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Suicide in Canadian Aboriginal Populations: Emerging Trends in Research and Intervention

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Executive Summary

This paper reviews the scientific literature on suicide among Aboriginal people to identify emerging trends in research and intervention. Suicide rates among Aboriginal people have increased dramatically in recent decades to more than three times the rate in the general population. There are wide regional variations in the suicide rate, however, and analysis of these regional and community differences might help to uncover specific problem areas and successful strategies for reducing suicide in Aboriginal communities.

Aboriginal suicide occurs more commonly among the young, and victims are most likely to be male. Suicides most often occur in association with heavy alcohol consumption and are carried out by highly lethal means (guns and hanging). Compared to the general population, suicide in Aboriginal adolescents may be more likely to occur in clusters. Risk factors for completed and attempted suicide among Aboriginal young people closely parallel those for youth in general and include frequent interpersonal conflict; prolonged or unresolved grief; chronic familial instability; multiple home placements; depression; physical illness; alcohol abuse or dependence; unemployment; frequent criminal justice encounters; previous suicide attempt; and family history of psychiatric disorder (particularly alcoholism, depression, and suicide). A single model of risk factors, however, cannot fit every situation faced by Aboriginal people today.

The increase in suicide and attempted suicide among Aboriginal people in the last few decades parallels, in exaggerated form, the increase among young people in the general population. This suggests that larger social processes in Canadian society – like increases in drug and alcohol problems and family disorganization – play a role in the current pattern of Aboriginal suicide. Only appropriately designed studies that combine epidemiological and ethnographic methods can clarify the role of cultural tradition, large-scale social processes, and the unique dilemmas posed by culture change and marginalization.

Specific gaps in the research literature identified by this review include the following:

- We lack basic epidemiological data on the rates and psychosocial correlates of suicide attempts among most Canadian Aboriginal groups (including non-status Indians and Métis peoples) as well as systematic comparisons across regions and tribal groups.
- There are few ethnographic studies of Aboriginal concepts of the person and the self as they pertain to health and well-being as well as to coping with adversity.
- We know little about the impact of culture change on child-rearing practices, the nature of family composition, and social support within different types of Aboriginal communities.
- Many individuals, families, and communities cope successfully with adversity, depression and suicidal ideation. Case studies of communities where positive changes have occurred are essential to balance the current emphasis on detailing problems and applying conventional solutions without adequate evaluation. Studies of community-based programs would provide an essential corrective to the tendency of mental health research to focus on individual psychopathology and interventions.
- There is little work on the meanings and implications of the spiritual dimension of suffering and healing, which are the focus of the revitalization of Aboriginal healing traditions.
- Evaluation research of intervention programs in Aboriginal communities is urgently needed, since there is a real possibility that some well-intentioned interventions may do more harm than good.
- Research must be conducted collaboratively with communities to ensure relevance and responsiveness to local needs and perceptions.

Aboriginal people must have ready access to culturally sensitive mental health care. In the case of individuals with psychiatric disorders, who form a large proportion of suicidal individuals, this means comprehensive psychiatric care, including access to evaluation, and the full range of treatment modalities. For many suicidal young people, however, their problems are inextricably intertwined with problems in the family and the social order.

Suicide interventions can be viewed in terms of their point of application: to pre-existing social or contextual factors, to the vulnerable individual, or at the time of a precipitating event or crises. Interventions can be targeted at the sociocultural milieu, the

family, the vulnerable individual or the crisis situation. The current consensus in the literature on youth suicide prevention emphasizes that rather than teaching the topic of suicide directly to students, schools should provide a health education curriculum for all students that builds basic skills useful for managing a variety of health issues. Such a curriculum would enhance students' skills in coping with stress or distressing emotions, problem solving, interpersonal communication and conflict resolution — all measures that help to build self-esteem. Even if these psychological issues are explored and dealt with in life skills programs, however, the surrounding socio-economic factors that the community, and hence the individual, is struggling with must be dealt with simultaneously.

The research reviewed suggests that suicide interventions for Aboriginal people must

- address problems at the community and political level as well as at the individual level; specifically, to promote empowerment of individuals and communities so that people come to feel a greater sense of coherence in and control over their lives;
- promote active transmission of traditional language and life skills from elders to young people;
- support symbols and enactments of group and community pride;
- develop culturally appropriate educational programs that address problem solving, dealing with substance abuse, depression, anger, relationship breakups, and other life events;
- ensure access to basic biomedical care; train primary care providers better to detect and treat major depression, panic disorder, and other psychiatric disorders;
- develop and improve access to treatment programs for alcohol and substance use;
- develop cadres of local Aboriginal community mental health workers with skills in individual and family counselling, social network intervention and community development; and
- develop culturally sensitive approaches to psychotherapy, family therapy and social network intervention — especially the promotion of traditional healing practices.

Preface

This report was prepared at the request of Dr. Dara Culhane, deputy director of social and cultural research for the Royal Commission on Aboriginal Peoples. Our mandate was to review the literature on suicide among Aboriginal people in Canada and set it in the larger context of research on the causes and prevention of suicide. The specific goal was to identify emerging trends in research and intervention. We hope that this document will help stimulate future studies, provide a basis for documents prepared for public dissemination, and assist the Royal Commission in its tasks.

The literature was reviewed by an interdisciplinary team of clinicians and scholars from psychiatry, family medicine, nursing, epidemiology, psychology, sociology and anthropology. It was assembled and integrated by the senior author.

In preparing this report we were able to draw from literature reviews and research results prepared by the Native Mental Health Research Group (see Appendix B), which receives support from the Fonds de la recherche en santé du Québec as part of a priority research team on culture and mental health, as well as grants from the Conseil québécois de la recherche sociale and the Kativik Regional Board of Health and Social Services. This work was not done under the auspices of any of these agencies, however, and they bear no responsibility for its content.

We would like to thank Drs. Morton Beiser, Dara Culhane, Charlotte Hobbs, Klaus Minde, John O'Neil, James Robbins, Mounir Samy and Michel Tousignant, as well as two anonymous reviewers for the Royal Commission, for their very helpful comments on earlier versions of this study.

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14 April 1993 and 12 March 1994

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Introduction

Scope and Outline of Report

Suicide is an index of the severe social problems facing Aboriginal peoples in Canada. The Aboriginal suicide rate is three times that of the Canadian population as a whole. From the ages of 10 to 29, Aboriginal youth on reserves are 5 to 6 times more likely to die of suicide than their peers in the general population. (MSB 1991a) Despite widespread concern about these alarming statistics, there continues to be a lack of epidemiological data, ethnocultural information on suicide, and evaluation studies of intervention programs.

Our aim in this study is to review the scientific literature to situate the problems of Aboriginal people in the larger context of suicide in Canadian society so as to identify features that are shared with the dominant society and those that are distinctive for Aboriginal groups. In such comparisons, there is a tendency to attribute any difference between groups to distinctive cultural or historical factors, but economic problems, geographic differences and issues of scale (e.g., the size of communities and the extent of infrastructure) may also

account for observed differences. Hence, comparative studies with statistical techniques that control for other possible explanations are needed.

This document is based on Medline, PsyLit and SocLit searches of the literature on suicide and Aboriginal people, conducted in February and March 1993, as well as consultations with researchers and review of the Royal Commission hearing transcript extracts on suicide. We have focused on more recent literature although we are indebted to earlier reviews of the literature on suicide (Hawton 1986; Maris et al. 1992) and suicide among Aboriginal people in particular. (May 1990; Peters 1981; Thompson and Walker 1990) In many cases, we have had to rely on research in the United States, since comparable Canadian studies are lacking. We have made no attempt to survey or assess popular and self-help literature on topics related to suicide, as this has been undertaken for the Royal Commission by other groups. Many issues pertaining to Aboriginal culture and mental health that are only touched on in this paper are discussed in more detail in a second study we have prepared for the Royal Commission, entitled "Emerging Trends in Research on Mental Health Among Canadian Aboriginal Peoples".

In subsequent parts of this introductory section, we provide definitions of technical terminology and offer some general comments on the integration of social and psychiatric perspectives in models of suicide. The second major section addresses basic demographic data on Aboriginal peoples and descriptive epidemiological statistics on suicide in North America. We summarize variations in the prevalence of suicide and attempted suicide by age, sex, socio-economic status, and other demographic factors. Particular attention is given to the marked changes in suicide rate that have occurred in recent times as well as to variations across geographical locations and ethnocultural groups.

The third section summarizes research on risk and protective factors for suicide. Subsections address factors involving the physical and social environment; constitution, temperament or developmental experiences; interpersonal relationships; alcohol and substance abuse; suicidal ideation and previous attempts; psychiatric disorders; social structure and economy; cultural traditions; and the impact of culture change.

In the fourth section we summarize what is known about the efficacy of interventions for suicide prevention. The introductory subsection presents a table outlining types of

interventions that have been proposed. We then consider detection, primary, secondary and tertiary prevention, and postvention (that is, the treatment of survivors). The conclusion to this section presents a summary of a comprehensive state-of-the-art approach to prevention.

In the concluding section, we sketch a sociocultural perspective on suicide. We then summarize the gaps in our knowledge, emerging trends in research, and promising approaches to intervention. Appendix A presents a brief summary of research methods to orient the interested reader.

Terminology and Definitions

The classic definition of suicide is Durkheim's:

> The termination of an individual's life resulting directly or indirectly from a positive or negative act of the victim himself which he knows will produce this fatal result. (1897/1951)

While it appears clear, this definition is difficult to interpret and apply consistently in research studies. (Farmer 1988) The official records on which suicide and other causes of death are recorded are often inaccurate and incomplete and do not contain crucial information for studying sociocultural correlates of suicide. Self-injury may mimic or aggravate pre-existing disease so that suicide is difficult to distinguish from 'natural' death. Determining individuals' motivation or intention to harm themselves may be difficult. (Samy 1993) In case of studies of completed suicide, where it can be done only retrospectively, such judgements of motivation may be impossible.

These considerations have led researchers to distinguish between studies of *attempted suicide, completed suicide* and *parasuicide* (self-injurious or risk-taking behaviour that is life-threatening without suicide being the conscious goal). In continuing studies of parasuicide, the World Health Organization (WHO) has defined parasuicide as

> (1) an act with nonfatal outcome, (2) that is deliberately initiated and performed by the individual involved without expectation of fatality, (3) but that causes self-harm or without intervention from others will do so, or consists of deliberately ingesting a substance in excess of the prescribed or generally recognized therapeutic dosage, and (4) which is aimed at a goal, i.e., to bring about desired changes in consciousness and/or social or interpersonal conditions. (Platt et al. 1992)

Much of the literature makes sharp distinctions between suicide, attempted suicide and parasuicide, for both methodological and substantive reasons. (Hawton 1986; Maris 1992) However, the interpretation of risk-taking behaviour or self-injury without the intent to die as related to suicide is contentious.

While many studies indicate somewhat different factors contributing to each of these forms of self-harm, they are certainly related.[1] Many completed suicides followed a progression from ideation to attempted suicide to completion. (Jeanneret 1992) Accordingly, suicidal behaviour can be viewed on a continuum and temporal and dynamic links sought between levels of life-threatening behaviour.

In this report we focus primarily on completed and attempted suicide on the assumption that they represent a continuum of increasingly lethal forms of self-harm. Statistics are generally more readily available and less ambiguous for completed suicide, while studies of psychological correlates are much easier to conduct on suicide attempters. We present statistics primarily on completed suicide. We also treat attempted suicide, along with suicidal ideation, as risk factors for completed suicide. Where important contrasts in the groups identified by each definition exist, we highlight them.

Integrating Social and Psychiatric Perspectives

The mental health professional tends to view suicide as an individual problem related to personal and/or family psychopathology. The sociological perspective sees suicide as a consequence of large-scale social processes, including economic disadvantage, acculturation stress and political disempowerment.

There is no single item of information or combination of items that allows accurate identification of individuals who will commit suicide over the long term. (Pokorny 1992) Accordingly, the clinical psychiatric perspective focuses on identifying and treating individuals who are currently distressed and at immediate risk. Until now, Aboriginal people in many parts of the country have not received adequate access to the range of mental health services. The provision of adequate clinical and social services will certainly reduce the suicide rate.

An argument can be made, however, that given the widespread social problems facing Aboriginal people in Canada, viewing suicide strictly as the outcome of a psychiatric disorder actually aggravates the situation. Psychiatric explanations are stigmatizing and so add to the feelings of estrangement, devaluation and powerlessness that contribute to suicide attempts. A psychiatric approach directs attention to the pathological individual rather than to basic social problems that demand remedies. Labelling whole communities as 'sick' is a metaphor hat may contribute to pervasive demoralization. From this perspective, it would be best to find means to address hopelessness without labelling it as an illness at either the individual or the community level.

Several studies on suicide and suicide attempter typologies suggest a distinction between (1) individuals with major pre-existing psychiatric disorders, and (2) individuals who have less psychopathology but more recent stressful life events and alcohol use. (Bagley 1992; Duberstein et al. 1993; Kienhorst et al. 1993) This typology raises the question of whether Aboriginal suicides tend to be of one type more than the other. Few data are available, and the issue is clouded by the attributions made by clinicians in establishing psychiatric diagnoses, particularly for personality disorders. If symptoms of conduct disorder and substance abuse are attributed to endemic social problems, and self- or other-directed aggression is seen as a culturally or socially shaped response to rejection, then most Aboriginal youth suicides would fall into the second group. If long-standing social problems and disruptions of parenting and other relationships result in major depression or deformations of character, then the same individuals might be given a psychiatric diagnosis and fall more clearly into the first group. Although this is an empirical question, answering it requires careful reformulation of diagnostic criteria and prospective longitudinal study.

Psychiatric and sociological views may be complementary rather than contradictory. Drawing from the work of Thorslund (1990, 1991), Figure 1 sketches an integrative model in which the collision of two cultures results in acculturation stress that acts at three levels: the community, the family and the person. The community suffers economic disadvantage, social disorganization and political disempowerment. Unemployment, poverty and community disorganization create conditions of alienation and anomie (normlessness). The family and social support system suffer disorganization as well as a result of forced changes brought on

by rapid modernization and loss of traditional patterns of child rearing. Individuals suffer self-estrangement and loss of self-esteem as a result of denigration or marginalization of the heritage culture from which they draw their language, self-definition and personal history.

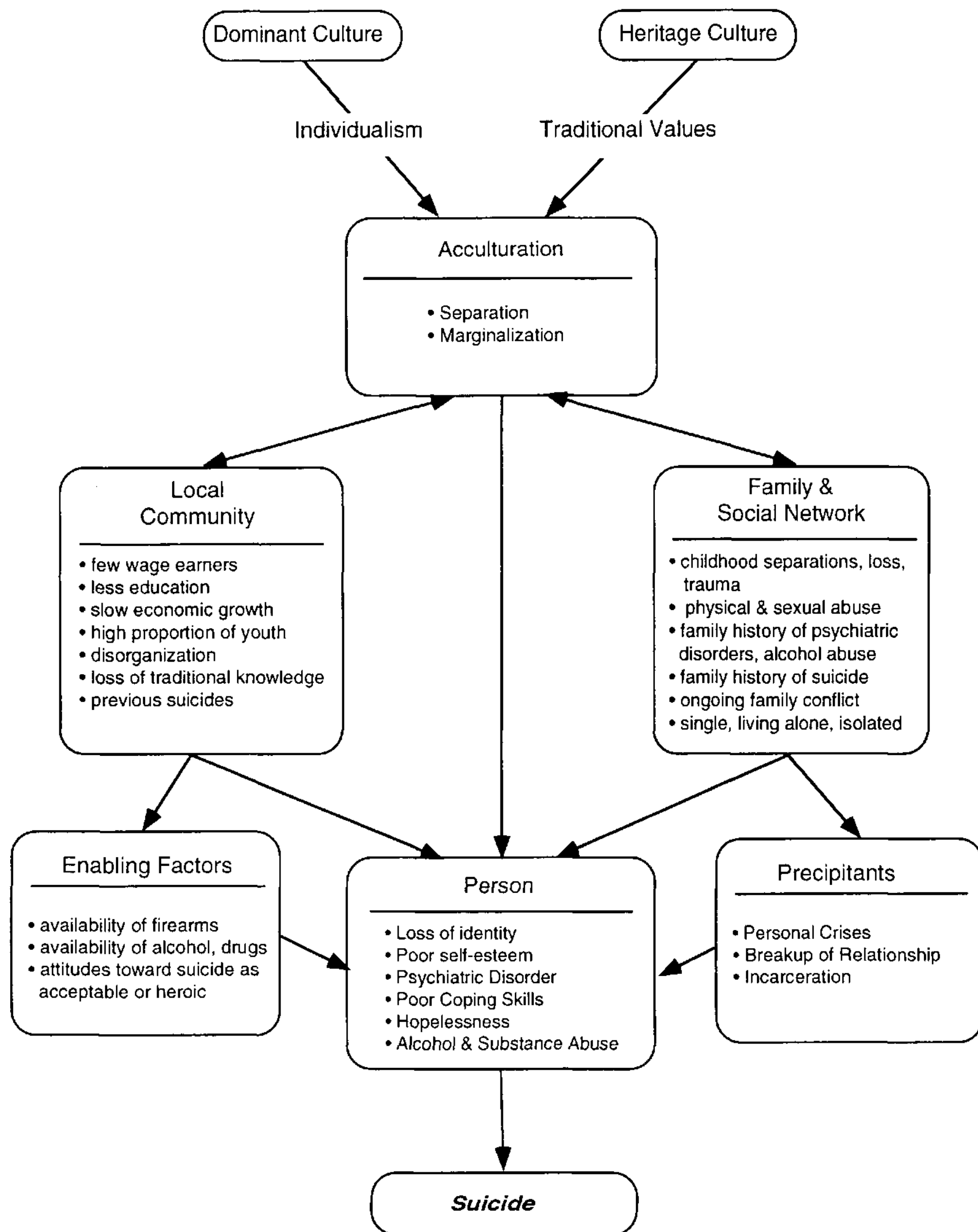
The model makes it clear that there are both distal and proximal factors that influence suicide. These range from social historical changes that exert their effects over long periods of time to enabling factors – like the ready availability of alcohol, drugs and firearms – that increase the likelihood of lethal suicide attempts in response to a precipitant like the break-up of a relationship or other personal crisis.

This model of suicide is helpful in highlighting the central role of larger social historical factors in the predicament facing contemporary Aboriginal people. It is misleading, however, in several important ways. First, it ignores the great diversity of Aboriginal communities, both in social and cultural history and in current circumstances. Culture contact is not uniformly deleterious, nor does it always result in a loss of traditional culture. There are very wide variations in the rate of suicide among Aboriginal communities, reflecting the different ways communities have responded to current challenges.

Second, the acculturation model ignores the fact that culture contact is not primarily a matter of the choice of adaptive strategy of individuals but is the outcome of political forces and struggle between groups. For most of the history since contact, Aboriginal cultures have been actively suppressed, undermined and destroyed by European and Canadian institutions and individuals. These acts of violence have directly scarred many Aboriginal people and severely constrained their options for adaptation.

Third, even with this history of violent oppression, culture contact remains a two-way process, in which Aboriginal culture and values have exerted a significant effect on the dominant society. In fact, this impact of Aboriginal values may be increasing in recent years through political efforts and media exposure. At the same time, Aboriginal peoples are actively engaged in creating ways of life and identity that blend features of traditional culture with elements drawn from the wider society.

Figure 1. A Model of Factors Contributing to Suicide Among Aboriginal Peoples.*



* Based in part on Thorslund (1991, p. 90).

The final common pathway of suicide is the hopelessness and pain of the individual. Hopelessness and despair are fuelled both by psychiatric disorders and by existential problems that follow directly from the rapid pace of social change and the suppression of traditional knowledge, history and identity, as well as from persistent racism and economic disadvantage in the larger society. These problems demand social and political analyses and interventions. The fact that the mental health literature tends to focus on individual problems and solutions should not obscure this need for a broader perspective on suicide among Aboriginal people.

Epidemiology

Demography

While the term Aboriginal creates the illusion of homogeneity, there is great cultural diversity among Canadian Aboriginal groups, with some 580 bands, 10 major language groups and more than 58 dialects. (Frideres 1993; MSB 1991a) Although most communities face similar problems of rapid cultural change, there are substantial variations in the type and frequency of social and psychiatric problems. Throughout this document, then, it is essential to keep in mind this variation, which may limit the applicability of findings made in one community, cultural group or socio-economic situation.

For government purposes, Aboriginal peoples in Canada comprise four main groups: status Indians registered under the *Indian Act*; non-status Indians; Métis; and Inuit. Although some demographic data are available for all four groups, systematic health data collection systems for non-status Indians and Métis do not exist. (Norris 1990)[2] Since some Aboriginal people who have integrated into the dominant society may no longer identify themselves as Aboriginal, existing statistics do not provide a complete picture of the evolution of health care problems even for status Indians.

The demography of the Aboriginal population is distinct from that of the general Canadian population in several important respects. Because of a transition to lower birth rates and increased life expectancy at a later date than the general population — that is, not until the 1940s to 1960s — a greater proportion of Aboriginal people is made up of young people. (Norris 1990) The birth rate remains at about twice that of the general population. Aboriginal groups have significantly higher mortality levels, resulting in a life expectancy about 10 years

shorter than that of the average Canadian. The 1986 Census indicated that 37% of all status Indians had less than grade 9 education, more than twice the total Canadian rate of 17%. (MSB 1991a)

The geographic distribution of Aboriginal people also differs from that of the general Canadian population in being predominately rural. In the 1986 census, 61% of those describing themselves as "Native only" in origin, and 46% of those with "mixed" (Native and non-Native) heritage, lived in rural settings, compared to 23% of the overall population. (Norris 1990) About 60 to 70% of individuals who identified themselves as of "Native origin" only lived on reserves and settlements. Aboriginal people off-reserve were more mobile than other Canadians, while those on reserves were less mobile. Women were more likely than men to leave the reserve. In recent years, however, the net flow of the Aboriginal population has been from urban to rural locations – especially among older women. (Norris 1990, p. 52) The Métis population was an exception to this pattern of migration.

This demographic diversity presents a problem in estimating the extent of Aboriginal suicide from detailed data pertaining primarily to reserves or to status Indians. More than 75% of the total Aboriginal population lives off-reserve. (Valentine 1992) While in eastern Canada, Aboriginal people living off-reserve tend to resemble the local general population in demographics and employment and prosperity, in western Canada there continues to be a large gap between the economic status of Aboriginal people and the local general population, even when Aboriginal people leave the reserve.

Prevalence

Rates of suicide in Canada as a whole have generally been higher than in the United States, although in the mid-range in cross-national comparisons. (GAP 1989) From 1971 to 1980, the rate of suicide in Canada ranged from 11.9 to 14.8 per 100,000. In the United States, the 1987 suicide rate was 12.7 per 100,000. (Tsuang et al. 1992) Over this century, the U.S. rate has averaged 12.5 per 100,000 but ranged from a high of 17.4 per 100,000 during the depression to a low of 9.8 per 100,000 in 1957.

Overall, rates of suicide among Aboriginal people in North America have been substantially higher than the average of the general population. (Earls et al. 1991; GAP 1989;

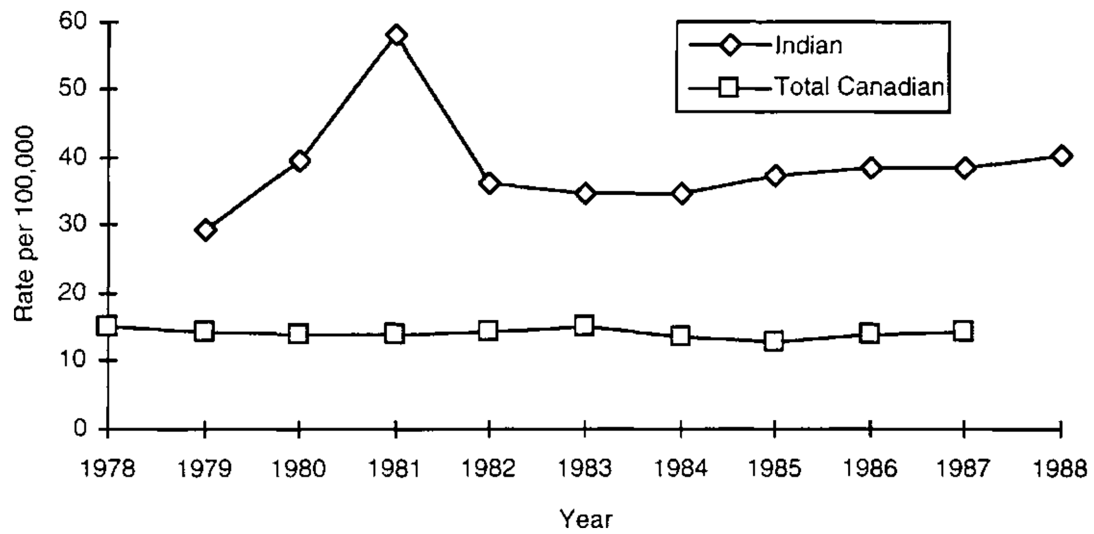
Kettl and Bixler 1991; Sievers et al. 1990) Annual suicide rates in recent years for all Canadians and for status Indians are shown in Figure 2.

In some provinces, Aboriginal people account for up to half of all suicides. On average, registered Indians have approximately three times the rate of suicide of the total Canadian population. This greatly underestimates the problem, however, since deaths by accident are also four to five times higher among Aboriginal groups, and an unknown proportion of accidental deaths are suicide – a Medical Services Branch report suggests as many as 25%. (1991, p. 45)[3]

The prevalence of suicide attempts may be underestimated in most studies because individuals are reluctant to divulge the problem, most attempts do not come to medical attention and, when they do, assessment of suicidal intent is difficult. In some cases, youth may report minor acts with no serious suicide potential as suicide attempts, leading to an overestimate. As a result, surveys of suicide attempts must include questions to assess the severity of the attempt. (Meehan et al. 1992)

The U.S NIMH Epidemiologic Catchment Areas study found a lifetime prevalence of suicide attempts in the general population of 2.9%; among 18 to 24 year-olds this increased to 3.4%. (Moscicki et al. 1989) A survey of an urban population in Alberta found a self-reported rate of attempted suicide of 0.8%. (Ramsay and Bagley 1985) The U.S. National Adolescent Health Survey of a probability sample of high school students found 14% reported having made a suicide attempt at some time. (American School Health Association 1989) In a sample of university freshmen age 18 to 24, Meehan and colleagues (1992) found a self-reported rate of attempted suicide of 10%; as indices of severity, 4.6% reported having been injured in an attempt, 3% had sought medical attention after an attempt, and 1% were hospitalized for a suicide attempt. About 2% of respondents reported having made a suicide attempt in the last 12 months.

Figure 2. Status Indian and Total Canadian Suicide Rates, 1978-88
(Age-sex standardized rate per 100,000)



Source: Medical Services Branch Steering Committee, 1991, p. 45.

Among Aboriginal people in the United States, the Adolescent Health Survey, administered to some 13,000 American Indian and Alaskan Native high school students living in non-urban settings, indicated that 17% had attempted suicide at some time. (Blum et al. 1992) A survey administered to 83 freshman students at the Zuni Public High School in New Mexico (58% girls, mean age 15.6) found a 30% rate of suicide attempts. (Howard-Pitney et al. 1992)

We could find few data on the prevalence of suicide attempts among Aboriginal people in Canada. Results of the Santé Québec Health Surveys of the Cree and Inuit populations had not been released at the time this paper was prepared. Our own community survey of 100 Inuit youth (ages 15 to 25) in a settlement on the east coast of Hudson Bay, using an adaptation of the Adolescent Health Survey and incorporating the questions of Meehan and colleagues (1992), found a lifetime rate of attempted suicide of 34%. (Kirmayer, Malus 1994) As an index of severity, 11% of suicide attempts resulted in an injury. Fully 5% of individuals reported they had made a suicide attempt in the last month. Only 16% of those who had ever made an attempt reported seeing a doctor, nurse or other health professional in relation to this attempt.

Age Differences

In the general population, suicide rates vary markedly over the life span. Suicide under the age of 12 is very uncommon. (Hawton 1986; Ryland and Kruesi 1992) The rate increases over the teenage years to reach a peak at about age 23 to 25, then declines until 60-65 when it shows a second smaller peak. (Tsuang et al. 1992) Suicide is the second leading cause of death, following accidents, among 15 to 24 year-olds in North America. (Rosenberg et al. 1987)

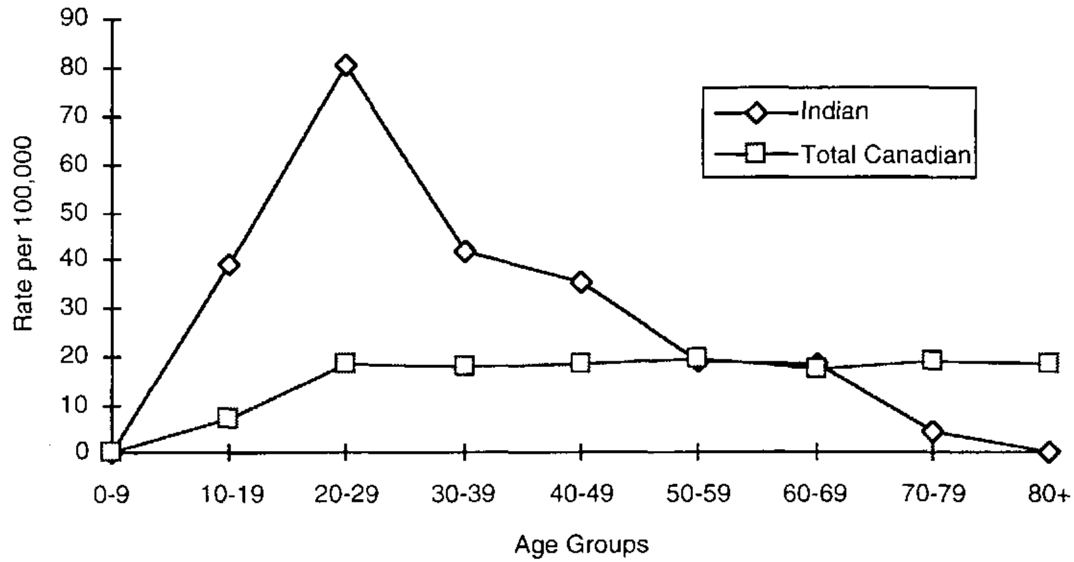
This pattern of age trends is exaggerated in the Aboriginal population (see Figure 3). A status Indian adolescent is five to six times more likely to die by suicide than the average Canadian adolescent. After age 70 the rate among status Indians actually drops below that for the general population. This same pattern has been found among Aboriginal people in the United States. (GAP 1989; Kettl and Bixler 1991)

While completed suicide is rare, even among adolescents, suicidal ideation and suicide attempts are relatively common. A recent survey of more than 11,000 U.S. high school students found that 27.3% of students had 'thought seriously about attempting suicide last year', and 8.3% had attempted suicide. (Ryland and Kruesi 1992) Comparable or higher rates have been reported for Native American students in boarding schools (Manson et al. 1989) and high schools. (Grossman et al. 1991; Howard-Pitney et al. 1992) Our own study of Quebec Inuit youth found that 34% reported ever having thought of suicide, and 17% reported having thought of suicide in the last 3 months. (Kirmayer et al. 1993b) About 5% reported serious suicidal thoughts in the current month.

Sex Differences

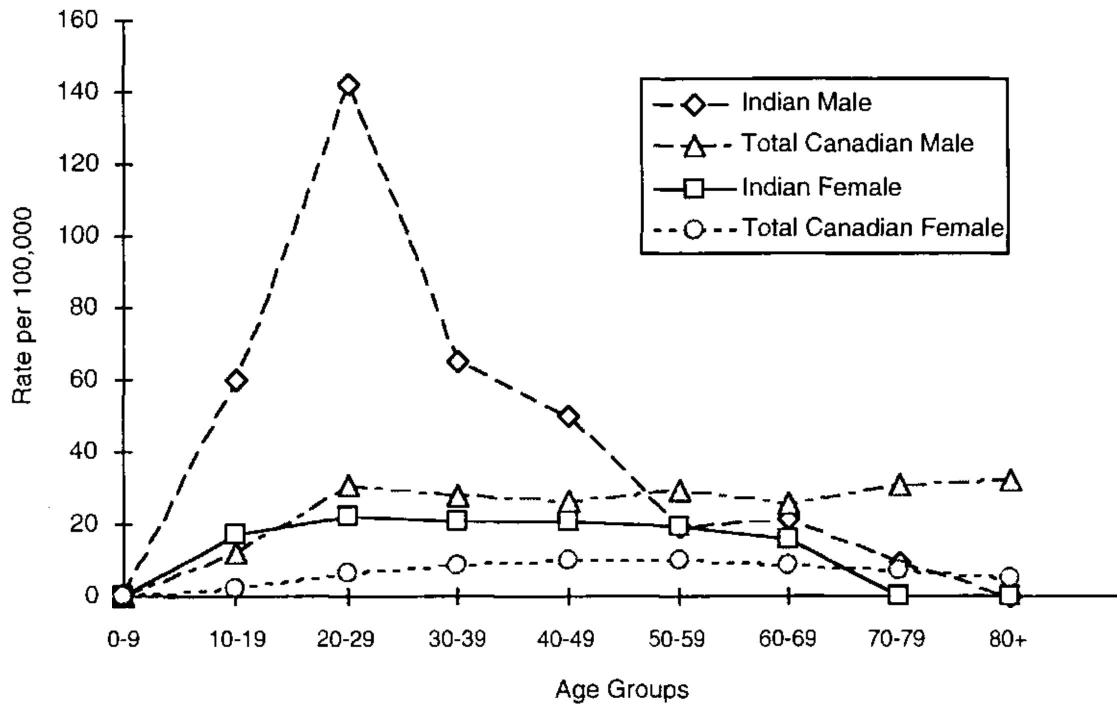
In the general population, suicide rates are generally higher among males than females, while suicide attempts are more frequent among females than males. (Cheifetz et al. 1987; Velez and Cohen 1988; Weissman 1974) The male to female ratio of completed suicide is about 4 or 5 to 1. (Garrison 1992) This difference is accounted for largely by the fact that males tend to use more lethal means (firearms, hanging, jumping from a height) than women (drug overdose, wrist slashing). (Velez and Cohen 1988) Drug overdoses are rarely successful. The most common methods for completed suicides among women in urban settings are intoxication, hanging and jumping from a height. (Cheifetz et al. 1987; Hawton 1986) Less marked sex differences have been found among some groups, including Hispanics and Blacks in the United States. (GAP 1989)

Figure 3. Comparison of Status Indian and Total Canadian Suicide Rates by Age Group (Average over 1984-88)



Source: Medical Services Branch Steering Committee, 1991, p. 47.

Figure 4. Comparison of Sex-Specific Status Indian and Total Canadian Suicide Rates by Age Group (Average over 1984-88)



Source: Medical Services Branch Steering Committee, 1991, pp. 48-51.

The sex differences in suicide rates among status Indians are comparable to those of the general population although amplified by higher rates in both males and females (see Figure 4). Female adolescent status Indians are 7.5 times more likely to commit suicide than female adolescents in the total population. In the 20-29 age range, the suicide rate for female status Indians is 3.6 times the rate for all Canadian females. Female status Indians have higher suicide rates than all female Canadians up to 69 years of age, at which point the Aboriginal rate falls below that of all females. Rates for male status Indians are higher than the total male population from age 10 to age 50. Adolescent status Indian males are more than five times as likely as the average Canadian male adolescent to commit suicide. Male status Indians between the ages of 20 and 29 have the highest rates of suicide of any group in Canada.

Marital Status

Suicide is more frequent among both men and women who are single, separated, divorced or widowed than among those who are married. (Trovato 1991) Those who are married with children have still lower rates. Suicide attempters are also more often single, separated or divorced and living alone. (Wasserman 1988)

An analysis of Canadian data covering four decades (1951 to 1981) supported the hypothesis that a change from single or widowed to married status reduced suicide risk for men significantly more than for women. (Trovato 1991) In the case of transition from divorced to married status, both sexes benefited equally in reducing suicide potential. However, the analysis was confined to the population aged 35 years and older because comparable information for younger ages was not available. As well, it is not known to what degree common-law marriage or other culture-specific, informal cohabitation arrangements and liaisons confer the same benefits. In many Aboriginal communities, extended family and kinship networks take the place of the reliance on a spouse or partner in the dominant society. As a result, it is not clear to what extent these data can be generalized to Aboriginal populations.

Period and Cohort Effects[4]

Suicide attempts increased in prevalence in the United States between 1960 and 1971. (Weissman 1974) While the overall rate of completed suicide was stable from 1950 to 1980, the rate actually decreased among older individuals and increased by 200% to 300% among 15 to 24 year-olds. (Rosenberg et al. 1987) The rate for young people has continued to increase more gradually over the last decade. (Tsuang et al. 1992) A smaller increase in the rate of suicide has also occurred in the 25 to 34 year-old age group over the same period. Suicide rates are continuing to increase in early adolescence (ages 13 and 14). (Bourque et al. 1983; Deykin et al. 1985; Velez and Cohen 1988) These increases have affected males and, to a lesser extent, females. There is some indication that rates for males over 20 may have stabilized in recent years, while rates for youth in the 15- to 19-year range continue to rise. (Mao et al. 1990)

Similar patterns of increasing suicide rates among youth, especially young males, have been reported among Aboriginal people in Canada (Rodgers 1982; Sampath 1992; Thompson 1987), American Indian and Alaska Native groups (Kettl and Bixler 1991), Inuit in Greenland (Grove and Lynge 1979; Thorslund 1990), and Aboriginals in South Australia (Cawte 1990; Clayer and Czechowicz 1991) and Micronesia. (Rubinstein 1983) These changes do not affect Aboriginal groups only, although they are greatly amplified among both male and female Aboriginal youth. (Jilek-Aall 1988)

Holinger and Offer (1982) argued that the suicide rate is related to the composition of a population; specifically, the suicide rate for youth increases with the proportion of the population that is adolescent. Recent analysis of regional U.S. data supports this hypothesis. (Holinger and Lester 1991) (The opposite relationship was found to hold true for older suicide victims, i.e., higher rates of suicide among the aged are associated with a smaller proportion of older individuals in the population.) An attempted replication with an international sample did not support this finding cross-nationally. (Lester 1992b) These results were also not confirmed in a Canadian study, which found an inverse relationship between the size of the youth cohort and regional suicide rates. (Hasselback et al. 1991)

The observation that, in the United States, the rate of youth suicide correlates with the proportion of population in the 15 to 24 age range suggests a hypothesis of 'relative

deprivation', in which greater competition for limited opportunities and resources leads to disadvantage and demoralization and hence to increased rates of suicide. Elderly people are not involved in the same competition to establish themselves and so may benefit instead from the social solidarity and increased political-economic representation associated with a larger cohort.

Data from Alberta indicate that similar trends of increasing suicide rates among adolescents and young adults in Canada cannot be explained simply by shifts in the age composition of the population. (Hellon and Solomon 1980) These data also suggest that there is a cohort effect. (Solomon and Hellon 1980)

The change in suicide rates over time may be both a cohort effect and a period effect. For the general population, a period effect seems to be the more important explanation for the recent rise in suicides, because changing social factors can best account for the rapidity and fluctuation of the changes in rate. (Wetzel et al. 1987)

Both period and cohort effects also may be important for the current generation of Aboriginal youth, who face unique circumstances. Their parents often went to residential schools, while they are more likely to have been educated in their communities. This difference accentuates the generation gap. They are a large cohort entering the work force during economically depressed times. Finally, they are living at a time of increasing awareness of the economic disparities between Aboriginal communities and the dominant society through mass media and a growing sense of concern over political issues such as land claims and self-government.

Regional and Ethnic Differences

Suicide rates vary cross-nationally and across ethnocultural groups within a society, but comparisons are difficult to interpret unless they are made between communities with similar suicide reporting practices. (GAP 1989; Tousignant and Mishara 1981)

Studies in the United States indicate large regional and ethnic differences. The U.S. suicide rate is about twice as high among whites as among blacks at all ages. (GAP 1989) A study of 261 Canadian census divisions found higher suicide rates in census divisions with

higher proportions of Francophones, Aboriginal people, and immigrants. (Hasselback et al. 1991) High rates of suicide were also found in isolated regions.

There are wide variations in historical and current suicide rates among Aboriginal groups. (Bachman 1992; May and Dizmang 1974; McIntosh 1983-84; Pine 1981; Shore 1975; Spaulding 1986; Webb and Willard 1975) The average rates among different Native American groups over the period 1980-1987 ranged from 2.88 to 120.77 per 100,000 in 100 different U.S. reservation-counties. (Bachman 1992) The highest rates have been reported in the western states and Alaska. (Kettl and Bixler 1991; Pine 1981)

In a study by Shore (1975) American Indian suicide patterns in the Pacific Northwest were examined with data obtained from the Portland Area Office of the Indian Health Service for the years 1969-1971. Of the 40,000 Indian people who live in the states of Washington, Oregon, and Idaho, there were 20 completed suicides over the three years and a total of 227 attempts. The typical profile of a completed suicide was an Indian male, single or separated, who shot or hanged himself at home or in jail on the Intermountain reservation. Alcohol and solvent abuse were involved in 75% of the completed suicides. Except for the Intermountain tribe, the typical profile of the attempted suicide subject was a young female who attempted a drug overdose at home following a quarrel with a relative or friend. These were often impulsive acts; alcohol was involved in 44% of the cases. Shore emphasized the high risk for suicide in Intermountain tribes compared to the much lower risk for Northwest Coastal and Plateau tribes. Suicide occurred more frequently in specific groups, in clusters,[5] as a learned response to social psychological stress. As probable contributors to these suicide clusters, Shore cited enforced residence on reservations, geographical isolation, widespread unemployment, widespread alcoholism and drug abuse, disorganized family life, and loss of relatives or friends by death.

As shown in Figure 5, there are marked regional variations in suicide rates among status Indians. (MSB 1991a) However, such regional variations may reflect differences in reporting practices as well as true effects. From the period 1979-1983 to 1984-88, there were increases in the suicide rates for the Alberta, Atlantic and N.W.T. regions, while rates in the Quebec, Saskatchewan and Yukon regions declined.

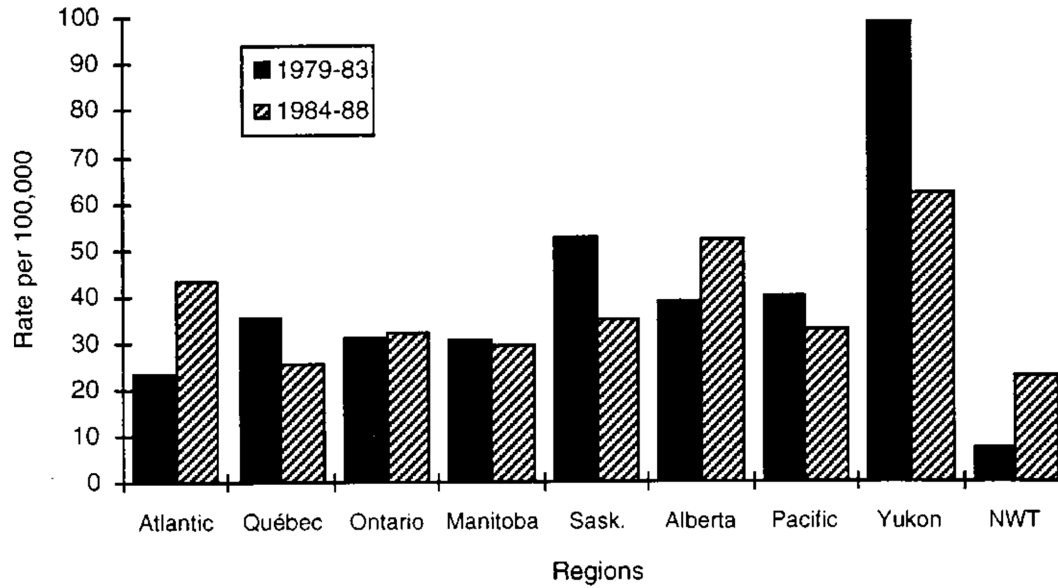
We could not find any study that systematically compared suicide rates and characteristics across Aboriginal groups in Canada. Studies either report provincial statistics and provide a discussion of the differences between Aboriginal and non-Aboriginal suicide (e.g., Aldridge and St. John 1991; Thompson 1987), or discuss Aboriginal suicide in a specific area or territory (e.g., Ross and Davis 1986; Spaulding 1986).

Table 1 summarizes studies of suicide rates among Aboriginal groups in Canada. These studies are not directly comparable because of differences in method, time period and sample. However, they all indicate much higher rates than those in groups of comparable age and sex composition in the general Canadian population.

There are wide variations in suicide rates for Aboriginal people between communities, even within the same geographical region. For example, there is a threefold difference between southern and northern Alberta. (Bagley et al. 1990) In a study of suicide in Newfoundland, all cases among Aboriginal people were restricted to a few communities in northern Labrador, where only 25% of the Aboriginal people live. (Aldridge and St. John 1991) Of the five isolated coastal communities in northern Labrador, one is Innu while the others are mainly Inuit. These communities have been in notable distress for some time, and the Innu community of Davis Inlet has recently been the focus of much urgent attention. The communities have problems with crowded housing, alcohol and solvent abuse. About 40% of the population is under age 15.

Our own data based on a review of the medical charts of all deceased individuals over a 10-year period (1982 to 1991) for the Inuit on the east coast of Hudson Bay yield a figure of 54.3 per 100,000. (Kirmayer et al. 1993b) For 1982-1986, the rate was 28.6 per 100,000, while for 1987-1991 it was 80 per 100,000. Most of this increase was attributable to a cluster of 10 suicides in 1991. The non-adjusted rate thus jumped from twice to almost five times the national average. Fully 90% (17 of 19) of suicides occurred in the 15- to 25-year age group. If 'possible' suicides are added to the suicide group, then the rate rises to 85.7 per 100,000 over 10 years (45.7 for 1982-86 and 125.7 for 1987-1991); again, fully 83% of suicides (25 of 30) occurred in the 15- to 25-year age group.

Figure 5. Regional Comparison of Status Indian Suicide Rates
(Five year averages, 1979-83 & 1984-88)



Source: Medical Services Branch Steering Committee, 1991, pp. 52.

Table 1
Some Reported Suicide Rates Among Canadian Aboriginal Groups

Region	Group	Period	Source	Suicide Rate* (per 100,000)
Labrador	'Native Peoples' ages 15-24	1979-1983	Wotton, cited in Aldridge and St. John 1991	337
	Innu, Inuit, North Coast of Labrador ages 10-19	1977-1988	Aldridge and St. John 1991	180
East Coast Hudson Bay	Inuit	1982-1991	Kirmayer et al. 1993	55-86**
Northwestern Ontario	Ojibwa	1975-1982	Spaulding 1986	62
	Wikwemikon	1975	Ward and Fox 1977	267
Manitoba	Northern Manitoba Status Indians	1981-84	Ross and Davis 1986	77
	'Natives' ages 18-20	1971-1982	Thompson 1987	177 (males) 32 (females)
	Indian Reserves	1971-75	Cited in Rodgers 1982	31
Alberta	Northern Alberta 'Natives' ages 15-34	1980-85	Bagley et al. 1990	80 (males)
N.W.T	Total Population ages 15-24	1970-1980	Rodgers 1982	120 (males 40 (females)

* Rates rounded to integers.
** Higher rate with inclusion of 'possible suicides'.

Suicide Clusters

Examination of mortality data for 1978-1984 from the mortality detail files of the U.S. National Center for Health Statistics revealed significant clustering of suicides in time and location. (Gould et al. 1990) There was some indication that the frequency of suicide clusters increased over this period. The transmission of increased tendencies to suicide may occur

through media exposure as well as personal ties and emotional identification with the predicament and actions of suicide victims.

The prominent display of a suicide in newspapers, television or other mass media leads to a predictable increase in deaths over a one- to two-week period following the display. (Eisenberg 1986; Gould et al. 1990; Phillips and Carstensen 1986) The relationship is dose responsive, that is, the more intense the media coverage, the greater the increase in suicide rate. (Phillips et al. 1992) This adverse effect of media attention has been noted in recent Native American suicide clusters. (Tower 1989)

It seems obvious that suicide clusters occur on an imitative basis. However, it has proved difficult to demonstrate this rigorously. A case control study of 14 adolescent suicides occurring in two clusters, using closed response questionnaires given to parents, found that cases were no more likely than controls to have had direct exposure to persons who had committed suicide. (Davidson et al. 1989) Cases were also no more likely to have had indirect exposure to suicide through media. They *were* more likely to have attempted suicide previously, to have damaged themselves physically, to have known closely someone who died violently, and to have broken up recently with a girlfriend or boyfriend. They had a history of having moved more often and attended more schools and had lived with more parent figures.

There is no research yet on whether imitative suicides involve the same types of individuals and actions as those occurring under other circumstances. In one study, the incidence of suicide attempts was no higher in friends of suicides than in controls over a six-month follow-up, suggesting that suicide clusters must involve additional factors beyond close familiarity with a victim of suicide. (Brent et al. 1992)

It appears that suicide clusters involve individuals who were previously at risk. However, the choice of method, time and place for the suicide may be strongly influenced by exposure to previous suicides. Suicide clusters pose a special problem for Aboriginal communities in which many individuals are closely related and share the same social predicaments, so that the impact of one suicide is felt deeply in the whole community and has strong reverberations. This close connection between many individuals and sense of shared predicament increases the risk of a cascade effect giving rise to a cluster of suicides.

Summary of Epidemiology

Suicide rates among Aboriginal people have increased dramatically in recent decades, to more than three times the rate of the general population. Suicide occurs much more commonly among the young than the elderly. Victims are most likely to be male. Suicides occur most often in association with heavy alcohol consumption and are carried out by highly lethal means (guns and hanging). There are wide regional variations in suicide rates. Compared to the general population, suicide in Aboriginal adolescents may be more likely to occur in clusters. (Earls et al. 1991)

Basic data on rates of suicide among non-status Indians and Métis are not available. Few data on attempted suicide are available for any Aboriginal group. Suicide clusters command most of the attention of media and observers, but this obscures the fact that some communities have lower than average rates while others have higher rates. Analysis of these regional and community differences might help to uncover specific problem areas and successful strategies for reducing suicide in Aboriginal communities.

Risk and Protective Factors

Overview

The study of risk factors attempts to identify variables that act singly or in interaction to increase the likelihood of suicide. Risk factors may reflect individual vulnerabilities or may be social factors that affect specific groups or whole communities. Since suicide is a rare event, risk factors are of more value in planning public health interventions than in predicting individual suicides.

A wide range of risk factors have been shown to contribute to suicide in the general population. These can be divided into three broad groups:

1. *predisposing factors*, such as extremes of temperament (e.g., aggressiveness, impulsiveness, inhibition), childhood separations, loss and abuse, major depression or other psychiatric disorders, alcohol and substance abuse, hopelessness and cognitive rigidity;

2. immediate environmental factors such as stressful life events, especially loss of relationships, martial problems, family pathology, isolation, living alone, modelling of suicidal behaviour by family or friends; and
3. social-cultural factors, including problems with work, unemployment, poverty, social disorganization, loss of tradition, alienation and anomie.

Of course, each risk factors has its obverse – circumstances that can be viewed as protective factors against suicide. In many cases, the absence or reduction of a risk factor can be viewed as a protective factor. Perhaps because suicide is rare in the population, however, factors or circumstances that protect against suicide have received much less attention. Suicidal ideation is, however, extremely common, so it is useful to consider factors that lead individuals to cope with suicidal thoughts and feelings without taking harmful action. Specific cultural values and traditions may act to increase or reduce the risk of suicide by making suicide more or less of an option for individuals in a given community.

We identified some of the sociodemographic risk or protective factors in Figure 1 and in the previous sections on epidemiology. Here we summarize literature that has addressed specific factors in an effort to develop methods of suicide prediction as well as prevention.

Physical and Social Environment

Suicide shows seasonal variation, with increased rates in the fall and spring in North America. There is no generally accepted explanation for these variations (Eastwood and Peter 1988; Fossey and Shapiro 1992); they may be related, however, to seasonal variations in mood and affective disorders.

It has been demonstrated that affective disorders[6] often follow a seasonal variation, fluctuating with changes in the length of the day. (Rosenthal et al. 1984) Mild dysphoria and insomnia during the short winter days are common in northern latitudes. (Haggag et al. 1990; Hansen et al. 1987) Interpersonal conflict and disease susceptibility may follow a parallel seasonal variation among Inuit. (Condon 1982, 1983) Major depressive disorder triggered by change in length of day has been described in the North. (Nayha 1985) Such seasonal affective disorders may respond to treatment with bright light early in the morning to simulate a longer period of daylight. (Hellekson et al. 1986; Lewy et al. 1982)

The increased suicide rate in the fall may correspond to an increase in the prevalence of depression with the shortening of the day. The increased prevalence in the spring may reflect either the contrast effect of feeling somewhat better then relapsing, or the availability of increased energy and hence the ability to act on suicidal intentions. This pattern is also seen during the treatment of depression: individuals are at greatest risk for suicide when they begin to respond to treatment and experience increased energy. (Appleby 1992; Hawton 1987)

In Canada, suicide risk among Aboriginal people varies with the latitude of the community, being higher in more northerly communities, and also with greater distance from the nearest town with a population of more than 5,000. (Bagley 1991) It is not clear whether these correlations reflect environmental or socio-economic influences or variations in suicide reporting.

The built environment also affects suicide rate. Isolation and seclusion of criminals in custody puts them at considerable risk for suicide. (Bonner 1992) Given the over-representation of Aboriginal people in the prison population, the confinement of individuals in prison is a substantial contributor to Aboriginal suicide. (Bland et al. 1990; MSB 1991a) Encounters with the law contribute to both immediate and long-term suicide risk and so may be an important focus for suicide prevention.

Most directly, availability of a lethal method, notably firearms, influences the number of completed suicides. (Brent et al. 1991; Garrison 1992) Alcohol use interacts with this — suicide victims who use firearms are more likely to have been drinking. (Brent et al. 1987) In one study among Alaska Natives, fully 76% of suicides resulted from gunshot wounds, and suicide by firearms was associated with elevated blood alcohol levels. (Hlady and Middaugh 1988)

Historically, the elimination of specific lethal means of suicide has had a measurable effect on the suicide rate. (Garrison 1992) Of course, firearms are readily available in Aboriginal communities and, owing to their use in hunting, are not amenable to tight control. This availability of means accounts in part for the high lethality of Aboriginal suicide attempts.

For young people, who are at highest risk for suicide, school is often the most salient aspect of their physical and social environment. Many Aboriginal people have suffered

separations, loss and trauma through the residential school system. In urban settings, schools may expose Aboriginal youth to prejudice along with neglect or outright suppression of their traditions. Even reserve schools have tended to ignore traditional cultural knowledge and so have contributed to the devaluation of Aboriginal identity. For the many youth who abandon school, it remains a reference point against which they may gauge their own status and hopes for the future. Negative attitudes toward school and experiences of failure are important contributors to the sense of hopelessness that can overtake vulnerable youth. The availability of charismatic teachers and a milieu that fosters a sense of positive identity and self-esteem in the course of transmitting life and work skills constitutes an important protective factor.

Constitutional and Developmental Factors

A high proportion of first- and second-degree relatives of suicides have made suicide attempts. This probably indicates both shared constitutional vulnerabilities and social learning.

Suicides have more complicated birth histories and parental alcohol and tobacco use, and have received less prenatal care. (Hawton 1986) They are also more likely to have had poor physical health as adolescents. (Earls et al. 1991; Blum et al. 1992)

Temperament

Certain temperamental or personality traits — including hypersensitivity, withdrawal, perfectionism and impulsiveness — may contribute to suicide risk. (Ryland and Kruesi 1992) The tendency to suicide among psychiatric in-patients is related to trait and state anxiety, anger, sad mood and impulsiveness. (Apter et al. 1993)

Impulsiveness may make individuals liable to respond to an emotional crisis with self-injurious behaviour. In a study of 94 male Israeli soldiers complaining of mental distress, impulsiveness and depression were found to contribute independently to suicide risk. (Koslowsky et al. 1992) Surprisingly, no link was found between violent behaviour and suicide risk; however, the sample and context may have masked the association.

A study of adolescents with self-reported measures of three types of 'recklessness' among adolescents — foolhardiness, driving while under the influence of alcohol or drugs, and

smoking, drug use or keeping 'bad company' — found that only the third factor had a significant correlation with depression and suicidal ideation. (Clark et al. 1990)

The tendency to suicide and aggressiveness are highly intercorrelated among individuals. Plutchik and colleagues have proposed that an underlying process of aggression may reach a threshold for action and then be directed toward the self or others, depending on both psychological and social factors. (Korn et al. 1992; Koslowsky et al. 1991) The underlying trait or state may be due to serotonin (5-HT) depletion or down-regulation (either constitutional or acquired), which is associated with anger, irritability and depression, as well as with impulsiveness and aggression. (Brown et al. 1992)[7]

While impulsiveness contributes to risk of suicide attempts, there is some evidence that withdrawal, hypersensitivity, and behavioral inhibition are more common premorbid personality traits than impulsiveness in completed suicide. (Hoberman and Garfinkal 1988; Shafii et al. 1985) Inhibition and withdrawal may contribute to suicide risk by impairing social functioning and relationships, leading to diminished self-esteem and self-efficacy, social isolation, and a lack of social supports.

Psychological development

Ego development may also contribute to suicidality. Borst and colleagues (1991) examined the relationship of ego development, age, sex and diagnosis to suicidal tendencies in 219 adolescents admitted to a private psychiatric hospital. Level of ego development was described as *preconformist*, *conformist* or *post-conformist* according to Loevinger's (1966) stages. Preconformist represents the earliest stage, in which individuals are impulsive, have stereotyped cognitive styles, and are dependent or exploitive in relationships. Conformist individuals are particularly concerned with interpersonal acceptance and often express their views in clichés and stereotypes. Individuals who have reached the post-conformist stage are said to cope with inner conflict generally with a high degree of self-awareness. With increasing ego maturation, adolescents diagnosed with conduct and/or affective disorders became *more* vulnerable to suicide. This type of study requires reconceptualization to be cross-culturally valid, since styles of moral reasoning and the path of ego maturation and adaptation may vary with culture and social circumstances. (Shweder 1991)

In some Aboriginal groups, child-rearing practices aimed at developing self-reliance involve teasing or playful threats of abandonment that may also foster insecurity about relationships and intense dependency needs. This may leave individuals vulnerable to depression and self-harm in situations of loss or deprivation. (Briggs 1982) Similarly, socialization may also inhibit other-directed aggression and increase the likelihood of self-directed aggression in times of frustration or loss. (Briggs 1983) Presumably, child-rearing practices interact with the temperamental differences discussed above to make individuals more or less vulnerable to suicide. However, the impact of cultural variations in child rearing on personality remains a controversial issue. The profound changes in Aboriginal settlement life have also rendered many traditional child-rearing practices difficult to apply or inappropriate and may be creating new problems. Clearly, this is an area in urgent need of systematic study.

Conflict over sexual identity, particularly early awareness of homosexual orientation, is also a significant risk factor for suicide among youth. (Ryland 1992) Negative feelings about the maturing body have been noted by psychotherapists in some adolescent suicide attempters. (Ladame 1992) This may be severely aggravated by experiences of incest or sexual abuse, which have more pervasive effects on self-esteem and contribute to a wide range of psychiatric problems. (Briere 1993)

Childhood separation, loss, trauma and abuse

Suicide is associated with a history of early separations, losses and emotional deprivation. Grossi and Violato (1992) found that adolescent suicide attempts were significantly related to greater number of residential moves, greater number of grades failed, and earlier age of separation from parents. Tousignant and colleagues (1993) found the effect of frequent residential moves on suicide risk did not hold when the control group consisted of adolescents with family problems, suggesting that the level of family functioning or distress is the essential factor. Parental loss may be particularly damaging when it leads to persistent disorganization of the household. (Adam 1985) Closer examination may reveal that family disorganization exists even in families that have not lost members and are therefore superficially intact.

Recently, there has been increased recognition of the widespread prevalence of physical and sexual abuse of women and children in North American society as a whole. (Conte 1991; Gelles and Conte 1990; Herman 1992) A survey of 15- and 16-year-old students in the Netherlands found that a history of suicide attempts was associated with sexual abuse, feelings of loneliness, depressed mood, low self-esteem, and the use of drugs for both male and female adolescents. (Garnefski et al. 1992) Additional risk factors were physical abuse for females and low self-reported academic achievement for males. Among adolescents in-patients at a private psychiatric hospital, severity of childhood physical abuse (but not sexual abuse) was significantly correlated with number of suicide attempts. (Shaunesey et al. 1993) Histories of severe physical and sexual abuse during childhood are extremely common among individuals with borderline personality disorder who, in turn, are prone to multiple suicide attempts. (Paris et al. 1989)

Single-parent families are about twice as common among status Indians as in the general population of Canada, and these are headed by women about five times more often than by men. (MSB 1991a) However, the impact of single parenthood depends on local social and cultural factors that determine the degree of support by extended family, relatives, elders and other members of the community. Similarly, in some Aboriginal communities – notably among the Inuit – adoption may be extremely common and less stigmatized and so may not be associated with the same increased risk for suicide seen in the total population. The cultural and personal meanings of adoption in these communities are undergoing change, and this requires much closer study.

Studies among American Plains Indians found that youth who completed suicide were much more likely to have had a change of caretaker during their childhood or adolescence. (May and Dizmang 1974; Resnick and Dizmang 1971) Aboriginal populations have experienced a high frequency of separations resulting from education in boarding schools and prolonged hospitalization out of their communities for tuberculosis and other chronic illness. (Kleinfeld and Bloom 1977; Manson et al. 1989) In Canada, the residential school system exposed Aboriginal children to prolonged separations from family and kin, physical and sexual abuse, and active suppression of their cultural identity. (Haig-Brown 1990; Knockwood 1992)

Aboriginal communities also suffer from family breakdown, as well as physical and sexual abuse. (Fischler 1985; Lujan et al. 1989) Owing to their isolation and complex web of family relations, there may be intense taboos within some communities against exposing and confronting family violence and abuse. Lack of opportunity and support to confront the problem leaves victims to struggle alone with their pain and so may contribute substantially to the risk of suicide.

Interpersonal Factors

Interpersonal conflicts, usually family or marital discord, breakup of a significant relationship, or loss of personal resources are the most common precipitants of suicide attempts. (Weissman 1974) Suicide precipitants vary with the phase of life. For adolescents, conflict with parents, loss and separation from family members, and rejection in relationships are the most powerful stressors. Several studies confirm that the immediate precipitants of youth suicide are usually an acute disciplinary crisis, or a rejection or humiliation (e.g., loss of girlfriend or other perceived failure). (Hawton 1986; Rich et al. 1991; Shaffer et al. 1988)

Several studies indicate that the quality of the individual's social network is a strong predictor of the risk for suicide attempts. Compared to controls, suicide attempters have less extensive and less adequate social support networks. (Hart and Williams 1987) Magne-Ingvar and colleagues (1992) reported that suicide attempts were more frequent among patients with poor social relationships and problems at work. Similar findings were summarized by Maris (1992), who identified work problems, being separated, widowed or divorced, living alone, and being unemployed or retired as risk factors for attempted suicide. Grossi and Violato (1992) found that adolescent suicide attempts were related to a lack of emotionally significant others. However, this was not confirmed in a later community study in Quebec. (Tousignant et al. 1993)

Further evidence of the importance of social networks is provided by a study indicating that, before the suicide event, friends of suicide victims have a higher incidence of psychiatric disorders than controls. (Brent et al. 1992) This might reflect either an effect of the social network on the vulnerable individual or the suicidal individual's own depression

causing similar dysphoria in friends – a well established consequence of depression. (Coyne 1976) In either case, it indicates a compromised social support system before suicide.

The existence of suicide clusters suggests that suicide begets suicide. However, there is little direct evidence that this is true. Brent and colleagues (1992) studied the impact of suicide on 58 friends and acquaintances of 10 adolescent suicide victims. The rate of suicide attempts was no higher in this group. This same study found that following the suicide, there was a higher incidence of major depressive disorder in friends of victims (37%) than controls (7%) within one month of the suicide. Substance abuse, anxiety disorder and conduct disorder all followed the same trend. Many were still depressed six months after the bereavement. Thus, a suicide has deleterious effects on others that last long after the victim dies. This may in turn impair the social support system of others at risk.

Although suicide often follows an interpersonal crisis, even in these cases, it is almost invariably the endpoint of long-standing problems. A retrospective study of all adolescent suicide victims over a one-year span in Finland found a high level of psychosocial stress in the year preceding suicide. (Marttunen et al. 1992) Among the indicators of long-term difficulties were antisocial behaviour (45% of males, 33% of females), alcohol abuse, previous suicide attempts (33%), and adjustment disorder (33% of males). Despite a high incidence of psychopathology preceding suicide, many parents were unaware of their child's suicidal intentions or even their previous attempts. One-third of parents had, however, made contact with a psychiatrist in the year preceding the child's death.

Interpersonal factors identified in studies of American Indian suicide include a history of non-parental caretakers, arrests of caretakers, early age of first arrest of suicide victim, arrest in previous 12 months, and recent loss of relationship through conflict or death. (May and Dizmang 1974; Resnick and Dizmang 1971) A study of seven victims of a suicide cluster in a Cree community found that all had evidence of low self-esteem, lack of intimate relationships, social isolation and identity confusion. They were uncommunicative and withdrawn, sometimes since childhood. (Ward and Fox 1977)

Alcohol and Substance Use

The rate of substance abuse in patients who commit suicide varies widely cross-nationally e.g., from 2/3 in a San Diego study to 1/4 in a Finnish study. (Runeson and Rich 1992) There is a strong association between attempted suicide and alcoholism. (Dyck et al. 1988)

Alcohol intoxication has been noted to be a major factor contributing to suicide in most studies of Aboriginal people, including the Cree of Northern Ontario (Ward and Fox 1977); the Ojibwa of northern Manitoba (Thompson 1987); the Inuit of Greenland, Alaska and the N.W.T. (Kettl and Bixler 1991; Kraus 1971; Rodgers 1982; Sampath 1992; Thorslund 1990), and numerous studies in the United States. (Brod 1975; GAP 1989)

Compared to suicides associated with depression, suicides associated with alcohol and substance use may be preceded more often by interpersonal stressors in the six weeks before the event. (Duberstein et al. 1993) Of course, these life events (mainly conflicts, arguments and disruptions of relationships) may also reflect long-standing interpersonal and character-related difficulties. Nevertheless, this finding supports the notion of a typology of suicides (e.g., Bagley 1992), some of which are linked more directly to psychiatric disorder (primarily depression) while others are linked to interpersonal events, alcohol use and, perhaps, personality problems that make individuals liable to catastrophic reactions to these events.

In part, the association between alcoholism and suicide may reflect common predisposing factors (including a shared biological diathesis: e.g., Brown et al. 1992). But it is clear that both acute and chronic alcohol use increase the likelihood of suicide attempts and completed suicide. (Lester 1992a) Acutely, higher blood alcohol concentration increases the probability that a firearm will be used as a method of suicide. (Garrison 1992) Chronically, about 15% of psychiatric patients hospitalized for a suicide attempt who have coexisting alcoholism eventually commit suicide — a rate comparable to that among people with affective disorders, although in contrast to depression, the suicides tend to occur late in the course of illness. (Hawton 1987) In drug addiction, the suicide risk may be 20 times that of the general population.

Solvent abuse is common in many Aboriginal communities. In our survey of Inuit youth in one community in Quebec, 21% reported having used solvents at one time, and 5% had used them within the last month. (Kirmayer et al. 1993b) Chronic solvent abuse can lead

to neurological damage. (Byrne et al. 1991) It is not known whether the cognitive impairment or other sequelæ of solvent abuse increase suicide risk independently or whether solvent abuse simply indicates more profound social and psychological problems that may lead to suicide.

In addition to their intrinsically rewarding and addictive effects, alcohol and drug abuse allow a temporary escape from sadness, anxiety, boredom and emptiness. Foulks (1980) has suggested that, among the Inuit, traditional shamanistic practices provided culturally sanctioned forms of dissociation as a method of problem solving and escape from boredom and pain. Cultural changes have made this strategy less available (although it persists in some contemporary religious practices), and alcohol and drug abuse have taken the place of religious, healing and recreational dissociative experiences, with an attendant increase in suicide.

Suicidal Ideation and Attempts

Most suicide victims have previously expressed suicidal thoughts or made suicide attempts. Shafii et al. (1985) found that 85% of adolescent suicide victims had previously expressed a wish to die, and 40% had made a previous attempt. Thus, although most suicidal acts have an acute precipitant, and many acts are impulsive, suicide usually occurs in the context of persistent or recurrent thoughts and plans about suicide.

Suicidal ideation is so common among adolescents, however, that it does not serve as a useful index of high risk. (Ladame 1992) As mentioned earlier, a study of U.S. high school students found that 27% reported suicidal ideation in the last year. (Ryland and Kruesi 1992) It is important therefore to distinguish between serious suicidal ideation or suicidal crises, and thoughts about suicide that express less urgent existential questions.

Among adolescent patients with major depressive disorder, suicidal ideation tends to fluctuate with the severity of depression rather than representing an independent cognitive state. (Myers et al. 1991) In a multivariate study of 558 French-Canadian adolescents and 150 adults, suicidal ideation in adolescents was found to be positively associated with depression, with smaller effects of stressful life events, low self-esteem, and dissatisfaction with social

supports. (De Man et al. 1992) Suicidal ideation in adults was independently associated with self-esteem and life events but not with depression.

Suicidal attempts may range from mild 'gestures' with minimal lethal intent to serious attempts in which death is averted only by happenstance. It is important, where possible, to characterize the severity of attempts to assess their potential lethality. Clinically, this involves estimation of a risk-to-rescue ratio – that is, the relative seriousness of the means used divided by the relative likelihood of discovery and prevention by someone else. A high risk/low rescue attempt might involve going off into the bush with a shotgun without telling anyone; by contrast, a low risk/high rescue attempt might involve taking a few sleeping pills in front of a spouse. In epidemiological research on suicide, efforts have been made to develop questions that assess severity of attempts retrospectively to understand better the significance of the very high levels of mild attempts found among youth. (Meehan et al. 1992)

A previous suicide attempt is the single best predictor of subsequent attempts and of completed suicide. (Maris 1992) However, previous suicide attempts do not predict between 75% and 90% of all completed suicides – which occur on the first recorded attempt. Compared to attempters, completers are more likely to be male, older, unmarried, divorced or widowed, living alone, and retired or unemployed. (van Egmond and Diekstra 1990)

Up to 50% of suicide attempters make a second attempt. (Kreitman and Casey 1988) Individuals may be at highest risk for a repeated suicide attempt in the first three months or so following an attempt. Repeaters tend to have previous psychiatric diagnoses and treatment, a history of other self-destructive behaviour, and a history of alcohol and substance abuse, and to be isolated and unemployed. (Kreitman and Casey 1988) Psychological characteristics of patients hospitalized for a suicide attempt who make a repeat attempt within three months of the initial episode include low frustration tolerance, internal locus of control, and a view of self as powerless. (Sakinofsky and Roberts 1990; Sakinofsky et al. 1990) Repeaters also have more externally directed hostility. There is some evidence that lethality tends to increase with each successive suicide attempt. (van Egmond and Diekstra 1990)

Patients who make multiple non-lethal suicide attempts may be different from those who complete suicide within a very few attempts. Clinicians tend to view the former as

having a personality disorder (typically, borderline personality disorder) or character-related problems and as tending to use suicide attempts as an angry or dramatic gesture in a somewhat calculated or manipulative way. (Dingman and McGlashan 1988) However, one cannot dismiss the risk of suicide in patients with personality disorders, as it is still significantly elevated when compared to the general population. A review of long-term follow-up studies of patients with personality disorder (most studies focus on borderline personality disorder) shows an average suicide rate of 5% (range 0 to 9%). (Paris et al. 1987; Tanney 1992)

Psychiatric Disorders

A history of major psychiatric disorders, especially major depression, is extremely common among suicides. Worldwide, post-mortem interview studies have shown a diagnosis of a mental disorder in 81% to 95% of youth suicides. (Goldstein et al. 1991; Runeson and Rich 1992)[8] Retrospective studies of completed suicides in adolescents and young adults find high rates of specific disorders, including 43% to 79% with affective disorders (mostly major depression), 26% to 66% with substance abuse, 3% to 61% with conduct problems or personality disorder (usually borderline or antisocial personality disorder), and 0 to 17% schizophrenic disorders. (Ryland and Kruesi 1992) The wide range reflects methodological differences in diagnostic methods and criteria as well as the limitations of retrospective data in making diagnoses. The rate of personality disorders is significantly higher among youth who commit suicide than among older suicides. In one retrospective study, 33% of adolescent female suicides suffered from borderline personality disorder. (Marttunen et al. 1991) Of those with personality disorders who commit suicide, about 85% have coexisting major depression and/or substance abuse disorders. Thus, it is comorbidity of depression and substance use that distinguishes patients with personality disorder at high risk for suicide from those at low risk. (Runeson and Rich 1992) Similar findings have been obtained in Quebec. (Lesage 1993)

Depressed patients have 50 times the suicide rate found in the general population. (Appleby 1992) Other risk factors identified in psychiatric populations include previous suicide attempts (particularly with a violent or dangerous method), recent relapse or discharge,

certain features of mental state (such as depression and psychosis and especially the cognitive feature of hopelessness), social circumstances (isolation, unemployment), and demographic characteristics (male, youth). (Appleby 1992) However, this risk profile is common enough in psychiatric populations as to be of no benefit in predicting suicide.

Symptoms of severe depression (psychomotor retardation, hopelessness, hypersomnia) best predict subsequent suicide. (Motto et al. 1985) Other predictors among depressed adolescents include weight gain; anergia and fatigue; father living away from home; previous suicide attempt; self-rating of likelihood; pessimistic attitude; and hopelessness. (Kienhorst et al. 1991) A three-year follow-up of adolescents with major depressive disorder found that predictors of later suicidality were primarily the severity of initial suicidality and the intensity of anger. (Myers et al. 1991) Suicidality was not related to impulsiveness or attention deficit disorder.

Anxiety disorders, particularly panic disorder, also carry a significant risk of suicide. (Weissman et al. 1989) An analysis of data from the U.S. NIMH Epidemiologic Catchment Areas study revealed that diagnoses of either panic disorder or sporadic panic attacks were also associated with an increase in both suicidal ideation and suicide attempts. (Weissman et al. 1989) In fact, the rate of suicide attempts was higher in panic disorder than in major depression. This increased risk was independent of comorbid major depression or alcohol abuse.

About 10% of patients with schizophrenia eventually die by suicide. (Hawton 1987) The period of highest risk is early in the illness, often during a relatively non-psychotic phase of the illness. Those most at risk had high educational attainment before onset of the illness, with higher expectations of themselves for the future. They were aware of the effects of the illness and expressed hopelessness and fears of mental disintegration. In contrast to affective disorders, these findings emphasize the need for careful surveillance during remission as well as during relapse, since it is when they are not delusional that some schizophrenic patients may assess their situation as bleak.

A study of incarcerated juvenile offenders investigated the ability of depression, substance abuse, conduct disorder and hopelessness to differentiate suicide attempters from non-attempters. (Kempton and Forehand 1992) Only depression emerged as a predictor of

suicide for white, but not black, youth. This study illustrates the importance of controlling for ethnicity when examining predictors of suicide attempts.

Appleby (1992) suggests that persons with psychiatric disorders are at greatest risk for suicide during two phases of their illness: (1) the acute phase, before hospitalization or treatment; and (2) the transition from in-patient to out-patient care. Loss of the continuous supervision in the in-patient setting, stress at re-entry to the community, and policies of short admissions and early discharge are proposed to explain the elevated suicide risk during the transition phase. A review of three studies of staff and physician attitudes toward patients found that a patient's "disturbed relationships with hospital staff, resulting in premature discharge" distinguished suicides from a control in-patient population. Hawton (1987) confirms that the first week of admission to hospital and the first month after discharge are periods of high risk for psychiatric in-patients.

In summary, psychiatric disorders are found among the majority of individuals who commit suicide. The small subgroup of suicides with no major psychiatric disorders tend to show excessive performance anxiety and perfectionism along with a poor response to stress and dislocation. (Hawton 1986) They may commit suicide when faced with a failure or setback at school or in other activities.

The diagnoses most often linked to non-fatal suicidal behaviours are personality disorders (21-48%), dysthymic disorder (22%) and substance abuse (20-50%). (Tanney 1992) Comorbidity of psychiatric disorders further increases the risk of suicide. However, psychiatric diagnosis alone is not a sufficient explanation for suicidal behaviour. Among psychiatric patients, a history of suicide attempts is the single best predictor of future attempts. (Pokorny 1992)

There are insufficient data on the prevalence of psychiatric disorders in Aboriginal communities in Canada, so it is not possible to determine what proportion of suicides is associated with major psychiatric disorders. Experiences with psychiatric consultation in Aboriginal communities indicate high rates of major depression and dysthymia in many communities. (Armstrong 1978; Sampath 1974; Young et al. 1993) The diagnosis of personality disorder is complicated by endemic social problems but is probably also common. Schizophrenia, bipolar disorder and panic disorder are also present. Individuals with

depression or other psychiatric disorders may be more vulnerable to the demoralizing effects of social problems experienced by Aboriginal people. Even where social problems cause or contribute to depression and other psychiatric disorders, once present these disorders appear to require specific treatment to resolve.

Cognitive Style

At the time of a suicide attempt, individuals typically describe a narrowing or constriction of thinking, along with an inability to generate alternatives or project themselves into the future. (M. Samy, personal communication) In conjunction with thoughts of death as relief or escape and suicide as an effective way to send a message of anger and despair, this cognitive constriction makes the act of suicide possible. These attitudes toward death and suicide and the tendency toward cognitive constriction may long antecede the suicide attempt.

Cognitive factors that increase suicide risk include hopelessness, dysfunctional assumptions, dichotomous thinking, cognitive rigidity, poor problem solving ability and negative self concept. (Weishaar and Beck 1992) Demoralization, lack of self-efficacy, cognitive distortions and lack of reasons for living all predispose an individual to suicidal behaviour, while interpersonal stress and intense hopelessness appear to be more immediate precipitants.

In fact, hopelessness may be related to suicidality more directly than depression itself. In a prospective longitudinal study of 207 hospitalized psychiatric patients followed over 5 to 10 years, a statistically significant correlation was found between high scores on the Hopelessness Scale and eventual suicide. (Beck et al. 1985) The scores on two additional instruments, the Beck Depression Inventory and the Scale for Suicide Ideation, did not correlate with eventual suicide, although the single item of the Beck Depression Inventory on pessimism did appear to have predictive value.

The cognitive theory of depression emphasizes the role of specific patterns of thinking in generating and maintaining depressed mood, including helplessness, hopelessness, pessimism, and over-generalization. (Beck et al. 1979; Kovacs and Beck 1978) Mood also alters cognition, however. Elated mood causes individuals to have more access to positive

reasons for living, while depressed mood leads to difficulty in recalling or generating such reasons. (Ellis and Range 1992)

People who make multiple suicide attempts have a large number of psychological deficits, including pervasive hopelessness, poor interpersonal problem solving skills, and poor ability to regulate affect. (Strosahl et al. 1992) Underlying these deficits may be a tendency to remember and think of past negative experiences and reduced anticipation of specific positive experiences. (MacLeod et al. 1992) Suicide attempters tend to be angry, while completers tend to be depleted, withdrawn and resigned.

Bancroft and colleagues (1975) examined self-reported motives for suicide. A list of possible reasons for suicide was presented to attempters, who could endorse more than one reason. One-third reported that they were seeking help, 42% wanted to escape from an intolerable situation, 52% were seeking relief from a terrible state of mind, and 19% were trying to influence someone. This type of work needs replication and extension cross-culturally. However, individuals' conscious reasons for suicide must be interpreted with caution, both because they are actually retrospective reconstructions and because suicidal behaviour is influenced by psychological and social factors of which the individual may sometimes be unaware.

Clinically, some Inuit adolescents mention boredom as their reason for attempting suicide, giving the superficial appearance that it is a casual act. (Kirmayer et al. 1993) Boredom is a common complaint among youth who feel there is a lack of interesting activities or opportunities for them in their community. Using the term 'boredom' as a reason for suicide may reflect a cultural style of minimizing or denying distress, a reluctance to acknowledge difficulty in coping, or a simple description of feelings of alienation and emptiness. In many cases, further inquiry leads to more explicit expressions of suffering and acknowledgment of loss of relationships, intolerable family circumstances, or depression.

Most research on suicide has identified the maladaptive characteristics of suicidal persons, instead of adaptive, life-maintaining characteristics of those who do not attempt suicide. As noted, African-Americans have much lower suicide rates than whites, despite facing economic disadvantage and endemic racism. In an exploratory study, Ellis and Range (1991) administered the Reasons for Living Inventory to 227 undergraduates at a large

southern U.S. university. Blacks scored significantly higher than whites on two of the seven subscales: Survival and Coping Beliefs, and Moral Objections. Cultural beliefs that engender a sense of self-worth in the face of negative social perceptions may contribute to lower suicide rates among African-Americans.

The conviction that life makes sense and has meaning may contribute to coping with suicidal ideation. In a study of 150 patients hospitalized after suicide attempts, subsequent suicidal behaviour was significantly predicted by two measures of 'sense of coherence': manageability (the sense that one could handle life and its vicissitudes) and comprehensibility (the conviction that life makes sense). (Petrie and Brook 1992)

The study of reasons for staying alive when you are thinking of killing yourself may point to both psychological and social interventions. (Kralik and Danforth 1992; Linehan 1983) This type of work could be extended to Aboriginal communities in a search for reasons for living and means of coping with distress that fit local culture and social conditions.

Social Structure and Economy

Durkheim focused on how changes in economic and occupational structure interfered with the social institutions and forms of life that serve to weave together or regulate the social order and so maintain a sense of morale and shared meaning in life. (Symonds 1991) Durkheim argued that the suicide rate "varies inversely with the degree of integration of domestic society", and this has offered a popular way to understand the deleterious effects of social breakdown and disorganization that have come from forced acculturation and relocation. He used the term *anomie* for a state of pervasive demoralization related to the breakdown of the "moral order", including religious, kinship and other social institutions; suicides attributable to such social breakdown he termed *anomic*. Durkheim contrasted them with *altruistic* suicides, which occur in an effort to sustain the life of loved ones or the community, and *egoistic* suicides, which occur when the cultural concept of the person becomes overly individualistic and undermines communal values, ultimately creating an 'empty self'. (Cushman 1990) Interdependence within the family and the community should reduce both egoistic and anomic suicide.

Durkheim also noted the existence of fatalistic suicide, which occur when individuals experience no alternatives or possibilities for escape from intolerable circumstances. This corresponds to the situation of many adolescents faced with multiple problems and few options in their communities. Fatalistic suicide can occur in situations of rigid social structure with few options, while anomic suicide occurs in situations of loss of social structure and norms. In a sense, however, they are not mutually exclusive, since communities may be rigid in some respects and chaotic in others. As well, chaotic communities may be embedded in a larger social system that is rigid and allows few options for Aboriginal people. Forms of institutional and bureaucratic rigidity, however, are also embedded in a larger world system marked by rapid and capricious change. The distinct forms of suicide characterized by Durkheim may thus not capture the range of conflicting situations of youth faced with local community politics and larger institutional structures and constantly exposed to mass media views of the larger world.

While Durkheim assumed that the whole population is suicide-prone, it seems clear that individuals with psychopathology are more likely to respond to anomic or fatalistic conditions with suicide. (Wasserman 1992) However, since these same conditions undoubtedly increase or aggravate many forms of psychopathology, the importance of other social factors in making suicide a more salient option should not be overlooked.

Poverty and unemployment

The impact of economic conditions on suicide has been studied extensively at a cross-national level. (Garrison 1992) Economic indicators used include levels of unemployment, disposable income, stock market indices, per capita income as a percentage of the gross national product, and poverty levels.

Suicide rates increase during times of economic hardship and decline in times of relative prosperity. Suicide rates have been found to be strongly correlated, at rho=.65, with percentage of population below the poverty level among Native Americans in the United States (Young 1990), and at rho=.76 among First Nations people on 26 reserves in Alberta. (Bagley 1991)

In most studies of the general population, suicide attempts are strongly associated with unemployment in both men and women. (Dyck et al. 1988; Hawton et al. 1988) Increasing unemployment is related to increased suicide rates, although this effect is generally stronger for men than for women. (Cormier and Klerman 1985; Wasserman 1992) Unemployment may have an additional indirect effect on women when affected men respond to this social stress with alcoholism and physical abuse of their spouses.

Rates of unemployment are much higher among Aboriginal people than in the general population. The percentage of status Indians living on-reserve receiving social assistance was 2.5 times the total Canadian rate in 1987. (MSB 1991a) The situation is similar among the Inuit. (Irwin 1989) However, Thompson (1987) suggests that "unemployment is seldom reported as a problem in Native male suicides because it is the 'status quo' on most reserves and is no more of a problem for the victim than for the rest of his community." In some communities where traditional subsistence patterns have been maintained, the meaning of wage employment may be different and the impact of unemployment thereby mitigated.

The transition from a traditional subsistence-based economy and a tribe or band society to a wage and social welfare economy has led to profound changes in the distribution of social status, power and wealth. This is true both at the local level, in family structure and sex-role differentiation, and at the larger sociopolitical level, in community leadership, economic development and interaction with provincial or federal political institutions. Of course, this does not mean that unemployment is not an factor in Aboriginal suicide, only that its effect may vary and must be examined in the context of the history and current values of specific communities.

Reserves, settlements and urban settings

Studies relating rural versus urban location to suicide vary cross-nationally, with some finding higher rates in urban settings and others in rural settings. The proportion of individuals living alone in an urban community may be one of the most powerful predictors of suicide. (Kowalski et al. 1987) By contrast, extended family households may offer protection against suicide, where such living arrangements are traditional, particularly for elderly people. (Dodge and Austin 1990) The effect of living arrangements, lack of support and loss may be both to

increase demoralization and, through a lack of contact, communication or supervision, to increase the opportunities for a lethal suicide attempt -- one in which the chance of rescue is minimal. (Grundlach 1990) The meaning of living arrangements, however, must be understood in the context of local economic conditions, family structure and cultural values.

Native Americans on reservations have higher overall mortality rates than those off-reservation (Thornton 1987, p. 50) -- although many factors could account for this observation. Forced relocation of entire communities has been noted repeatedly to have devastating effects on psychological well-being. (Berry 1993; Shkilnyk 1985) The loss of power and social segregation intrinsic to being placed on reservations or in settlements by a distant and unseen government has been seen by many authorities as contributing directly to Native American suicide. (Devereux 1961)

Conditions in most reserves and Aboriginal settlements are difficult. Crowded dwellings (defined as any dwelling occupied by more than one person per room) are some 16 times more common among Aboriginal people than Canadians in general. (MSB 1991a) Despite recent improvements, adequate water supply and sewage disposal also continue to be problems in many settlements.

About 45% of status Indians on-reserve are functionally illiterate, compared to 24% of Indians off-reserve. (MSB 1991a) This contributes to difficulty in competing on the job market and in making use of information resources. It also impairs the transmission of traditional culture. Thus, many youth are cut off from both cultures.

Family and religion

Since Durkheim it has been claimed that religion affects the suicide rate, with higher rates found among Protestants than among Catholics and Jews. In a study of U.S. suicide rates, Stack and Lester (1991) found no effect of type of religious affiliation, but more frequent church attendance did lower the rate of suicide. This effect of religiosity was independent of education, sex, age and marital status. A high proportion of individuals without religious affiliation in a community has also been found to be associated with an increased risk of suicide. (Hasselback et al. 1991)

Quality of family life and religiosity are highly correlated. (Stack 1992) The impact of religion on suicide rates can be understood not so much in terms of specific beliefs about suicide, suffering and the afterlife as in terms of how religious affiliations and practices organize social support networks. (Pescosolido and Georgianna 1989) Religiosity may reduce the suicide rate through its effects on strengthening social ties through participation in community activities. Family and religious institutions are the remaining 'collectivist' institutions in American life. Religiosity, stable families and low suicide rates may all reflect a strong sense of shared communal values.

Social disorganization and traditionalism

Bachman (1992) studied the correlates of Native American suicide rates averaged over the period 1980-87 in 100 different U.S. reservation-counties. She examined three hypotheses in multiple regression models: (1) the higher the rate of social disorganization in a reservation community, the higher the rate of suicide; (2) the higher the level of economic deprivation in a reservation community, the higher the rate of suicide; and (3) the more traditional and integrated a reservation community, the lower the rate of suicide.

Social disorganization was measured by the mobility rate – i.e., the proportion who did not live on their current reservation in 1979 or 1980. Economic deprivation was measured by three indicators: percentage of families below the poverty level; percentage unemployed; and the percentage of 16- to 19-year-olds who had dropped out of school. Traditionalism versus acculturation was measured by the percentage of the county population that was American Indian. This was intended to tap the degree of contact with non-Native society. The percentage of the American Indian population between the ages of 18 and 24 was included as a demographic control, since the suicide rate is known to be highest for this age group.

The first and third hypotheses were not confirmed. Mobility was not significantly related to the suicide rate. The percentage of the county that was Indian was actually positively correlated with the suicide rate. Of the economic indicators, the unemployment rate and the percentage of families below the poverty line were both significantly related to suicide rate, and there was a trend for the drop-out rate to contribute as well. Further, homicide was closely related to suicide, suggesting some common factors increasing the risk

of violent death.[9] In addition to such shared underlying factors as alcoholism and family violence, loss of family members by violent death is more likely to lead to complicated grief reactions and increase the risk of subsequent suicide. When the homicide rate was added to the model, it was the most significant predictor of the suicide rate, followed by the economic indicators.

This study is limited by the crude proxy measures of social disorganization and traditionalism. However, of the variables examined, economic deprivation emerges as the most important contributor to suicide risk. These results suggest that it was neither acculturation nor traditionalism *per se* that contributed to suicide risk but the degree of economic deprivation. Certainly, loss of family members by violent death is more likely to lead to complicated grief reactions and increase the risk of subsequent suicide.

Cultural-Historical Factors

Historical accounts of the health of the Aboriginal population were frequently distorted by biases. Two common portraits were the "innocent, peaceful and happy Native" living in harmony with nature and enjoying exceptional health and vigour and the life in primitive circumstances that was "nasty, brutish and short". Contemporary accounts of social problems among Aboriginal people tend to adopt the former idealized view of traditional times, perhaps in an effort to regain a noble past as part of a renewed identity.[10] The historical reality was, of course, neither of these extremes. As far as can be determined, social problems, including suicide, homicide and abuse of women and children, existed throughout the history of Aboriginal peoples as they have among peoples everywhere. (Edgerton 1992) A review of suicide in preliterate societies found rates that were not much lower than in many literate urban societies. (Tousignant and Mishara 1981) This historical reality should not detract, however, from the predominant role of culture change and the destruction of traditional ways of life by the dominant society in the problems of contemporary Aboriginal people. Nevertheless, traditional beliefs and practices may persist in current practices and concepts of the self and so constitute both risk and protective factors for suicide.

Smith and Hackathorn (1982, p. 203) used the Human Relations Area Files (HRAF)[11] to look at the prevalence of suicide in tribal and peasant societies. Choosing only 69 societies

for which sufficient data on suicide prevalence were available, their sample included 20 Native American societies (tribes). Suicide was *less* frequent in societies with the following characteristics:

1. Greater family integration, as indicated by predominant mutual bonds and empathy among the adult members of the households.
2. Greater political integration, as indicated by a smaller number of jurisdictional levels present in the society between the individual and ultimate political authority.
3. Greater economic integration as indicated by three measures: (a) a settlement pattern involving nomadism or semi-nomadic life; (b) an economic level involving primarily hunting-gathering; and (c) a local community size that is very small.
4. More moderate expression of emotions, as contrasted with very restrained or very open expression.
5. Less importance of pride and shame in the culture.

Type of economy (settled agriculture as opposed to hunter-gatherer) and the importance of pride and shame in the culture were the factors that were most predictive of suicide rates.

Suicide must be considered in its cultural historical context for different Aboriginal groups. (GAP 1989) Examination of historical and ethnographic records suggests that suicide was rare in pre-contact times, but these data are extremely sketchy and unreliable. (Pine 1981) Despite wide variations in belief, most groups had explicit negative attitudes and proscriptions against suicide.

To emphasize the diversity of contemporary Native American groups, Webb and Willard (1975) described the different patterns of suicidal behaviour in six different groups. For some time, high rates of suicide were assumed to exist among all American Indian groups on the basis of studies of only two Shoshone Indian reservations suffering from a high level of social disorganization, unemployment, alcohol and solvent abuse, and criminal behaviour among adolescent males. These very limited data have been cited frequently to establish the severity of the problem in the entire Aboriginal population.

By contrast, the Pueblo Indians have been noted to have low suicide rates, although they encompass many different groups and, as with other Aboriginal groups, owing to their small numbers, it takes only one cluster of suicides to drive the rate up significantly. Among

the Dakota and Cheyenne, there have been few reports of completed suicide, although suicide attempts are more common. Webb and Willard (1975) argue that completed suicide is actually more common than it appears in this group because it often takes the form of risky or foolhardy behaviour or provocation in which one knows one will be killed. This conforms to a traditional pattern called "Crazy-Dog-Wishing-To-Die". Many accidental deaths may then be suicides.

Altruistic suicide by the incurably ill or disabled was described in some early historical reports of Aboriginal peoples, but it seems usually to have been a response to desperate circumstances. Many accounts make no mention of this practice, and its prevalence is unknown. (Vogel 1970/1990, p. 157) In fact, the epidemics of contagious diseases brought by European colonizers that decimated the Aboriginal population may have provoked many suicides through the utter despair felt by individuals who had lost their families and communities. (Thornton 1987, p. 74)

In the boreal or subarctic regions, suicide was sanctioned, indeed institutionalized, as a response to insoluble marital problems or as an act of mourning for the loss of a loved one. (GAP 1989) Among the Inuit, ethnographic accounts suggest that suicide was traditionally sanctioned when an individual became a burden to the group. (Leighton and Hughes 1955) Grief over the death of kin was also recognized as a legitimate reason for taking one's own life.

Certain cultural beliefs and social practices may also contribute to the risk of suicide. For example, the Hopi have traditionally been perceived as restrained, nonviolent, and highly integrated as a cultural group. However, in recent years they believe they have suffered an increase in suicide and alcoholism. This is popularly attributed by the Hopi to the impact of acculturation. Levy and Kunitz (1987) challenge some of these assumptions. In a study of suicide on Hopi reservations, they found most victims came from socially deviant families, in that their parents had married across traditional lines of endogamy. (Levy et al. 1987) Hopi suicides could be seen as a consequence of the stresses associated with contravening cultural taboos and so were at least partly attributable to forces of traditionalism within the community that act to maintain the community's self-definition and integration by controlling deviance. When deviant individuals, who were suffering social ostracism, attempted to

improve their lot, they were sometimes attacked by others for trying to step out of their place -- at the bottom of the society.

This study illustrates an important caveat against the tendency of some researchers to attribute all problems to cultural change. All communities create and control certain forms of deviance to define and integrate themselves. Yet social pressures on the individual labelled as deviant may be so powerful that they have deleterious effects on their mental health and create pathology. Of course, communities may differ in their tendency to label deviance according to their scale and cultural values. (Freilich et al. 1991)

There is insufficient information on the meaning of suicide in Aboriginal cultures in Canada. Much of the ethnographic literature does not address mental health issues or deals with a bygone era of varying relevance to contemporary Aboriginal peoples. There is an urgent need for detailed ethnohistorical and ethnographic studies of Aboriginal traditions and practices related to the range of deviant behaviours and distressing emotions, including depression, demoralization and suicide.

Culture Change, Modernization and Acculturation

'Acculturation' is a term for how individuals from one cultural background accommodate the encounter with a new culture. In the case of Aboriginal peoples this process has been driven both by their own economic interests and by tremendous external pressure from government and from economic, educational, medical and religious institutions at various points of their history. This process of cultural confrontation and change has usually proceeded at a pace dictated by interests outside Aboriginal communities. Hence, it is appropriate to speak of *forced acculturation.*

Berry (1993) notes that at the level of the group, acculturation may involve many types of changes: (1) changes in *physical environment*, including location, housing, population density, urbanization, environmental degradation and pollution; (2) *biological* changes in nutritional status and exposure to communicable diseases; (3) *political* changes, transforming or dissolving existing power structures and subordinating them to the dominant society; (4) *economic* changes in patterns of subsistence and employment; (5) *cultural* changes in

language, religion, education and technical practices and institutions; and (6) changes in *social* relationships, including patterns of inter- and intra-group relations.

Changes have been particularly profound for Aboriginal groups that were hunter-gathering societies organized at the level of extended families, bands or tribes. In most cases, these groups were accustomed to large territories, low population densities and relatively unstructured social systems. The process of sedentarization has changed all these parameters. Relatively large communities composed of unrelated individuals, living in high-density dwellings, with complicated new political and institutional structures that restrict freedom of activity, are now the norm.

Berry (1976, 1985) described four different patterns of response to acculturation: integration, assimilation, separation and marginalization. The choice (or emergence) of a particular response to acculturative stress is based on two variables: (1) whether traditional culture and identity are viewed as having value and are therefore to be retained; and (2) whether positive relations with the dominant society are sought. In general, integration and assimilation are viewed as positive outcomes by the dominant society the former involving a form of biculturalism while the latter amounts to abandoning one's identification with one's culture of origin for the dominant culture. In fact, active efforts to maintain traditional culture may sometimes be protective against the depredations of culture change:

> Groups that have maintained separationist responses, such as many of the Southwestern Pueblos and the Navajo, have experienced lower suicide rates than other Native Americans faced with the combined pressures of modernization, technological change, and acculturative stress. (GAP 1989, p. 51)

However, as these same authors note:

> Where traditional lifestyles and values have been eroded by displacement, disease, persistent unemployment, poverty, and religious and educational efforts to discourage 'old ways', separationist and integrationist adaptations tend to break down. Many Native American groups have endured this situation for generations; with pathways to assimilation to the dominant society blocked, they have slipped or been forced into cultural marginalization. These groups have lost many essential values of traditional culture and have not been able to replace them by active participation in American society in ways that are conducive to enhanced cultural and psychological self-esteem. The feelings of loss, alienation, self-denigration and identity confusion engendered by this

situation are reflected in the escalating rates of suicide witnessed in many Native American communities" (GAP 1989, pp. 51-52)

The increase in rates of suicide among many Aboriginal groups in recent decades has paralleled the increase in culture contact and acculturative stress. In general, higher rates of suicide are found among Aboriginal groups in greater contact with the dominant society. (Bachman 1992; GAP 1989; Van Winkle and May 1986) Increasing rates of suicide among Inuit and Athapaskan peoples have been associated with greater contact with southern culture and with access to alcohol. (Kraus and Buffler 1979) However, this pattern may not be consistent across all groups. For example, among the Navajo, rates of suicide did not vary on different reservations with degree of contact with the dominant society. (Levy and Kunitz 1971) Navajo culture has a long history of change, syncretism and assimilation of features of other groups. (Webb and Willard 1975) The crucial issue may be the trajectory of the process of acculturation, which in turn depends both on traditional patterns of culture change and on the pattern of negotiation with the dominant society. (GAP 1989)

As noted earlier, Bachman (1992) found that more traditional communities actually had higher suicide rates. In attempting to explain this finding, Bachman cites Berlin's cautions about the dilemmas of tradition versus modernity:

> Traditional communities, however, may impose old values on adolescents and young adults that may also lead to suicides or suicide attempts. For instance, an important American Indian value is that people should not strive to be better than others and thus cause others to lose face. In school and even in athletic events, being singled out as a superior student or athlete may bring ostracism or even physical chastisement from the peer group. Thus, at times, traditional tribes' values may be used to the detriment of their young people. (Berlin 1987, p. 226)

However, many other explanations are possible. Bachman's proxy measure for traditionalism is imprecise and may also reflect segregation, political disempowerment, size and social isolation of communities. Without further controls and a more direct measure of traditionalism and acculturation stress, the relationship is still inadequately tested. To a large extent, the problem is that acculturation is not a one-dimensional construct, and the process may go through distinct phases, with different consequences for mental health and suicide risk. (Berry 1985) There may be a sort of 'inverted U' relationship between traditionalism and

suicide, in which both very traditional and highly assimilated individuals or communities are protected from suicide, while those in the intermediate state experience greater conflict and confusion about identity, resulting in increased risk for suicide.

Jilek-Aall (1988) compared juvenile suicide in Norway, Denmark and Japan and among Amerindians and Inuit. Although she found disturbed family life during childhood to be a common predisposing factor for suicide across cultures, the Aboriginal case warranted special attention for endemic social problems that lead to "anomic depression". She described anomic depression as follows:

> This term denotes a psychophysiologic and behavioral syndrome characterized by anomie – absence of traditional norms guiding behavior – and by cultural identity confusion; a chronic dysphoric state with lack of interest in life, lack of self-respect and purpose, and no hope for a better future. These young people, who have also lost culturally acceptable ways of expressing anger and frustration, are extremely susceptible to the temporary escape provided by alcohol. The disinhibiting effect of alcohol facilitates violence and self-destructive behavior, thus creating new misery and the desire for further escape, ultimately leading to suicide. (1988, p. 95)

Davenport and Davenport (1987, p. 536) discuss how Aboriginal culture and lifestyle have been damaged and transformed by the dominant culture. All the changes wrought upon Aboriginal people have taken away their autonomy and initiative. The enforced settlement of Aboriginal people on reserves or reservations, with allocation of tribal lands without an understanding of the traditional relationship to the environment, has disrupted hunting and gathering practices that depend on natural cycles and shifting territorial boundaries. The collective use of land, rather than its individual ownership, is not easily accommodated by the political economy of modernization. The insensitivity of the dominant culture and government to Aboriginal political, religious, and educational practices has also caused and continues to create problems.

In the face of the systematic negation and destruction of Aboriginal traditions and self-esteem, suicide can be seen both as an escape from an intolerable situation and as an act of defiance.

> It reflects the hopelessness of trapped and imprisoned souls...According to many American Indians...suicide could be construed as the ultimate act of freedom. It is an act that defies governmental control and challenges the

> dominant society to face up to its irresponsibilities in meeting treaty agreements for health, education and welfare. (LaFromboise 1988)

Marginalization involves a sort of 'deculturation', in which individuals acquire the skills, values and tradition of neither culture. To some extent, this describes the situation of many Aboriginal youth, deprived of a deep education in and sense of value for their tradition, cut off from the mainstream of Canadian society by poverty, isolation and educational barriers, lacking linguistic skills in the language of either their elders or the dominant society. Berry (1993, p. 17) states that among Aboriginal youth in northern Ontario suicide "is related to the situation of being caught between two cultures, and being unable to find satisfaction in either."

Several studies indicate that suicides tend to occur among Aboriginal youth who are better educated than their Aboriginal peers, although less educated than their counterparts in the non-Aboriginal population. (Travis 1983) Brant (N.D., p. 3) suggests that these suicide victims "may have had ambitions to participate in mainstream society" but experienced frustration because they were "still behind in terms of education achievement and competing for jobs and recognition."

In a discussion of the dramatic increase in suicide rate in the N.W.T. between 1971 and 1978, particularly among the Inuit, Rodgers (1982) noted that the victim was often a better educated person who was employed and had spent time out of the community (creating a greater discrepancy between expectations and possibilities). He was seen by others as a potential success but was unable to confide his doubts or fears because of the need to maintain "an outward facade of self-reliance". The suicide victim thus maintains his image of success -- to the satisfaction of the community -- at the cost of a more basic level of acknowledgement and support from others.

Young males may experience great acculturative stress as a result of greater discrepancies between the traditional male role of hunter, provider and leader and limited contemporary economic opportunities. Aboriginal women may experience somewhat more continuity between traditional roles and current challenges, but they inevitably share in and suffer from the demoralization of the men in the community who are their fathers, brothers, husbands, and sons.

The acculturation model implies that individuals and communities have choices about how they adapt to contact with another culture. However, O'Neil (1983, 1984, 1986) has argued that this psychological view of acculturation fails to consider the political context in which acculturation takes place. As a result, it exaggerates the extent to which individuals exercise choice in selecting traditional or modern values. In his work on Inuit youth, O'Neil found that "the 'coping styles' available to young people were very much determined by a colonial political economy". (Personal communication) He suggests that rather than a purely psychological construct, coping is better understood as the outcome of an interaction between the individual and political-economic constraints derived from both local and larger social forces.

The pattern of acculturation reflects the ideology of the dominant society as well as the strategies of assimilation and accommodation adopted by the traditional group. (Berry 1993) Canada currently has an explicit policy of promoting multiculturalism, which should encourage individuals both to maintain their culture of origin and acquire new skills, values and practices derived from the dominant society. Historically, however, government interventions (as well as the activities of educational and religious institutions) have been based on policies of assimilation or segregation. Thus, despite recent changes in official policy and a less explicit ideology of assimilation, Aboriginal people in Canada face problems similar to those encountered by their counterparts in the United States. The revival and revitalization of Aboriginal values and traditions is a powerful counterforce to this assimilation.

Most researchers in this area approach Aboriginal cultural assimilation and culture conflict in terms of a bicultural model: non-Aboriginal versus Aboriginal culture. For example, Larose (1989, p. 38) discusses the situation of Aboriginal culture in Quebec in terms of a conflict of identity between the idealized Aboriginal self-image of the 'bush Indian', which is in contrast to contemporary Aboriginal identity, which always presupposes some form of contact with and adaptation to non-Aboriginal norms of behaviour. Acculturation research tends to assume a one-way direction of change in which the dominant culture overwhelms and displaces Aboriginal heritage cultures.

It may be more accurate, however, to view Aboriginal people as actively involved in constructing a new identity that draws, in varying degrees, from at least three sources: (1) the cultures of the dominant society; (2) the cultures of Aboriginal communities, whether urban enclaves, reserves or dispersed kinship networks; and (3) the traditions of the past. Past traditions are transmitted by family and elders within Aboriginal communities, but they are also represented in the dominant society as distorted images that are either denigrated or idealized. Individuals and communities must use creative *bricolage* to recover and re-invent their identity in a form that serves self-esteem and efficacy. In the process, Aboriginal communities and culture also help to reshape the dominant culture and its institutions. Although this process of identity construction is a two-way street, the overwhelming direction of influence, until recent times, has been the active displacement and destruction of Aboriginal traditions and values by the institutions of the dominant society. Even now, interest in Aboriginal traditions within the dominant society often takes the form of a romantic distortion and commercial appropriation of traditions that can be truly understood only in the context of specific communities and kinship ties.

Summary of Risk and Protective Factors

There is general consensus that there are high rates of major depressive disorder among Aboriginal people, although epidemiological data are limited. (MSB 1991a, p. 26) However, even among depressed patients, for whom the risk of suicide is greatest, the lifetime probability of suicide appears to be no more than 15%. (Goldstein et al. 1991) The accuracy of a model to predict true-positive results is limited by this low base rate. Goldstein and colleagues note that "the results have been disappointing when trying to predict suicides statistically. Although the list of potential predictors from which the present model was generated included nearly all the demographic and clinical risk factors for suicide that have been reported consistently in the literature, the model failed to predict even one of the eventual suicides." The study of risk factors is more useful as a guide to public health policy than in predicting individual suicides.

Many studies address risk factors independently, so it is not possible to know whether they act through other, more fundamental, variables. For example, major depression may be a

risk factor because it increases hopelessness or because it leads to depletion of brain monoamines. Unemployment may be a risk factor because it leads to poverty or to loss of self-esteem. Multivariate studies allow researchers to control for confounding variables and to examine interactions between variables. Even models that include multiple risk factors, however, account for only small amounts of the variation in suicidal behaviour. (Myers et al. 1991; Pfeffer et al. 1988)

A number of studies have assessed the relative contributions of risk factors to completed suicide or suicide attempts among Native Americans. A longitudinal survey of American Indian students attending a Bureau of Indian Affairs-funded but tribally administered boarding school in the southeastern United States examined the prevalence and incidence of symptoms of depression, anxiety, and substance abuse as well as the relative contribution of specific risk factors. (Manson et al. 1989) Suicide potential was ascertained by two survey items: (1) whether the student had ever tried to kill himself; and (2) whether suicide ideation had occurred in the past month. In this study, 23% of students had attempted suicide at some time in the past, and 33% reported suicidal ideation within the past month. Suicide attempters had higher levels of depressive symptomatology, greater quantity and frequency of alcohol use, and little family support. The authors found a strong relationship between relatives or friends having committed or attempted suicide and the students' attempts and current risk of suicide. Having experienced the death of a sibling or parent was not related to either suicide indicator in students, although the death of a friend was related to both past attempts and current suicide risk.

Analysis of data from the 1988 U.S. Indian Health Service Adolescent Health Survey identified multiple risk factors for suicide attempts. (Grossman et al. 1991) Self-report questionnaires were completed by 7,254 students in grades 6-12 on the Navaho reservations. Fifteen per cent of students (N=971) reported a past suicide attempt; more than half of these reported more than one attempt. Logistic regression was used to identify the factors that contributed independently to having made a past attempt. Factors identified, and their associated odds ratios,[12] were a history of mental health problems (3.2); having a friend who attempted suicide (2.8); weekly consumption of hard liquor (2.7); a family history of suicide

or suicide attempt (2.3); poor self-perception of health (2.2); a history of physical abuse (1.9); being female (1.7); and a history of sexual abuse (1.5).

In summary, risk factors for completed and attempted suicide among Native Americans closely parallel those for youth in general and include (Earls et al. 1991) frequent interpersonal conflict; prolonged or unresolved grief; chronic familial instability; depression; alcohol abuse or dependence; unemployment; and family history of psychiatric disorder (particularly alcoholism, depression, and suicide). Among Aboriginal adolescents, suicide rates are higher for those with physical illnesses, those who have previously attempted suicide, those with frequent criminal justice encounters, and those who have experienced multiple home placements. Cultural marginalization and concomitant problems in identity formation that produce chronic dysphoria and anomie render Aboriginal youth vulnerable to suicide, even in the absence of clinical depression. The phenomenon of the outwardly successful youth who commits suicide is a chastening reminder of the diversity and complexity of suicide. A single model of risk factors cannot fit every situation facing Aboriginal people today.

Traditional beliefs and practices influence the motives for — and the community response to — suicidal behaviour. It appears, however, that whether rates of suicide among Aboriginal groups were high or low in the past, many groups have experienced a tremendous increase in recent times. This has been attributed to the stress of acculturation and the availability of alcohol. (GAP 1989; Kraus and Buffler 1979; Ward and Fox 1977) However, as noted earlier, the increase in the last few decades parallels, in exaggerated form, the increase among young people in the general population. This suggests that larger social processes in Canadian society like increases in drug and alcohol problems and family disorganization — play a role in the current pattern of Aboriginal suicide. Only appropriately designed studies that combine epidemiological and ethnographic methods can clarify the role of cultural tradition, large-scale social processes, and the unique dilemmas posed by culture change and marginalization.

Interventions

Overview

In this section we review what is known about the effectiveness of various types of interventions for the detection and treatment of suicidal individuals, the prevention of suicides at the population level, and the post-suicide assistance of affected individuals and communities. The major types of current interventions are listed in Table 2 along with sources in the literature where more details can be found.

Detection

Both under-diagnosis of depression and inadequate use of antidepressants have been shown to increase suicide risk. (Appleby 1992) Primary care medical settings play an important role in the detection of suicidality. Most individuals making a suicide attempt have seen a primary care physician at some point before the attempt. Primary care providers may under-recognize depression and other serious treatable psychiatric disorders in all settings because of somatized clinical presentations. (Kirmayer et al. 1993c) This problem is compounded where limited resources or cultural and linguistic differences make diagnostic assessment more difficult.

A history of suicide attempts is common among adolescent patients in primary care, but most adolescents present with chief complaints related to sexually transmitted diseases, obstetrical or gynaecological concerns, or somatic symptoms like abdominal pain. In a study of 332 patients aged 12 to 19 attending a medical clinic, only 8% of suicide attempters presented with mental health related complaints. (Slap et al. 1992) Consequently, physicians tended not to identify adolescents with past suicide attempts (74% of whom reported current suicidal ideation) who are at risk for recurrent attempts.

Targeting primary care providers may be an efficient method of improving mental health care delivery and reducing the suicide rate. For example, an educational program for general practitioners on the island of Gotland, Sweden was developed to increase knowledge about the diagnosis and treatment of affective disorders. (Rutz et al. 1992; Rutz et al. 1989) Suicide rate was studied as an indicator of ultimate treatment failure of depressive disorders. There was a statistically significant decline in the incidence of suicide in Gotland compared to

Sweden as a whole the year after the educational programs were completed. This is in marked contrast to the lack of significant effects found from other suicide prevention programs, such as telephone hot-lines for the general population or school-based suicide prevention programs.

This preventive value may be extended by promoting primary care detection and treatment of panic disorder, which also carries an increased risk of suicide attempts. (Weissman et al. 1989) Patients with panic disorder frequently present to emergency room physicians or general practitioners where their symptoms of panic disorder may be misdiagnosed as a variety of cardiac or other medical illnesses. Consequently, their suicide risk may go unrecognized.

Suicide in adolescents may be the outcome of serious psychological problems that began before the age of 10 or 11. There is a need, therefore, to reach out to young children with improved methods of detecting and treating early depression, conduct problems and family pathology. (Carlson 1990) Studies of Native Americans at public boarding schools and high schools also suggest the need for early identification of students' general mental health needs and the importance of giving specific attention to substance use. (Howard-Pitney et al. 1992; Manson et al. 1989)

Unfortunately, the most seriously ill youth may be the ones who "elude the mental health system". (Myers et al. 1991) They may not be in school where their problems can come to the attention of educators. They may avoid contact with health care providers and reject community interventions. In our survey of Inuit youth in a settlement on Hudson Bay, we found that not a single young person would go to a doctor or nurse for a problem with depression. (Kirmayer and Malus 1993a) This may reflect a lack of knowledge about the symptoms of depression and the availability of effective treatments in the form of medication and psychotherapy.

Table 2
Types of Intervention for Suicide

Interventions	Sources
Detection	
Training of Primary Care Providers	Michel and Valach 1992; Rutz et al. 1992
Promoting Help Seeking	
Public Awareness of Depression	
Primary Prevention	
Crisis Hotlines	
Community Crisis Teams, Support Networks	Everstine et al. 1977
School-based Educational Programs in Problem Solving	Leenaars and Wenckstern 1991
School-based Counselling	Harvey 1985
Firearms control	Brent et al. 1987; Brent et al. 1991
Alcohol and substance use control	
Youth-Elder Adventure Camps	Levy and Kunitz 1987
Community Workshops	Berger and Tobeluk 1990; Ewan Cotterill et al. 1990; Muskox Program Development 1991
Job Training and Economic Development	
Political Empowerment	
Secondary Prevention	
Crisis Intervention	Samy 1993
Psychiatric Treatment	Berlin 1985
Hospitalization	Jacobs 1983; Sletten and Barton 1979
Specific Psychotherapy	Hendin 1981, 1991; Liberman 1981; Linehan et al. 1991; MacLeod et al. 1992
Family and Network Therapy	Richman 1979
Rehabilitation Programs/Aftercare	
Postvention	
Group or School-Based	Hazell 1991
Individual or Family Therapy for Bereaved	Worden 1983
Community Intervention	Rodgers 1991
Mass Media	Phillips et al. 1992

The problems of detection and treatment of depressed or suicidal individuals are compounded in small communities where there is considerable cost to one's social identity associated with declaring a personal or family conflict. Cultural values may also mitigate case-finding. As Brant notes:

> There is a problem with early identification and treatment of ...[the] at risk person because Native society is non-interfering and if such a person were... asked if he was having problems...[one would probably get the response:] 'nothing I can't handle' because self reliance in one's internal emotional world is expected. (N.D., p. 15)

The reluctance to acknowledge emotional distress may be a response to living in a small community, a specific cultural style, or a psychological defense. Given this reluctance, there is a need to develop means of reaching vulnerable and distressed individuals without subjecting them to psychiatric labelling and potential ostracism from the community. One solution is public education about depression and other psychiatric disorders aimed at reducing stigma. Another approach would provide counselling and group support in non-clinical settings such as youth recreation programs, vocational training or cultural activities.

Primary Prevention

Primary prevention aims to reduce suicide risk by improving the health of a population. In the case of many Aboriginal communities, the high prevalence of suicide attempts puts many youth at risk and suggests the utility of a broad-based approach aimed at promoting community mental health. However, most suicide prevention programs have remained focused on the individual level and the issue of suicide *per se.*

The fact that interpersonal crises are usually the immediate precipitants of youth suicide raises serious problems for prevention for at least three reasons: (1) interpersonal crises are frequent events for many individuals; (2) they are often provoked or aggravated by other characteristics of suicide attempters; and (3) there is often a short interval between the stressor and the suicide attempt. (Shaffer et al. 1988)

The basic modalities of suicide prevention developed for urban communities are rooted in a clinical perspective and include

1. providing ready access to comprehensive psychiatric services;
2. restricting access to methods used to commit suicide;
3. providing school-based programs to
   (a) heighten awareness of the problem;
   (b) promote case finding;
   (c) provide information about mental health resources;
   (d) improve teenagers' coping abilities.

Suicide hot-lines have had limited impact. (McNamee and Offord 1990) This disappointing lack of benefit may result from low utilization rates by the individuals most in need, poor training and uneven quality of helpers who provide inappropriate advice, and the lack of outreach or follow-up of individuals at risk. (Shaffer et al. 1988)

Most students do not recognize suicide as a feature of a mental illness; instead, suicide is treated as a natural response to rejection, feeling unloved or unwanted – or even as a heroic or romantic gesture. (Shaffer et al. 1988) This impedes help-seeking and acceptance of psychiatric intervention. Educational materials and public awareness programs aimed not at suicide *per se* but at coping with conflict and loss and facilitating psychiatric help-seeking for major depression and family problems may help reduce the suicide rate.

An analysis of U.D. data from the period 1980 to 1987 found that state governmental initiatives on suicide prevention – including specific legislation, a commission, task force or advisory group, and production of manuals or brochures – were associated with a decline in the suicide rate. (Lester 1992c) However, student participation in school-based suicide prevention programs was actually associated with a subsequent *increase* in the level of adolescent suicides within the state.

In an important critical review of youth suicide prevention programs, Shaffer and colleagues (1988) point out that educational programs – which are usually lecture programs of several hours' duration in which students are given information about suicide – may have counterproductive effects. These programs may have the effect of normalizing suicide rather than emphasizing its strong association with major psychiatric pathology:

> Relatively few students believe either before or after exposure to a program that suicide was a feature of mental illness. In view of the evidence that suicide

> is a feature of mental illness, programs that choose to ignore the psychiatric correlates of suicide are either operating in ignorance or are misrepresenting the facts. They may also inadvertently enhance the chances of imitation, which the authors believe is especially likely if suicide is portrayed as an understandable, tragic, heroic, or romantic response to stresses emanating from uncaring adults or institutions. In the authors' view, suicide is less likely to be imitated if depicted as a deviant act by someone with a mental disturbance. The findings thus do little to support the value of general educational programs. Most students do not need them, and those who do would probably be better served by an individualized approach to their clinical problems. This is not to say, however, that there is no place in the high school curriculum for more education about mental health and how to obtain help for emotional disorder. (Shaffer et al. 1988)

Vieland and colleagues (1991) assessed the impact of a high school-based suicide prevention program on the help-seeking behaviours of adolescents. The implemented program comprised a single 90-minute information session given by teachers who in turn had received 6 hours of training in the subject. Over an 18-month follow-up period, students completed three questionnaires on their coping strategies when faced with life stresses, including suicidality. There was no significant difference in reported coping strategies between students exposed to the program and those who did not receive it. In fact, there was a non-significant trend for the exposed group to report attitudes inconsistent with the program. Spirito and colleagues (1988) found a positive change in knowledge and coping skills following a six-week prevention program with a structured curriculum but did not test any impact on suicide rate.

It may be that drawing attention to the problem of suicide has a deleterious effect. School programs targeted not at suicide *per se* but at enhancing self-esteem may prove to be more effective. (Garland and Zigler 1993; Stivers 1991) Dryfoos (1990) examined 100 prevention programs in the areas of adolescent delinquency, pregnancy, drug abuse, school failure and acting out behaviour. Work on these problems is relevant to suicide prevention since they share many common risk factors. Dryfoos concluded that programs with multiple goals that include educational enhancement, job preparation, aid to dysfunctional families and restoration of community pride were more successful than others. The most successful programs managed to use the schools as the basic approach to problems of unemployment, family breakdown and community despair. Programs that were more likely to be successful

integrated multiple rather than single goals, e.g., drop-out prevention, pregnancy prevention, and improvement in child placements.

Felner and colleagues (1992) also emphasize the potential value of comprehensive programs, which include educational enhancement, improving employment opportunities and strengthening family coherence and community pride. More successful recent programs have a broad base that includes making schools more supportive of student populations already at risk from deleterious socio-economic factors through such measures as smaller classes and teaching styles that enhance self-esteem.

One issue that appears only sporadically in the suicide prevention literature is the question of cultural identity. As discussed earlier, Grossman and colleagues (1991) found alienation from culture and community to be an important risk factor in a survey of suicide attempts among Navaho youth. Elders in an Inuit community on Hudson Bay the site of a cluster of teenage suicides in 1991-92 – reported: "We don't know what to teach the children any more". (Personal communication to M. Malus) This points to the importance, in a comprehensive program, of nurturing a sense of pride in one's roots and heritage. Positive strength from one's past can work to inform the present with a sense of optimism for the future. In the United States, authorities on Native health have called repeatedly for community-wide intervention grounded in the culture and customs of the tribe. As the authors of a report on Native American adolescent health note:

> One is struck by the strong cultural values and heritage which transcend the poverty and negative statistics we have confronted. In many communities there is an orientation to collective values over individual decisions a strong cultural base for prevention programs. In many homes, cultural values and spirituality buffer youth from the often brutal economic realities which surround them. Language, arts, music and religion can serve as the basis for building common values. (Indian Health Service and University of Minnesota Adolescent Health Program 1992)

The challenge, then, is to encourage and support local initiatives that build on traditional values to provide renewed community solidarity and integration that reach alienated youth.

Communities themselves may be a fertile source of ideas that fit with local social and cultural realities. A state initiative in Alaska allowed communities to develop their own suicide prevention programs. (Berger and Tobeluk 1990) Town meetings in each community

led to proposals that were funded by the state. The types of programs funded included youth/elder communication (33%), e.g., cultural instruction, modelling; projects to promote knowledge of traditional language and culture; recreational activities to provide alternatives to alcohol or drug use (12%); support groups (9%) for youth, elders or both to raise self-esteem; volunteer systems to improve informal helping and networking in the community (8%); direct counselling to persons at risk (7%); education/prevention programs to inform people about self-destructive behaviour and train community residents to help (7%); development of a crisis intervention team (5%); and development of a crisis line (3%). No data were provided on whether this program was successful, but it was well received by the communities. Grass-roots development programs have been undertaken in the N.W.T. and elsewhere in Canada (Ewan Cotterill 1990; Muskox 1991), but these programs need both continued financial support and access to relevant mental health and organizational expertise to implement and evaluate their programs.

Various conventional mental health programs may be effective provided they have the support and participation of the community. (Berlin 1985) However, since the breakdown in the transmission of cultural traditions appears to contribute substantially to the widespread demoralization and hopelessness of youth, the development of programs to transmit traditional knowledge and values, usually by respected elders, is also a crucial component of any suicide prevention program addressed to Aboriginal people. Whatever programs are developed should include an evaluation component so that other communities can learn from their successes and failures.

Secondary Prevention

Acutely suicidal individuals require skilled crisis intervention and may require hospitalization. Suicide attempters require comprehensive medical care to prevent mortality and morbidity associated with their attempt and systematic follow-up and aftercare to prevent recurrence. Effective treatment of depression by antidepressant medication and psychotherapy can reduce the risk of repeated attempts and completed suicide.[13]

Given the uncertainty of prediction even in high-risk groups, many authorities have suggested that attention be focused on previous attempters to prevent recurrence and extended

to follow-up of individuals with parasuicidal behaviour. (Jeanneret 1992) Although treatment studies are lacking, long-term psychotherapy may be beneficial for adolescent suicide attempters. (Ladame 1992) Beck and colleagues (1985) advocate cognitive therapeutic interventions that specifically address hopelessness to lower suicide potential. Psychodynamic approaches offer a more differentiated approach to the range of motivations and conflicts that may give rise to suicidal behaviour. (Hendin 1991) However, psychodynamic psychotherapy is generally time- and labour-intensive, requiring great expertise to administer, and there are still no outcome studies to verify its usefulness in reducing suicidality. Family intervention may be the treatment of choice where suicidal impulses can be traced to intransigent conflicts with parents or siblings. (Samy 1993)

Unfortunately, there are few controlled outcome studies of the treatment of victims of attempted suicide with adequate description of sample, clearly defined treatment and close follow-up. One review concluded that there is no proof at present that psychiatric aftercare of suicide attempters is effective in preventing subsequent suicide. (Moller 1989) One major problem is non-adherence to treatment, with most studies showing only about 25% of patients participating in follow-up. In a three-month follow-up study of adolescents seen in a general hospital emergency department or an in-patient psychiatric unit, about 15% never showed up for their crisis therapy, and 10% made a second suicide attempt. (Spirito et al. 1992)

In the general population, individuals who make repeated suicide attempts constitute a special group with widespread deficits in problem solving and interpersonal relationships. (Appleby and Warner 1993) Specific forms of behaviour therapy directed at interpersonal problem solving produce demonstrable delays in parasuicide and less risk of repetition. (Liberman 1981) A randomized clinical trial of cognitive-behaviour therapy for the treatment of chronically parasuicidal women who met criteria for borderline personality disorder found less frequent and less severe parasuicidal behaviour, over the year of the treatment, in the treated group compared to a 'treatment as usual' community control. (Linehan et al. 1991)

The relevance of these psychotherapeutic approaches to the problem of Aboriginal suicide is still uncertain. Davenport and Davenport argue that

> psychological approaches favored by many mental health workers are most applicable to egoistic suicide   a type that is relatively rare among Indians.

> Although psychological approaches can also be used with altruistic and anomic suicide, psychological intervention for these types of suicide should be primarily an adjunct in a comprehensive process of community and social development. (1987, p. 537)

Postvention

Treatment of bereaved relatives and friends of suicide victims who may themselves be at risk for increased psychiatric morbidity, including suicide, is termed *postvention.* As noted earlier, suicide can occur in clusters, and this has been particularly common in Aboriginal communities that are closely knit. Suicides have a significant impact on family and friends of the victim, increasing depression for at least six months after the event. Consequently, many authorities advocate the provision of counselling and supportive psychotherapy aimed at promoting normal mourning and avoiding pathological grief responses. (Brent et al. 1992)

The U.S. Centers for Disease Control has developed guidelines for the community response to suicide clusters. (O'Carroll et al. 1988) In brief these guidelines suggest that

1. A community should review these recommendations and develop their own plan before the onset of a suicide cluster.
2. The response to the crisis should involve all concerned sectors of the community:
    (a) a co-ordinating committee of concerned individuals from school, church, health care, government, law enforcement, helpers, etc.
    (b) a host agency should be identified to co-ordinate meetings, planning and actual response in time of crisis.
3. Relevant community resources should be identified, including hospital, emergency medical services, school, clergy, parents' groups, suicide hotline, students, police, media, representatives from agencies not on coordinating committee.
4. The response should be implemented when a suicide cluster occurs or when one or more deaths from trauma are identified that may have an impact on adolescents.
5. The first step in crisis response is to contact and prepare all groups involved.
6. Avoid glorifying suicide victims and minimize sensationalism.
7. High-risk persons should be identified and have at least one screening interview with a trained counsellor and then be referred for further counselling as needed.

8. Timely flow of accurate, appropriate information should be provided to the media.
9. Elements of the environment that might increase the likelihood of further suicide attempts should be identified and changed.
10. Long-term issues suggested by the nature of the suicide cluster should be addressed.

Rodgers (1991) discusses an approach to suicide clusters in Aboriginal communities based on experiences with clusters in three communities, two in the N.W.T. and one in Saskatchewan, each with a population of about 1200. The suicide clusters involved mostly young males living in communities that lack resources and who have problems with alcoholism, family violence, general hopelessness and pervasive feelings of low-self esteem. Rodgers advocates a community-based intervention, conducted with outside consultation, based on the hypothesis that the suicides are an indicator of more widespread community disorganization.

In this intervention, the consultant prepares for a brief visit by collecting available information from key contacts within the social and political structure of the community. Onsite activities involve workshops, meetings with key informants, and community meetings. These meetings serve to identify problems within the community that can then be targeted for change. Key informants are also asked to identify individuals at risk within the community who are then offered continuing counselling. Responsibilities for follow-up are clearly defined.

Rodgers reports an almost complete halt to suicides in the three communities that received this intervention. Unfortunately, this report lacks both systematic description of the intervention and structured evaluation of its effectiveness. However, it remains a promising direction for integrating professional expertise with community resources.

Role of the Media

As noted earlier, the more publicity given to a suicide, the more suicides follow in its wake. While the exact mechanism of this effect is poorly understood, news media must be encouraged to follow specific guidelines with respect to suicide reporting. There is some evidence that this may actually reduce suicides following in the wake of media reporting.

(Phillips et al. 1992) Many Canadian editors have adopted policies to minimize the reporting of suicide to reduce their negative impact. (Pell and Watters 1982)

Phillips and colleagues (1992, pp. 510-512) offer explicit recommendations on how the media should handle suicides to reduce the contagion effect:

1. Headlines should not mention suicide explicitly.
2. Alternatives to suicide should be presented in the article.
3. The negative outcomes of suicide should be emphasized, rather than a romantic treatment (e.g., a TV program that portrays suicidal youth as heroic representatives of a betrayed culture).
4. Suicide stories should be short and not repeated frequently, while antisuicide stories should be presented immediately after suicide stories and repeated frequently.
5. The media should not create 'epidemics' by juxtaposing suicides from different parts of the country.
6. People conveying antisuicide messages should be recognizably similar in demographic characteristics (age, sex, ethnicity) to those of the targeted audience.
7. Multiple advocates should repeat the message that suicide is rare and elaborate on alternative ways of coping with loss, pain, rejection, depression, stress, and family or social problems.

Antisuicide materials can also be promulgated through the media. For example, there is a need for continued public education about the recognition of depression and panic disorder. Our survey of 100 youth in a northern Quebec Inuit community found that not a single person would go to a doctor, nurse or other professional helper if they were depressed, despite high levels of health care use for physical problems. (Kirmayer et al. 1993b) People need to be informed that major depression and panic disorder are treatable, and the stigma of mental disorder must be reduced, even as the stigma attached to suicide and other self-destructive behaviours is increased.

Finally, the media can contribute to suicide prevention by presenting positive images of Aboriginal culture and examples of successful coping and community development. Unfortunately, such stories are often eclipsed by more sensational accounts of community problems; such accounts may help Aboriginal groups gain political leverage, but they can be

deeply demoralizing for individuals and communities that identify with the afflicted groups. This is further aggravated by media tendencies to lump all Aboriginal people together, with little regard for their diverse cultures and experiences. Presenting a wide range of Aboriginal voices and events will counteract this tendency to stereotype and, inadvertently, promote prejudice.

Summary of Interventions

Figure 6 presents the types of suicide intervention arranged by their point of application: to pre-existing social or contextual factors, to the vulnerable individual, or at the time of a precipitating event or crisis. Interventions can be targeted to the sociocultural milieu, the family, the vulnerable individual or the crisis situation. While all these approaches are reasonable, only the public education and individual levels of intervention have received much study, and there is little evidence that they have significantly reduced the suicide rate. (McNamee and Offord 1990; Shaffer et al. 1988) Most disturbing, there is evidence that some types of intervention may actually be harmful specifically, school-based suicide awareness programs and media attention to suicide epidemics. (Lester 1992b; Phillips et al. 1992; Shaffer et al. 1990; Vieland et al. 1991) Most studies of the effectiveness of interventions have been methodologically flawed, so that no firm conclusions can be reached. (McNamee and Offord 1990)

Although early studies of school-based educational suicide prevention programs have been very disappointing (Shaffer et al. 1988;), some authorities remain optimistic. (Leenaars and Wenckstern 1991) More recent studies suggest some efficacy for intensive, broad-based programs. (Felner et al. 1992) The current consensus in the literature on youth suicide prevention emphasizes that rather than teaching the topic of suicide directly to students, schools should provide a health education curriculum for all students that builds basic skills useful for managing a variety of health issues. Such a curriculum would enhance students' skills in coping with stress or distressing emotions, problem solving, interpersonal communication and conflict resolution – all measures that help to build self-esteem. (Cimbolic and Jobes 1990) Even if these psychological issues are explored and dealt with in

life skills programs, however, the surrounding socio-economic factors that the community, and hence the individual, is struggling with, must be dealt with simultaneously.

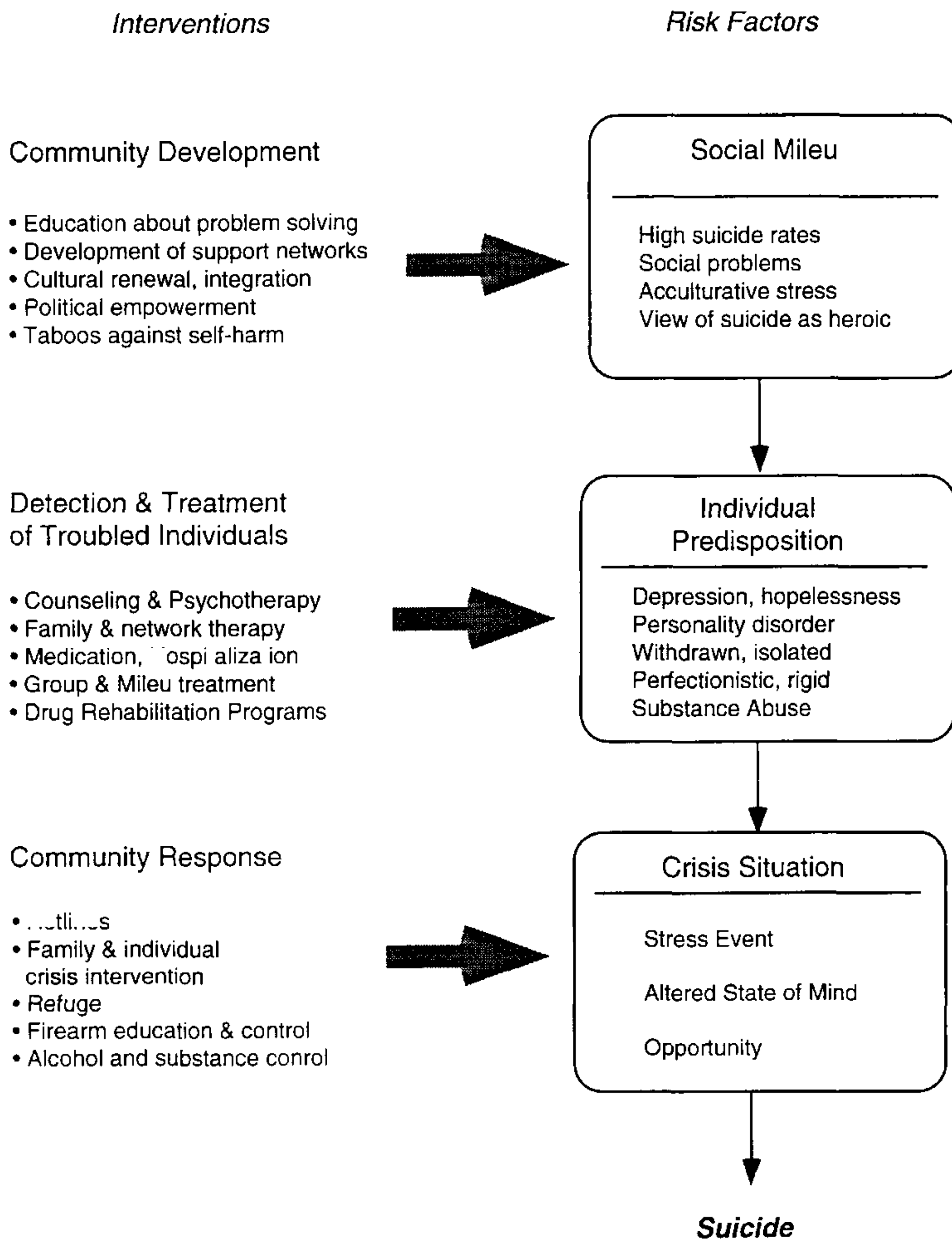
Aboriginal people must have ready access to culturally sensitive mental health care. In the case of individuals with major psychiatric disorders, who account for a large proportion of suicidal individuals, this means comprehensive psychiatric care, including access to evaluation, and the full range of treatment modalities. Traditional values of non-interference that are used to justify non-intervention and lead to avoidance of problems must be counteracted with education on help seeking for specific problems.

However, for many suicidal adolescents, their problems are inextricably inter-twined with problems in the family and the social order. Consequently, they need therapy aimed at helping them to negotiate and master the chaotic social situations they face. Family therapy or social network interventions aimed at uncovering abuse, resolving conflicts and assuring the emotional support of youth may be more useful than an individual-centred approach. For those suicidal adolescents who are withdrawn 'outsiders' relative to the community, therapy "directed at formation of role identity and assimilation into the dominance hierarchy would be a logical strategy to try, but has not had systematic study". (Ryland and Kruesi 1992, p. 192) For adolescents who are outward success stories, but who inwardly harbour perfectionist strivings and an inability to share pain and self-doubt, it may prove helpful to identify some of the burdensome community expectations they receive and develop relationships where they can confide their concerns and receive support.

One type of program that may be particularly effective at the level of cultural transmission, enhancing self-esteem and promoting social integration is the development of heritage camps that bring together youth and elders. Under skilful leadership and design, these programs can integrate potentially deviant youth without singling them out for further labelling or ostracism. (Levy and Kunitz 1987)

Government responses to social pathologies that simply provide more health care avoid the more fundamental causes. Serious effort must be applied to developing full employment and to preserving and enhancing community and cultural esteem. Prevention programs must identify community strengths as well as weaknesses to avoid contributing further to the demoralization that hurts everyone. (Levy and Kunitz 1987) Berry states that

Figure 6. A Model For Suicide Prevention*



* Based in part on Shaffer et al., 1988.

> Fundamental changes are required in order to retain control over lives, and through this, to return self-respect among Aboriginal Peoples. This return of control will involve advancing and withdrawing: the former on the part of Aboriginal peoples in the areas of education, health, social services, justice and economic development; and the latter on the part of non-Aboriginal peoples in the areas of schooling, hospitals, welfare, policing and resource exploitation. (1993, p. 18)

In the United States, recent legislation has authorized a comprehensive mental health program for Native Americans that will include community mental health planning, increased clinical staff, training of community workers, public education and research. (Nelson et al. 1992) Current policies are based on an Indian Health Services document (IHS 1990) that emphasizes the importance of providing a high level of professional mental health care to all Native groups. Efforts to make this care culturally sensitive and to work co-operatively with Native healers are also emphasized. Local community initiatives are essential to the development of new programs that address the low self-esteem, family violence and alcohol abuse that often contribute to suicide. A special team is available to help communities develop programs. (DeBruyn et al. 1988) Such a program, centred on delivery of professional mental health care, is a minimal standard that should be extended to all Aboriginal people by virtue of their citizenship. However, this professional response will likely be insufficient to tackle the elevated rates of suicides in Aboriginal communities. Only community development, political empowerment and the revitalization of Aboriginal identity will give youth a solid sense of self-worth and a hopeful future.

Conclusion

A Sociocultural Perspective

Psychiatric disorders increase the risk of suicide but, in themselves, are not a sufficient explanation for many suicidal acts. (Tanney 1992) Depression and schizophrenia increase the risk of completed suicide, while increased rates of non-fatal suicide attempts are most closely associated with personality disorders, dysthymic disorder and substance abuse. At present there are no adequate data on which to base a determination of the degree to which suicide among Aboriginal people in Canada is related directly to major psychiatric disorders. In particular, it is not known what proportion of suicide attempts are associated with major

depression and what proportion occur in otherwise healthy individuals facing hopelessness and despair because of social or community problems. However, since both depression and personality problems can be provoked and aggravated by social conditions (Brown and Harris 1978; Goldberg and Huxley 1992), a high prevalence of psychiatric comorbidity does not preclude a social explanation for suicide. It would, however, indicate the need for provision of psychiatric care to complement social interventions aimed at the root of the problem. There is also a continuing need for psychiatric epidemiology in Aboriginal communities to ascertain the prevalence of major psychiatric disorders and determine what social changes may alleviate the problem.

But the individual is not a free-standing entity – one's personhood and selfhood (the outward and inward faces of identity) are social and cultural constructions. (Markus and Kitayama 1991; Shweder 1991) Cultures vary in the concept of the person and the self. (Carrithers et al. 1985; Marsella et al. 1985) The impact of social forces on individual psychopathology, then, can be mediated by culture-specific notions of self and person.

The dominant North American culture tends to be highly individualistic, valuing self-direction, individual preferences and achievements as the marker of maturity, psychological health, and success. (Bellah et al. 1985) In contrast, many other cultures see the person as a social being whose identity derives from participation in family and community. (Sampson 1988) The broad polarity between egoistic or individualistic cultures and those that are communalistic or sociocentric, which has dominated the literature of cross-cultural psychology, must be expanded, however, to encompass the cultural realities of Aboriginal peoples. In some respects, these cultures appear sociocentric, in that the well-being of the family, tribe or band often takes precedence over that of the individual. In other respects, they are better understood as more individualistic than the modern welfare state, in that traditional values of respect for individuals' own choices and non-interference are central to the community. (Brant 1990)

In addition to the contrast of egoistic and sociocentric versions of the self, a third aspect, not adequately incorporated in current models, concerns the role of the environment in the experience of the self. For Aboriginal peoples, the land, the animals and the elements are all in transaction with the self and, indeed, in some sense constitute aspects of the self (or,

better, the human self participates in these larger, more encompassing realities). (Stairs 1992) Damage to the land, appropriation of land, and spatial restrictions all then constitute direct assaults on the self. These environmental attacks on the self must be understood as having psychological consequences that are equivalent in seriousness to the loss of social role and status in urban society. The result is certainly a diminution in self-esteem, but also a hobbling of a distinctive form of self-efficacy that has to do with living on and through the land. The implication is that issues that may seem purely political or territorial for the dominant society are fundamentally issues of collective and personal self-creation and well-being for Aboriginal peoples.

Psychotherapy and other mental health interventions assume a particular cultural concept of the person, with associated values of individualism and self-efficacy. (Kirmayer 1989b) These approaches may not fit well with either traditional Aboriginal cultural values or contemporary realities of settlement life. There is a need to rethink the applicability of different modes of intervention from the perspective of local community values and aspirations. Family and social network approaches that emphasize the interconnectedness of individuals may be more consonant with Aboriginal culture, particularly if they are extended to incorporate some notion of the interconnectedness of person and environment. (LaFromboise 1988)

As well, Aboriginal notions of spirituality are at the centre of the renaissance of traditional healing practices. (Absolon 1994; Stout 1994) These values are being reclaimed after centuries of active suppression by religious, educational and government institutions. Traditional healing practices invoke spirituality as a link between individual suffering and the health of the community as a whole. Suicide then is seen as closely related to other forms of sickness of the spirit, and the aim of healing is to restore the balance of physical, mental, emotional and spiritual dimensions of self and community. (Stout 1994) While the term 'spiritual' is understood intuitively and experientially by many people, it has specific interpretations in different community contexts. The efficacy of promoting spiritual values and healing cannot be understood simply in terms of symptoms, behaviours or outcomes, as it is an essential element in the current reconstruction and revitalization of Aboriginal identity at both the individual and the community level.

Emerging Trends in Research

A fundamental problem in efforts to predict suicide is its low base rate. Any method that is sensitive enough to detect individuals at risk will actually identify many more *false positives* — that is, individuals who are not truly at risk. At the same time, unpredictable life events sometimes precipitate suicide attempts. Consequently, the goal of accurate prediction of individual suicides may be forever out of reach. Instead, we need to understand the nature of suicide in psychological, social and cultural perspective to guide broad-based interventions aimed at improving the health and well-being of Aboriginal people and so reducing suicide rates among groups as a whole.

Research on psychological processes proximate to suicide may guide better understanding of causes, prevention and psychotherapeutic treatment. Such research may also provide a locus where the impact of culture on psychological processes, beliefs and attitudes can be examined. Similarly, studies of family, interpersonal and social network responses to depression, aggression and suicidal behaviour offer another way to examine the impact of distinctive social and cultural factors on behaviour and may lead to culturally adapted intervention strategies.

Among the questions to be addressed at the psychological level are the following:

- How are depression, anxiety and demoralization expressed and coped with in Aboriginal communities? Expressions of distress vary widely cross-culturally, so that psychiatric diagnostic categories may give a very incomplete picture of local forms of distress. (Kirmayer 1989a) We need to know more about cultural variations in the expression of distress so that treatable disorders can be recognized. We need to understand the social response to problems so that helpful strategies can be supported and maladaptive responses modified.
- What role do culture-specific notions of the self and the person play in the cognitive and behavioral processes that contribute to depression, anxiety and suicide?
- How does the self mediate the social processes of disorganization and anomie?
- How do some individuals resist the damaging effects of widespread social problems and political disempowerment? The study of 'reasons for living' and ways of coping

offers an entry point for studying adaptive strategies that fit local traditions and social context.

- What therapeutic strategies have an immediate effect on suicidal ideation?
- What interventions have long-term benefits in suicide prevention?
- Traditional values of non-interference may be used to justify non-intervention and lead to avoidance of problems. The circumstances under which denial and avoidance are adaptive strategies and under which they are themselves the cause of harm are the focus of current controversies in health psychology and must be studied in the Aboriginal context.
- How must psychotherapy, family therapy and network interventions be modified to fit the social and cultural situation of Aboriginal peoples? We need to develop culturally appropriate forms of psychotherapy and intervention that reflect the cultural concept of the person and cultural values. (Kirmayer 1989b) Thus, most psychotherapy is individualistically oriented and aimed at self-efficacy. To respect traditional values of family, community and spirituality, psychotherapy may need to be altered, or at least occur with a large measure of openness to alternative conceptions of the self.

Social processes affect the whole community and demand different research strategies to examine their impact. Important social questions for understanding and preventing Aboriginal suicide include the following:

- What accounts for the enormous variations in suicide rates across communities?
- To what extent is this a question of simply accounting for the dynamics of clusters?
- There is a lack of information on the effect of changing configurations of the family and on the impact of parenting or presence or absence of children. (Stack 1992)
- To what extent are economic factors (poverty, unemployment, rate of growth) sufficient to account for differences in rates?
- How can we understand local variations in the acculturative process?
- How do community attitudes toward suicide and mental health affect the suicide rate? Lester and Bean (1992) have developed scales to measure attitudes toward suicide (e.g., asking respondents to react to statements such as "people who commit suicide are usually mentally ill", "suicide is often triggered by arguments with a lover or

spouse", "suicide can be a rational act", "only cowards kill themselves", etc.) that could, with cultural adaptation, be used to examine community attitudes that may sanction or prohibit suicide.

Specific gaps in the research literature identified by this review include the following:

- We lack basic data on the rates and psychosocial correlates of suicide attempts among most Aboriginal groups in Canada.
- There are no systematic comparisons across regions and Aboriginal groups in Canada to identify variations and social correlates.
- There are few ethnographic studies of Aboriginal concepts of the person and the self as they pertain to health and well-being as well as to coping with adversity.
- We know little about the impact of culture change on child-rearing practices, the nature of family composition, and social support within different types of Aboriginal communities.
- Many individuals, families, and communities cope successfully with adversity, depression and suicidal ideation. Case studies of communities where positive changes have occurred are essential to balance the current emphasis on detailing problems and applying conventional solutions without adequate evaluation. Studies of community-based programs would provide an essential corrective to the tendency of mental health research to focus on individual psychopathology and interventions.
- There is little work on the meanings and implications of the spiritual dimension of suffering and healing, which are the focus of the revitalization of Native healing traditions.

There is a clear need for basic epidemiological data and for more culturally valid studies that integrate anthropological and indigenous perspectives with epidemiological methods. (Rogler 1992) Inconsistencies in findings across studies may be minimized with standardized epidemiological methods. Those that remain, however, will be understood only when we address the personal and cultural meanings of symptoms and behaviour.

There is an urgent need for evaluation research of intervention programs in Aboriginal communities, since there is a real possibility that some well-intentioned interventions may do more harm than good. Compounding this problem is the fact that suicide commands public

and government attention and therefore is perceived as a powerful issue to bring to the fore in political debates. Just this focus, however, may serve to legitimate suicide as a form of political protest and so, inadvertently, increase its prevalence.

Research must be conducted collaboratively with communities to ensure relevance and responsiveness to local needs and perceptions.

Ethical guidelines for the conduct of research with Aboriginal communities and peoples have been published by the Royal Commission on Aboriginal Peoples (1993) and the Association of Canadian Universities for Northern Studies (1990), among other groups.

Implications for Intervention

Previous working groups have clearly set out the broad agenda for Aboriginal mental health. (MSB 1991b) The basic principles include

1. a holistic approach to health – that is, avoiding the segmentation of care and narrow focus of biomedicine to encompass biological, psychological sociocultural and spiritual dimensions of health and well-being;
2. co-ordination of multidisciplinary services;
3. a continuum of care from promotion to prevention, treatment, support and aftercare;
4. mental health training of existing community workers;
5. development of specialized indigenous training centres;
6. a particular focus on child and family;
7. experiential learning and development of indigenous models of knowledge and practice.

While embracing these principles, the research we have reviewed suggests that suicide interventions among Aboriginal peoples must

- address problems at the community and political level as well as at the individual level – specifically, to promote empowerment of individuals and communities so that people come to feel a greater sense of coherence and control over their lives;
- promote active transmission of traditional language and life skills from elders to young people;
- support symbols and enactments of group and community pride;

- develop culturally appropriate educational programs that address problem solving, dealing with substance abuse, depression, anger, relationship breakups, and other life events;
- ensure access to basic biomedical care; train primary care providers to detect and treat major depression, panic disorder, and other psychiatric disorders;
- develop and improve access to treatment programs for alcohol and substance use;
- develop cadres of local Aboriginal community mental health workers with skills in individual and family counselling, social network intervention and community development; and
- develop culturally sensitive approaches to psychotherapy, family therapy and social network intervention — especially the promotion of traditional healing practices.

As well, we note that there are certain problems not of culture but of scale that affect the applicability of mental health programs designed for urban settings. In small communities, identifying vulnerable individuals may have damaging effects on their social status and integration, thus further aggravating their situation. As well, in small communities there are no secrets, so that usual guarantees of professional confidence may be more or less meaningless. The development of interventions must thus proceed with the participation of community members, experts on social process and cultural practitioners, and not by mental health practitioners simply transplanting models of care appropriate for their familiar settings to Aboriginal communities.

Suicide is a response to feeling trapped in a dead end with no exit. It is almost always an effort to escape unending frustration, grief and psychic pain. (Schneidman 1993) The prevention of suicide must therefore counteract frustration, hopelessness and unbearable pain in all of their toxic forms and provide other means of changing or escaping intolerable circumstances. In many cases, this may involve psychotherapy, medication or other forms of healing that renew the individual's sense of power, self-efficacy and self-worth. For conventional mental health approaches to be effective, however, they must fit with community values. Where the loss of hope affects whole communities, this individualized approach may be woefully inadequate. Rather than turning Aboriginal communities into therapeutic milieus where everyone is preoccupied with mental health issues, it may be more effective to address

directly the social problems of economic disadvantage, breakdowns in the transmission of cultural tradition and identity, and political disenfranchisement.

In accord with previous reports, then, we believe that the fragmentation of mental health programs into substance abuse, violence, psychiatric disorders, suicide prevention and so on is not a wise way to proceed. (MSB 1991B) There is tremendous overlap between the affected individuals, the professional expertise and the appropriate interventions. Focusing attention exclusively on suicide, without attending to its larger context, may do more harm than good. A comprehensive approach to the problem of suicide should be integrated within larger programs of health promotion, family life education, community and cultural development, and political empowerment.

Notes

1. Comparisons of completed and attempted suicides are made difficult by differences in research methods. For example, Lester (1991) used a measure of objective suicidal intent on a sample of completed suicides and a sample of attempted suicides. He found that the correlates of suicidal intent were quite different in the two groups. This may reflect substantive differences between completed and attempted suicides, but it also may reflect limitations of working with retrospective data. The problem with using reports by others of the life events of the individual who has committed suicide is that the meaning of relevant events may be changed or omitted by the respondent.

2. Throughout this document we use the term Indian when referring to status or non-status Indians in Canada or Native American Indians in the United States. To avoid confusion, the choice of term parallels the particular literature we are citing or reviewing.

3. In estimating prevalence, we have relied heavily on statistical data from the Medical Services Branch because few other data are available. Unfortunately, these statistics address only status Indians. As well, we have not been able to review the original sources of these data or their methods of collection, so we cannot ascertain their reliability.

4. A *cohort effect* is one associated with a specific group of individuals born within a specific time period (e.g., baby boomers). A *period effect* involves changes occurring at one specific time that affect individuals of all ages at that time.

5. A suicide cluster is a grouping of suicides close in time and location (see below).

6. Affective disorders include major depression and bipolar (manic-depressive) disorder, and well as dysthymia (chronic low-grade depression).

7. Individuals who complete suicide tend to have low levels of cerebrospinal fluid 5-hydroxyindoleacetic acid (CSF 5-HIAA), a metabolite of the neurotransmitter serotonin (5-HT), and low levels of serotonin in the brain on post-mortem examination. (Roy 1992) This suggests that individuals who commit suicide have a depletion or hypofunctioning of brain serotonergic pathways, which have also been implicated in depression. In hospitalized psychiatric patients receiving treatment, a declining or low CSF 5-HIAA may predict poor prognosis. Although usually interpreted as evidence of a biological defect, CSF 5-HIAA levels may also reflect the influence on the brain of environmental or social factors, including social status. At present, the measurement of CSF 5-HIAA remains a research tool with uncertain clinical application.

8. Psychiatric disorders are currently categorized according to the World Health Organization, ICD-10, or the Diagnostic and Statistical Manual (DSM) of the American

Psychiatric Association, which is currently in its third revised edition. (DSM-III-R, American Psychiatric Association 1987) The latter scheme has two principal axes: Axis I concerns acute psychiatric disorders, while Axis II involves personality disorders chronic or lifelong difficulties in adaptation and interpersonal behaviour that are related to extremes of temperament or character-related difficulties. There are complications involved in interpreting and comparing studies pre- and post-1980, when the DSM-III was introduced, particularly with regard to the diagnostic groupings of depressive disorders and the lack of systematic reporting of comorbidity (Axis II) with depression (Axis I) before 1980. (Runeson and Rich 1992)

9. Suicide rates tend to be highly correlated with homicide rates in communities, ranging from r = .34 to .52. (Bachman 1992; Young 1990)

10. A second reason is the adaptationist argument that people in most places and most times are well-adapted to their environment and have few social or psychological problems unless some exceptional perturbation occurs, either internal to the society or in the form of culture contact (e.g., colonization: see, for example, Berry 1993). However, this assumption is not borne out by either by the historical record or epidemiological surveys with modern instruments, which indicate substantial levels of psychopathology in every society ever studied. (Edgerton 1992) It appears that human organisms are liable to maladaptive behavioral and emotional distress so that no society has ever had a 'perfect fit' with both its local ecology and human psychological needs. This fact should caution us against facile appeals to a golden age in the past, as well as to simple solutions to our present predicaments.

11. The HRAF are a series of databases of ethnographic information on a large number of societies compiled in a standard format that permits statistical comparison. However, the studies used to construct the database were never intended for this use; they span many different periods in the history of anthropology and were conducted without any standard method of data collection. Consequently, the presence or absence of mention of a specific datum (like suicide or psychopathology) reflects the idiosyncratic interests and perspective of the individual ethnographer. At best, then, the HRAF is useful for generating hypotheses; it cannot be considered a valid test of hypotheses – although it is an antidote to over-generalization from isolated ethnographic reports.

12. The odds ratio indicates the relative likelihood that an individual with the stated characteristic will attempt suicide compared to individuals without that characteristic. For example, an odds ratio of 3.2 for mental health problems indicates that individuals with mental health problems in this study are 3.2 times more likely to have attempted suicide. In logistic regression, these ratios are calculated while controlling for (holding constant) other variables. Hence, they represent the increase (or decrease) in risk that is uniquely attributable to that characteristic.

13. Concerns that the recently introduced antidepressant fluoxetine (Prozac) may provoke suicide have not proved well founded. (Power and Cowen 1992) The original report by Teicher et al. (1990) presented anecdotal reports of six cases, all of whom presented complex diagnostic problems. A retrospective study of 1017 patients found a significant increase in new onset suicidality in the fluoxetine-treated group (2.77%) compared to the non-fluoxetine-treated group (0.75%). However, a meta-analysis of pooled data from double blind trials found new-onset suicidality in 1.2% of fluoxetine-treated patients, 2.6% of placebo-treated patients, and 3.6% of TCA-treated patients. Fluoxetine appears to be safe and effective. However, it may cause agitation, irritability or motor restlessness (akathisia) and dysphoria in some patients, which the patient may attribute to a worsening of depression. This is most often seen with doses greater than 20 mg daily and usually shortly after increasing the dose.

Appendix 1
A Note on Research Methods

There are three broad strategies for studying the problem of suicide at the level of communities: clinical, epidemiological and ethnographic. Each has strengths and limitations. The integration of these forms of knowledge is a continuing challenge in the field of mental health.

Clinical studies that compare suicide attempters with other patients are conducted in the settings where problems are recognized and where professional staff are present to collect information. Clinical studies can describe the characteristics of suicide attempters who come or are brought for help and can identify potentially important risk and protective factors, but they cannot determine their prevalence or relative contributions to suicide risk in the population, which are important in identifying both social causes and potential methods of prevention. In any given clinical setting, completed suicide is usually a rare event, and it can be misleading to generalize from the idiosyncratic features of a few cases.

As well, studies of mental health in the community indicate that many individuals never come for help or use alternative family and community resources. Those that do contact the professional health care system are seen primarily in primary care, not in psychiatry or specialty mental health. It is therefore necessary to conduct community surveys to determine the true prevalence of suicide attempts and to study the effectiveness of family and community resources as well as professional interventions. (Goldberg and Huxley 1992) Studying the pathways to care may also identify problems in recognition of distress and in differential treatment and so improve the delivery of appropriate care.

Epidemiological surveys offer the best means of identifying risk and protective factors that function at the level of the vulnerable individual, as well as factors at the levels of family, social network, cultural community, society or nation that affect whole populations. Current epidemiological methods emphasize structured diagnostic interviews and systematic recording of details of personal history and experience. (Eaton and Kessler 1985) However, memory is surprisingly poor even for personally salient events, and recall is biased by present

concerns and conceptions. (Rogler et al. 1992) These factors set limits on the reliability of any psychiatric survey. Self-report measures of symptoms also identify dimensions of distress, though these may not fit discrete psychiatric diagnostic categories. (Goldberg and Huxley 1992)

Studies of completed suicides demand special methods to reconstruct the suicide victim's personality, psychopathology, recent life events and living circumstances (sometimes called a 'psychological autopsy'). (Brent et al. 1988) Usually, these are case control studies in which suicide victims are compared with peers or age-mates who died by other means or who are alive and well.

All retrospective studies have limitations owing to the lack of complete and accurate information in medical charts, family or informant recollection, official records and so on. For example, many studies have found low correlations between parents' reports of their children's distress and children's self-reports. While parents are often aware of symptoms of emotional distress in adolescent suicide attempters, parents tend to be unaware of (or deny or refuse to report) their adolescents' suicidal ideation and even suicide attempts. (Marttunen et al. 1992; Velez and Cohen 1988)

Retrospective case studies of completed suicide that involve intensive interviews with bereaved family members raise special practical and ethical issues. (Beskow et al. 1991) Interviews may be stressful for family and friends, and it is crucial to ensure that such interviews are conducted by mental health professionals equipped to recognize and deal with pathological responses to loss.

Many deaths recorded as 'accidents' are really suicides. This error in record keeping arises because of the difficulty in determining intent retrospectively and the general reluctance to acknowledge suicide because of its social stigma. This issue of suicide masquerading as accidental, violent or drug-related death is particularly important in assessing the extent of the suicide problem in Aboriginal communities. (MSB 1991a)

A partial solution for this problem involves reassessing the cause of death by standardized criteria. (Cheifetz et al. 1987) Such criteria can be applied in other settings, allowing comparisons that are not vitiated by local variations in coroners' judgements and reporting practices. For example, it has been claimed that Newfoundland has very low suicide

rates. Aldridge and St. John conjectured that this might be attributable simply to high rates of under-reporting. They produced a more thorough count of the total number of suicides by supplementing official suicides with a systematic reassessment of records of accidental deaths, death certificates not transmitted to archives, and records of pathologists' examinations not sent to the chief forensic pathologist.

> Cases were included as suicide if death had been caused by firearms, hanging, jumping in front of a speeding vehicle or jumping from high places. Deaths by other less lethal self-destructive methods such as recreational or prescription drug overdose, asphyxia or drowning were considered to be suicide if one or more of the following were found in the record: a suicide note or record of a note having been found; record of a previous suicide attempt; evidence of previous psychiatric hospitalization or psychiatric treatment; statements that the person had suffered from a psychiatric illness before or at the time of the suicide. Alcohol and drug abuse were included as psychiatric illness because of their association with suicide in young people. (1991, p. 433)

This procedure revealed that fully 58% of suicides were not initially reported — a substantially higher rate of under-reporting than that found in previous studies. While this type of careful assessment gives a more accurate estimate of suicide prevalence, it also introduces bias into studies of the correlates of suicide, since psychiatric morbidity and substance abuse become criteria for defining a death as suicide. In effect, it conflates suicide and parasuicidal behaviours that may have occurred without suicidal intent.

Comparisons across regions and groups — or between groups and the general population — must adjust the crude suicide rate for differences in the demographic composition of the population. For example, groups with a disproportionate number of young people will have inflated suicide rates because the suicide rate is generally higher for youth. Alternatively, comparisons among groups must be made for specific age and sex strata or subgroups. Further, breakdown of group comparisons by type of suicide may also be important where there are clinical or public health reasons for identifying the role of specific risk factors or the effectiveness of specific interventions. (Tousignant and Mishara 1981)

A general problem for cross-sectional epidemiological research is that factors found to correlate with an outcome do not necessarily cause it. Studies that simply report correlations between factors and suicide rates, while they may be useful in developing indices of prediction, may be extremely misleading in attempts to determine the causes of suicide.

Similar underlying processes may give rise to suicide, attempted suicide and other factors associated with these outcomes. In completed suicide, only replication of observations in different samples with statistical control for confounds can allow identification of more fundamental risk factors. In the case of attempted suicide, longitudinal studies permit greater confidence in identifying antecedents and consequences of factors presumed to contribute to suicide. Ultimately, however, ascription of causality depends on theoretical models of the pathway from cause to consequence. These causal models are usually derived from social or psychological theory, clinical experience, and detailed knowledge or case studies of communities.

Ethnographic case studies use anthropological techniques of participant observation, depth interviews and qualitative data analysis to explore the meaning of events and actions to the individuals and groups involved. They examine actions as *situated* -- that is, having a particular salience, pragmatic force and meaning in a specific social context. In the case of suicide, ethnographic studies do not assume that suicide has a universal meaning but focus instead on the specific meanings of suicidal behaviour in a given community. While older anthropological traditions were concerned pre-eminently with belief systems, contemporary psychiatric anthropology focuses on the local construction of meaning through action. (Kirmayer 1992; Kleinman 1986, 1988) Culture is not an homogeneous medium that affects everyone identically -- it emerges from processes of invention, transmission, negotiation and contestation of shared beliefs and practices. Understanding behaviour at this level may resolve some of the inconsistencies across studies of suicide and mental health based on communities with different histories, cultural practices and current social, political and economic predicaments. Ethnography leads to local knowledge about specific situations and communities that can be generalized to communities that share salient features of social and historical context.

A central problem for cross-cultural work concerns the translation of instruments. Generally, this has been dealt with by checking translations by back-translation to ensure semantic equivalence. However, this may be insufficient, and newer methods that involve examining the latent structure of questionnaires with statistical methods may prove more effective. As well, it is recognized increasingly that questionnaires must contain items that are

culturally meaningful in that they use familiar language and tap cultural 'idioms of distress' - conventional means of expressing and understanding problems. (Manson et al. 1985) Without this modification of instruments, it is possible to verify that problems parallel to those found in the dominant society exist while missing a whole range of concerns that are expressed in a culturally distinctive fashion. (Kirmayer 1989a; Kleinman 1988) The most valid methods of determining the level, nature and correlates of suicide then involve integrating epidemiological and ethnographic methods. To date, this approach has been used in only a few studies of Aboriginal groups in North America. (Manson et al. 1985; O'Nell 1989) It has not yet been applied to the problem of suicide among most Aboriginal groups in Canada.

Appendix 2
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