984), suicide stories generally (Hassan 1995, Phillips et al 1989), fictional television portrayal of suicidal behaviour (Hafner and Schmidtke 1989, Schmidtke and Hafner 1988), and television documentaries designed to inform and advise about suicide (Gould and Shaffer 1986).

In particular, young people who are marginalised or in youth subcultures may not react positively to well-meaning educational materials (Keys Young 1997). Experience with other programs reinforces this concern. Programs to reduce drug use, for example, while successful among lower-risk groups, may reinforce drug taking by those most alienated from authority (Elliott and Shanahan 1998). The same issues apply to other at-risk groups, including people who are homeless (World Health Organization 1993) and people from diverse cultural backgrounds, who include Aboriginal and Torres Strait Islander peoples (Aboriginal and Torres Strait Islander Commission 1998).

Availability of means of suicide

Evidence from Australia and overseas suggests that availability of a particular means of suicide (firearms, prescription drugs, motor vehicle exhaust) increases the likelihood of that means being used (Beautrais 1998, Cantor et al 1996). Beautrais (1998) documents studies suggesting that access to guns plays a significant role in youth suicide in the United States, and the small amount of Australian evidence available suggests that access to a firearm will increase the likelihood that it will be used in a suicide attempt. Reductions in the suicide rate have resulted, among Australian women, from reduced access to barbiturates and, in the United Kingdom, after the detoxification of domestic gas (Cantor et al 1996).