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Report of the Canadian Forces Expert Panel on

SUICIDE
PREVENTION

Canada

Report of the Canadian Forces Expert Panel on Suicide Prevention

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SUMMARY

Suicide is an important public health problem in industrialized nations. It is the second leading cause of death in the demographic group that makes up the bulk of military organizations, namely young and middle-aged men. Hence, it is an important contributor to premature mortality in the armed forces. Suicide rates tend to be somewhat lower in service members relative to the general population: In the Canadian Forces, the suicide rate for Regular Force males[i] is approximately 20% lower than those of the general population of the same age. Those who have (or who develop) the serious mental disorders that present the greatest risk for suicide[ii] are excluded from the military, so this lower suicide rate is not surprising. Nevertheless, suicide remains an important public health threat in the military. For this reason alone, military organizations need to take an active interest in suicide prevention.

Public interest in military suicides has been particularly acute over the past year or two, coincident with a rise in the suicide rates seen in the US Army and Marine Corps. Other militaries coping with the extraordinary demands of the conflicts in SW Asia are concerned that they, too, will see such increases in time. In the CF, however, the suicide rate has remained steady since the beginning of the mission in Afghanistan, and previous deployment does *not* appear to be associated with a significantly increased risk of suicide. Nevertheless, the public, Members of Parliament, and military leaders often ask what the CF is doing in terms of suicide prevention.

Public interest notwithstanding, suicide in the military does have special significance. Mental health problems are important precursors to suicide, and certain types of military work (notably exposure to operational stressors such as combat) can trigger mental health problems. More importantly, military organizations have control over a broader range of potential targets for suicide prevention than does a civilian employer. For example, the military generally delivers its own mental health care, with such care being a central tool in suicide prevention.

It is against this backdrop that the CF Surgeon General convened the CF Expert Panel on Suicide Prevention in September 2009. Over two days, CF and external experts reviewed and evaluated the CF's suicide prevention activities.

Targets for Suicide Prevention in the CF: The Panel began by reviewing a familiar model of targets for suicide prevention in civilians. This model included the following elements:

A. Education and awareness programs;
B. Screening and assessment;
C. Pharmacotherapy;
D. Psychotherapy;
E. Follow-up care for suicide attempters and high-risk patients;
F. Restriction of access to lethal means; and
G. Media engagement (to encourage responsible reporting of suicides).

The Panel then extended this model by adding additional prevention targets in military organizations, including:

H. Organizational interventions intended to mitigate work stress/strain (leadership training, policy, programs, etc.);
I. Selection, resilience training, and primary risk factor modification;
J. Interventions to overcome barriers to mental health care; and
K. Systematic efforts to improve the quality of mental health care.

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[i]   There are so few suicides in women in the CF that is not appropriate to calculate and report their suicide rates.
[ii] Namely, bipolar (manic-depressive) disorder and psychotic disorders such as schizophrenia.

FIGURE 1

Figure 1: Potential Targets for Suicide Prevention in the CF

The Panel accepted that suicide prevention research poses formidable methodological challenges. Truly bias-free studies are close to impossible, and those inclined to doubt will find limitations in any given study. The Panel dealt with this challenge by trying to look at the strength of the literature as a whole instead of focusing on the limitations of any particular study.[iii]

The Panel also took the unusual stance of endorsing activities as suicide prevention initiatives even in the absence of firm evidence that they prevent suicide. However, this was only done when there was a highly plausible link to suicide prevention,[iv] when the intervention offered other clear benefits to the organization, and when the potential for harm appeared low.

The Panel's key findings and recommendations[v] for each of these targets are as follows:

A. Education and awareness programs: Suicide awareness training is what most people think of when they think of suicide prevention. While there is no evidence that it is beneficial as an isolated intervention, the multi-faceted, community-based prevention programs with the strongest evidence of efficacy have included an element of mass education.

In the past, the CF's mental health and suicide education program had been fragmented and inconsistent. Recently, however, the CF has stood up a Mental Health Education Advisory Committee, and it has expanded its Joint Speakers Bureau as its preferred delivery mechanism. The strategic vision is for members to receive a comprehensive and coherent mental health education and training

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iii   For example, while each study addressing the effectiveness of restriction of access to lethal means had at least some sources of uncontrollable bias, the literature as a whole consistently shows that means reduction can decrease the risk of suicide.
iv   For example, the Panel looked for evidence showing that the intervention significantly attenuates an important mediator of suicide, such as depression.
v   All recommendations are summarized in ANNEX A.

program across their career and deployment cycle. The Panel recommended that these mechanisms be used to integrate suicide prevention training into the rest of mental health education.

B. *Screening and assessment*: The CF already screens for suicidal thoughts during its regular Periodic Health Assessments and its pre- and post-deployment screenings. The Panel did not recommend any additional screening for suicidal thoughts. However, the Panel did recommend that the CF consider additional screening for *depression* in primary care, given evidence that this can contribute to better mental health outcomes. The Panel recommended that the CF follow conventional guidelines for the assessment of suicidal risk in patients with symptoms of mental health problems.

C. *Pharmacotherapy*: The Panel noted that CF Regular Force members have access to any needed psychiatric medications at no cost. This represents much better access than the average Canadian enjoys.[vi] The Panel found that the balance of evidence showed that antidepressants lower suicidal risk. The Panel recommended that the CF follow conventional guidelines for drug treatment of individuals with mental disorders and for suicidal patients in particular.

D. *Psychotherapy*: CF Regular Force members also have ready access to psychotherapy at no cost. Again, this is far better access than the typical Canadian enjoys.[vii] Expansion of the CF's mental health staff will shortly result in Regular Force members having approximately twice as many mental health providers per capita relative to Canadian civilians. Access to psychotherapy is important because optimal treatment for the common mental disorders that drive suicidal behaviour should include some evidence-based psychotherapy. The Panel recommended that the CF follow conventional guidelines for psychotherapy of individuals with mental disorders. It also recommended that suicidality be specifically targeted with evidence-based psychotherapies, citing evidence that this decreases the risk of suicidal behaviour.

E. *Systematic follow-up for high-risk patients*: The Panel found some evidence that systematic efforts to assure follow-up of high-risk patients decreased the risk of suicidal behaviours. Moreover, such efforts lead to other favourable outcomes, particularly for depressed patients in primary care settings. Each CF clinic currently has its own approach to ensuring follow-up, but the Panel recommended that the CF consider standardizing this essential process nationwide. The Panel also recommended that the CF consider implementing the US Army's RESPECT-Mil program for primary care management of depression and PTSD, based on strong evidence of the value of this approach.

CF members receive inpatient psychiatric care through civilian institutions. Limitations in inpatient bed capacity mean that members at significantly increased suicide risk[viii] will need to be managed as outpatients. Military environments offer both additional constraints (e.g., less privacy) and additional opportunities (e.g., engagement of the unit leader) relative to the typical community setting. High-risk patients are sometimes managed in their units, watched over by their co-workers (sometimes termed a "buddy watch"). The Panel found this practice to be well-intentioned but problematic, noting the enormous breach of patient confidentiality that it requires. Hence, the Panel recommended that the CF develop best practices for outpatient management of high-risk patients, making it clear that a unit "buddy watch" should be used only as a last resort.

F. *Restriction of access to lethal means*: The Panel found good evidence that restriction of access to lethal means (e.g., firearms, certain medications) can decrease the risk of suicide. However, additional opportunities for means reduction in the CF appear limited because the means of member suicides are often procured from outside the CF. The Panel did recommend that the CF's suicide surveillance

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vi   Coverage for psychiatric medications is uneven for the provincial health plans in Canada. Many individuals have private insurance coverage for medications, but these often have deductibles, co-insurance, or coverage limits.
vii Insurance coverage for psychotherapy is also uneven for most Canadians.
viii For example, those recently discharged from an inpatient facility after a serious suicide attempt.

system better capture information on the means of suicide to identify potential means reduction opportunities. The Panel also recommended that the CF evaluate means reduction through changes in the packaging and dispensing of medications commonly used in suicide (e.g., over-the-counter pain relievers). The Panel also emphasized that means restriction should be part of the management plan for individual high-risk patients managed as outpatients.

G. Media engagement: The Panel identified some evidence that media reporting of suicides can serve as a suicide trigger for suicide-prone individuals. The challenge for the CF is that member suicides are sometimes judged to be newsworthy, particularly when there is a perceived connection to a deployment. The Panel recommended that the CF attempt to engage the media to encourage them to follow conventional guidelines on the reporting of suicide in the media, such as those promulgated by the US Centers for Disease Control.

H. Organizational interventions intended to mitigate work stress/strain (leadership training, programs, policies, etc.): Work stress is a risk factor for mental health problems, and it is a common contributor to suicidal behaviour. The CF has implemented a broad range of organizational policies and programs to mitigate work stress. Examples include the PERSTEMPO policy, the Screening and Reintegration Policy, and the Alternative Dispute Resolution Program. Effective leadership mitigates work stress and hence may have suicide preventive effects.

Failed intimate relationships are a common trigger for suicidal behaviour. The Panel noted that the CF has developed a number of family-friendly policies and programs that are designed to strengthen intimate relationships, potentially mitigating suicide risk. Given that supervisors and others in the unit are likely to know about failed relationships, the Panel identified this as a potential point of intervention for suicide prevention.

Disciplinary action and/or legal problems are another common factor in military suicides, so these again represent another potential point for intervention. The Panel recommended that leader education provide guidance on managing the disciplinary process in ways that mitigate suicide risk. The Panel also recommended that the CF evaluate the US Air Force's "hands-off" policy for members under investigation. This policy requires that members be "handed off"[ix] to their leadership immediately after any investigative interview. Leaders then assess how the member is coping and refer for evaluation or care as needed.

I. Selection, resilience training, and primary risk factor reduction: At recruitment, the CF already screens out those with the most serious mental illnesses, which bring with them a high risk of suicide. Additional screening for those with a history of more minor psychopathology or those who merely have risk factors for these in the future is appealing in principle but unreliable in practice.

The CF is integrating some of the most promising resilience training approaches into its mental health education program. In theory, such training could mitigate suicide risk, but other demonstrated benefits[x] would need to sustain these programs.

The CF also offers evidence-based primary risk factor reduction through its "Strengthening the Forces" health promotion program. These programs target risk factors such as alcohol use disorders, relationship conflict, psychological stress, and anger. The programs may plausibly attenuate suicide risk through risk factor modification.

[ix]   The US Air Force's choice of ambiguous terminology here is unfortunate: "Hands-off" in this context refers to the transfer of responsibility for the member's safety from the investigator to the member's chain of command rather than a "hands-off" approach of non-intervention. Quite to the contrary, the whole point is the active involvement by the chain of command in assuring the member's safety and wellbeing.

[x]   Specifically, improvements in performance or wellbeing in response to adversity.

J. Systematic efforts to overcome barriers to mental health care: Nearly all suicidal individuals have mental health problems, but more than half are not in care at the time they commit suicide. The CF has invested heavily in efforts to overcome the barriers to mental health care over the past 5 to 10 years. These efforts have included:

- Strengthening confidentiality and career protection for members seeking care for mental health or substance abuse problems;

- The development of the innovative Operational Stress Injury Social Support (OSISS) peer support program;

- Dramatically expanding the number of CF mental health professionals;

- Offering up to 10 sessions of free, confidential counselling to CF members or their families through non-CF civilian providers;[xi] and

- Reinforcing screening for mental health problems during the regular Periodic Health Assessment and routine pre- and post-deployment screening.

The Panel reviewed evidence that these initiatives are paying off, and it noted that the CF has a robust surveillance system for monitoring barriers to mental health care in garrison using its periodic Health and Lifestyle Information Survey. The Panel supported carrying out a planned in-theatre mental health needs assessment to identify the needs and barriers to care in deployed settings.

K. Systematic efforts to improve the quality of mental health care: Conventional suicide prevention models focus on finding ways to identify suicidal individuals and get them into care, with the assumption being that once there, they will receive optimal treatment. Data from elsewhere shows that this is not a safe assumption: Studies have repeatedly shown that the quality of mental health care that actually gets delivered usually falls short of what experts consider optimal care. Care received by suicide victims tends to be especially inadequate.

The CF's well-resourced mental health system has eliminated nearly all of the structural problems that plague the delivery of mental health care in civilian settings, so it *should* be performing better. However, hard data on the quality of care in the CF is lacking: Without such data, systematic efforts to enhance the quality of care are impossible. For this reason, the Panel's most pivotal recommendation is that the CF take steps to reinforce its infrastructure for quality improvement in mental health care. Each suicide offers the tragic potential to provide valuable lessons for suicide prevention, much as airplane crash investigations help prevent future crashes. Current CF policy requires a Board of Inquiry (BOI) for every CF suicide, but the Panel concluded that the BOI process was a weak and inefficient tool for clinical quality assurance. For this reason, it recommended that the CF do a rapid, standardized health care quality assurance investigation after each suicide.

Conclusions: When broadly framed as above, the CF already has a strong suicide prevention program that compares favourably to those of its closest allies. In particular, it includes almost all of the elements of the US Air Force's benchmark suicide prevention program (ANNEX B), for which the strongest and most relevant evidence of efficacy exists. It has also implemented (or is in the process of implementing) nearly all of the suicide prevention strategies most consistently identified in the civilian scientific literature. Finally, its approach targets additional factors that are more specific to military organizations.

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xi   Access is managed through the Canadian Forces Member Assistance Program (CFMAP).

Nevertheless, the Panel did identify some opportunities for reinforcing the CF's program, most notably the need to improve its ability to systematically improve the quality of mental health care that it delivers. Given the strength of the CF's existing program, the Panel's recommendations represent additional prevention opportunities to exploit as opposed to serious deficiencies to correct.

The Panel emphasized that the responsibility for suicide prevention in the CF needs to be shared among leaders, clinicians, and the rank-and-file. The leader and clinician responsibilities are laid out above. Members need to do what they can to recognize the need for care in others and to help them get into care. Moreover, members have a responsibility to do their best to recognize their *own* need for care, to actively engage in such care, and to comply with recommended treatment. However, the Panel recognized that mental disorders perversely rob people of the insight, hope, and trust that are needed in order to engage in care. For this reason, the CF's suicide prevention approach can be framed as an attempt to set up circumstances that favour this essential engagement in care.

Suicide prevention has a strong, intuitive appeal. To the grieving friend or family member, their loved one's suicide likely appears preventable, particularly when the victim is receiving mental health care. In practice, though, most suicides are not preventable: Quality assurance audits in mental health settings suggest that even for those already in care, only about a quarter of suicides are judged to be preventable.

The Panel identified a number of factors that contribute to the incomplete preventability of suicide, including intrinsic technological limitations in mental health care, the complexities of providing mental health care, the broad range of contributors to suicidal behaviour, and important scientific uncertainties as to how best to treat mental disorders and prevent suicides. While mental health treatments are better than ever, mental illnesses are powerful disorders: Even the best equipped clinicians cannot pry every patient from their grasp.

Thus, the Panel emphasized the need to have reasonable expectations of the CF's suicide prevention program. Many of the most effective interventions are already in place, so future gains are likely to be modest. For this reason, the Panel felt that the ancillary benefits of the CF's suicide prevention program (e.g., quality improvement in mental health care) will overshadow its impact on suicide rates.

BACKGROUND

Suicide is a rare but tragic event, taking the lives of close to 4,000 Canadians each year [1]. It is a leading cause of death among the demographic group that forms the bulk of military personnel [1], and it contributes importantly to years of potential life lost in that population [2].

The finality of the suicidal act makes prevention an especially important control measure.[xii] In theory, all suicides should be preventable, but in practice, only some are. Analogously, all motor vehicle accident deaths should be preventable: If people were to drive prudently and avoid running into other vehicles, pedestrians, or stationary objects, no one would die in a car crash.[xiii] In practice, people are inattentive, drive when road conditions are poor, speed, disobey traffic laws, drink and drive, and so on…with predictable consequences.[xiv]

Even for patients who are in mental health care, clinical quality control audits have shown that only 20 to 25% of suicides are judged to have been preventable [3;4]. Still, much as a broad range of interventions and technological advances have decreased the road traffic accident fatality rate [5], a number of interventions have been shown to decrease the risk of suicidal behaviour [6]. There are also many measures that plausibly have suicide preventive effects but for which firm evidence is lacking.

Suicide prevention in military organizations has a special significance, particularly at present:

- Mental health problems are leading contributors to suicidal behaviour [6], and certain military activities (notably armed combat) can trigger mental health problems [7]. While suicide rates in active-duty military populations are usually somewhat lower than those of the general population [8-11], *veterans* of some [12;13] (but not all [14;15]) conflicts appear to be at higher risk of suicide. Thus, the military has a due diligence responsibility to mitigate what could be an occupational health problem.

- The conflicts in SW Asia are exposing larger numbers of Western military personnel to greater degrees of risk and adversity than in any time in recent memory.

- Suicide rates in the US Army and Marine Corps have increased dramatically over the past few years. In contrast, the CF suicide rate has remained stable over that same period, despite the extraordinary demands of the mission in Afghanistan. Rates have also been stable in the UK [16;17], which also has heavy operational commitments in SW Asia. However, the number of suicides in the CF is low enough that the ability to detect a small to modest increase in the suicide rate from year-to-year is limited (see ANNEX C).

- Most importantly, military organizations have control over a broader range of potential targets for suicide prevention than does the typical employer. This is because the military is, in addition to being an employer, also a health care delivery system, an occupational medicine service, a public health entity, an insurance plan, etc.

As described in detail in ANNEX C and shown in Figure 2 and Figure 3, the number of suicides in the CF is low in absolute terms (approximately 10 per year), and the rate in males[xv] is about 20% below that of the Canadian general population of the same age distribution (specifically about 17 to 20 suicides per 100,000 men per year). Despite the deployment of close to 30,000 members in support of the mission in Afghanistan, male suicide rates have not increased over the past five years.

[xii] In comparison, most conditions offer an opportunity for cure even when prevention fails (e.g., syphilis, lung cancer, etc.).
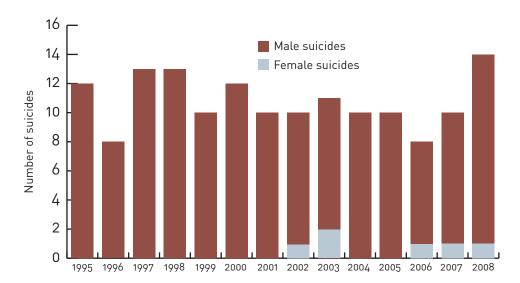[xiii] In fact, public health experts object to the use of the term "accident" in this context, preferring "car crashes," which sends stronger message about their potential preventability.
[xiv] Prevention of motor vehicle accidents has some similarities to suicide prevention: Both are complex problems requiring a complex series of interventions. Environmental interventions are important in each. Educational campaigns can play a facilitative role in road traffic accident prevention, but their independent contribution is uncertain and probably small (as it is for suicide prevention). An important difference between accident prevention and suicide prevention is that no one *wants* to have a car accident—this is an unplanned and undesired outcome. In contrast, truly suicidal individuals *want* to die and are capable to achieving their goal. This makes prevention a greater challenge.
[xv] There are so few suicides in women in the CF that is not appropriate to calculate and report their suicide rates.

FIGURE 2*

CF Regular Force Suicides, Both Sexes, 1995–2008

*Data from the CF suicide surveillance system.

FIGURE 3*

CF Regular Force Male Suicide Rate, 1995–2008
(Compared to Canadian Male Suicide Rate)

*2005 was the most recent year for which general population suicide rates were available at the time of this analysis. CF data is from CF suicide surveillance system (for numbers of suicides), the CF's Human Resources Management System (for the numbers of male Regular Force personnel per year, and Statistics Canada (for Canadian general population suicide rates).

Notwithstanding these facts, CF suicides regularly attract public attention, particularly when there is the perception that the suicide was related to a deployment or where it is believed that the CF should have prevented the suicide. Available data (see ANNEX C) shows that suicides are in fact no more likely in those with a history of deployment.

The CF is involved in many activities that have (or may have) suicide preventive effects, but its existing policy on suicide prevention (CFAO 19-44, ANNEX D) dates from 1996. Since that time there have been major changes in the CF's operations, in the way it delivers mental health services, and in the body of knowledge on suicide prevention. The main focus of the current policy is education of members and leaders to increase their suicide awareness.

In the summer of 2009, the CF Surgeon General (Commodore Hans Jung) ordered the standing up of an Expert Panel on Suicide Prevention consisting of key CF health services personnel and representatives from some of our closest allies (ANNEX E). The stated objectives of the panel were to:

1. Review the available scientific evidence, epidemiology and current best practices in the area of suicide prevention and surveillance; and

2. Develop a series of recommendations for the management of suicide prevention and intervention in Canadian Forces that is balanced, feasible and logical given the available evidence (ANNEX F).

Suicide prevention recommendations from the Panel were *not* to be limited to educational approaches.

The Panel met in Halifax on 22 and 23 September 2009; the agenda is included as ANNEX G. CF experts made presentations on what the CF was doing with respect to suicide prevention in a given area (e.g., mass education). Potential opportunities for improvement were discussed, and formal recommendations were made. The CF's international colleagues presented information on their nations' suicide prevention programs. The strength of the CF's approach was judged against best practices from the literature and the approaches used by its closest allies. Comparison of the CF's approach against the suicide prevention strategy for Canada as a whole was not possible—Canada is one of the only industrialized nations that lacks a national suicide prevention strategy.

This report summarizes the Panel's findings and recommendations.

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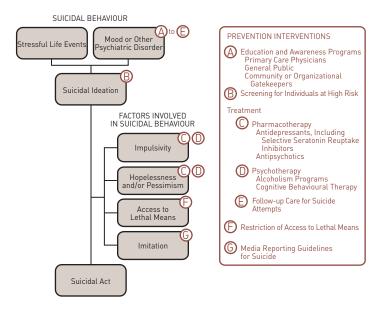# A COMPREHENSIVE MODEL OF POTENTIAL TARGETS FOR SUICIDE PREVENTION IN THE CF

To organize its deliberations, the Panel began with a commonly used model of potential targets for suicide prevention developed by Mann *et al* in 2005 [6] (Figure 4).

The panel then modified and expanded the model to emphasize additional potential targets for suicide prevention in military organizations (Figure 1, on page 4). The complete list of targets includes the following:

A. Education and awareness programs
B. Screening and assessment
C. Pharmacotherapy
D. Psychotherapy
E. Follow-up care for suicide attempters and high-risk patients
F. Restriction of access to lethal means
G. Media engagement (to encourage responsible reporting of suicides)
H. Organizational interventions intended to mitigate work stress/strain (leadership education/training, policy, programs, etc.)
I. Selection, resilience training, and primary risk factor modification
J. Interventions to overcome barriers to mental health care
K. Systematic efforts to improve the quality of mental health care

FIGURE 4

Mann *et al* Model of Targets of Suicide Prevention Intervention*

Circled letters refer to relevant prevention intervention listed on the right.

*JAMA, 26 October 2005, Volume 294. Issue 16, p. 2065. Copyright ©American Medical Association, 2005. All rights reserved.

The panel identified a number of interventions that plausibly offer benefits in terms of suicide prevention but for which evidence of efficacy (in terms of suicide prevention) was lacking. For example, good leadership has been shown to mitigate work stress, which is a known risk factor for depression which is in turn a known risk factor for suicide. In many cases, the Panel chose to endorse these as suicide prevention activities where a reasonable theoretical linkage could be made, where evidence of efficacy on mediators of suicide behaviour (e.g., depression) was strong, where the risk appeared to be low, and *especially where the interventions would provide other clear benefits to the CF*. For example, better leadership might not prevent suicides, but it should result in improved operational effectiveness.

Suicide prevention research is a methodological minefield: The causes of suicide are complex and multi-factorial, so multi-faceted interventions are often required. Suicide rates fluctuate in response to both known and unknown factors, making detection of program-related improvements difficult. In epidemiological terms, suicide is a rare enough event that studying the effects of prevention requires hundreds of thousands to millions of subjects followed over a period of years in order for convincing effects to be demonstrated. For randomized trials of community-based interventions, the ideal unit of randomization is the community, meaning that multiple similar communities need to be identified and randomized, adding to the logistical complexity of the research.

The enormity of the suicide prevention research evidence base posed an additional challenge to the Panel.[xvi] Rather than perform its own exhaustive literature review, it used a limited number of recent, high-quality reviews from others as its primary source material [6;18;19]. Although these reviews were summarizing the same studies, they reached different conclusions as to what the literature showed. These differing interpretations appeared to be largely rooted in different expectations as to what level of scientific evidence was required to show evidence of preventive efficacy.

The following sections of the report deal with each of the potential targets for suicide prevention delineated above.

[xvi] A MEDLINE search on "suicide" and "prevention" will yield approximately 8,000 articles.

PREVENTION STRATEGIES

A. Education and Awareness Programs

This section deals with suicide education and awareness programs that target CF members (i.e., the rank-and-file), CF gatekeepers, and CF clinicians.

Education of CF Members

Many CF members have received basic suicide awareness training, and a significant number have received more advanced (e.g., multi-day) training (see ANNEX H). Suicide awareness has been commonly incorporated into CF mental health education, but until recently, this programming was fragmented and inconsistent. For this reason, the CF has stood up a Mental Health Education Advisory Committee (MHEAC), which is tasked with providing high-level guidance for the development, implementation, and evaluation of a comprehensive mental health education program. In addition, it has enhanced and expanded its Joint Speakers Bureau (JSB); the JSB provides intensive training to its presenters to assure consistency and quality of the educational programming.

The vision for the CF's mental health education program is that members will get ongoing education about mental health issues at multiple points in their career and deployment cycle. Education will begin as early as possible in the member's career. Training content will change to reflect where the member is in their career/deployment cycle, with the right content being delivered at the right time.

Using guidance provided by the MHEAC (and priorities provided by senior leaders), the CF has already developed a series of modules for the Primary Leadership Qualification (PLQ) course and another series for pre-deployment training. The next modules developed will be for the post-deployment period. Additional modules for earlier and later in the career cycle will follow over the next year or two. Suicide awareness training is being integrated into each of the modules as appropriate.

The CF has also developed a half-day suicide awareness and prevention program as part of the Strengthening the Forces (StF) Program; information on this and other StF mental health and wellbeing programs is found in ANNEX H. The module is grounded in the US Army's "ACE" program [20], which targets specific skills for recognizing suicidality and intervening effectively. The ACE program teaches members to:

- **Ask** about suicidal thoughts;
- **Care** for those who express them; and
- **Escort** suicidal patients to care.

Suicide awareness training also targets mental health literacy, including helping individuals recognize the need for mental health care in themselves. Indeed, in both the CF [21;22] and the Canadian general population [23] the leading barrier to mental health care (seen in at least 80% of those surveyed) is that individuals with mental disorders *do not appear to realize that they have a problem for which help is available.* There is also evidence that public education campaigns can be associated with improvement in mental health literacy and treatment-seeking. Disappointingly, patients with depression with suicidal ideation benefited far less than others [24].

Still, suicide awareness education as a single intervention has never been shown to be effective at reducing suicidal behaviour [6]. Nevertheless, all community-based suicide prevention programs that have some evidence of efficacy have involved at least some mass education. Unfortunately, effective programs have also included other elements, so it is not possible to attribute their apparent benefits to the educational aspect. If education is effective, then the right "dose" is not known—there is some suggestion of efficacy with both brief programs and longer programs [18;19].

The CF's required mental health education program is delivered pre-deployment, post-deployment, and during career courses. Even though not all members will have an immediate opportunity to take part in these training sessions, the Panel chose not to mandate immediate training for all members. Its rationale was as follows:

- Suicide in the CF is an important public health *problem*, but it is not a public health *crisis*.

- Suicide education is only one small part of the CF's comprehensive prevention program.

- The independent contribution of suicide awareness and education remains uncertain.

- Members have complex educational needs for many different types of essential (and even lifesaving) training, and the Panel was reluctant to declare suicide prevention to be the top priority. Instead, it felt that those responsible for managing the training for a given group (their supervisor, commanding officer, or MOSID advisor) were in a better position to determine overall training priorities.

- Stand-alone suicide prevention training is available through Strengthening the Forces for those for whom this is felt to be urgent or essential.

The Panel applied this same logic to education for gatekeepers and clinicians (see below).

Recommendation 1: **The CF should continue to leverage its existing mechanisms for developing, implementing, and evaluating mental health training, specifically the MHEAC and the JSB.**

Recommendation 2: **Routine suicide awareness and prevention training should be incorporated into the rest of the regular, coordinated mental health training that will occur across each member's career and deployment cycle.**

Recommendation 3: **The US Army's "ACE" program targets the key competencies for suicide prevention and should be strongly considered for the CF's mental health education efforts.**

Recommendation 4: **The development of suicide awareness and prevention training should follow sound principles of curriculum development and adult education. Specifically, such training should incorporate opportunities for learners to practice suicide-specific skills, such as asking a friend about suicidal thoughts.**

Recommendation 5: **The fate of the StF module on suicide prevention should be decided by the Mental Health Education Advisory Committee. Until such time as the full mental health training program has been implemented, the StF suicide prevention program should continue to be available as a training option, particularly for those in gatekeeper roles.**

Recommendation 6: **For mass education, shorter programs should be favoured over longer ones until such time as there is evidence that longer programs lead to superior outcomes.**

Recommendation 7: **The Panel does not see the need to mandate that all members receive suicide prevention training by a certain date.**

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Gatekeeper Education

CF members in certain roles can serve as "gatekeepers" for suicidal individuals. These gatekeepers include chaplains, military police, personnel selection officers, and others. Military leaders are also important gatekeepers to mental health care in that their approval is often sought by members needing care during work hours.

Beyond this formal gatekeeping role, there is a sound rationale for benefits of good leadership as a suicide prevention strategy: Leaders have a special role in monitoring and attending to the health and wellbeing of their subordinates. The climate that they set with respect to attitudes towards mental health care can influence care-seeking for mental health problems [25]. Work stress is a contributing factor in some military suicides, and leader behaviour can mitigate work-related stress and strain [26;27]. Leaders who know their subordinates well may have additional opportunities to help them through personal or family problems as well.

While the above rationale creates a logical link between good leadership and suicide prevention, there is as yet no firm evidence that this potential benefit is indeed realized. Nevertheless, good leadership will obviously provide many other tangible benefits to the CF and to CF members.

Disciplinary action and legal difficulties are common suicide triggers, with more shameful transgressions (e.g., paedophilia) presumably being particularly risky. In addition, those with mental health problems are plausibly at increased risk for disciplinary infractions. Hence, an opportunity exists to manage disciplinary actions in a way that mitigates suicide risk.

There is no firm evidence that specific suicide training of leaders or other gatekeepers prevents suicides [6]. However, several prevention programs for which reasonable evidence of efficacy exists [19;28-30] included such training as part of a whole suite of different interventions. There is also evidence that gatekeeper education can improve knowledge, attitudes, and self-efficacy about suicide and mental health [31].

While the Panel felt that that there was a good enough rationale for requiring at least some specific suicide prevention training, it felt strongly that this training should not eclipse the likely greater importance of general good leadership skills as a suicide prevention tool.

> **Recommendation 8:** The linkage between good leadership, work-related stress, and mental health problems should be covered in the CF's routine mental health education program, as should the leader's role in overcoming barriers to mental health care.

> **Recommendation 9:** General leadership skills that form the backbone of leadership training in the CF are probably more important for suicide prevention than specific suicide prevention skills. However, there is enough evidence of potential benefit of suicide prevention training that it should be incorporated into the CF's mental health education program across a leader's career cycle. Stand-alone suicide prevention training may be considered for leaders who will not be receiving suicide prevention training as part of a career course (or other training) over the new few years, but such training should not be considered mandatory. Instead, leaders should prioritize the need for suicide prevention training against other unit and individual training needs.

> **Recommendation 10:** Educational programming for leaders should specifically address ways of managing the disciplinary process in ways that mitigate suicide risk.

> **Recommendation 11:** Those who manage the ongoing education of CF trades that have an increased likelihood of encountering patients at suicide risk (such as MP's) should consider the need for specific suicide prevention training for their occupational group. The priority of this training should be weighed against the many other educational needs of a given occupational group.

Education of Clinicians

All CF clinicians will have had education on suicide as part of their professional training; they will also have had the opportunity to develop suicide-specific skills. Recently-trained primary care clinicians will also have had training in the recognition and management of depression. However, the strength of the training and experience will vary substantially from individual to individual [32]. Medics and other front-line personnel are likely to have had less training and experience in assessment of suicidality. Nevertheless, the Panel felt that the ability to establish trust and rapport with the patient was the most central skill for suicide assessment: Without such a foundation, effective assessment of suicidality cannot occur.

There is evidence that education of primary care clinicians on recognition and treatment of depression may decrease suicidal behaviour [6;31]. However, the study showing the clearest benefit was done long ago [33], when knowledge of depression and its treatment were not common in primary care providers. More recent studies have shown apparent benefits in other countries [34;35], but the culture and medical care system are different enough that the apparent benefits may not apply in Canada. Systematic efforts to enhance the quality of care often require an educational component (though in general, clinician education *alone* tends to have little or no sustained effect [36]).

> **Recommendation 12:** **Those managing the educational programming for CF health professionals should consider offering educational programming on depression and suicide as part of their regular educational activities (e.g., occupation-specific training at CFB Borden). These individuals should weigh the priority of such training against the many other educational needs of their occupational group.**

> **Recommendation 13:** **The ability to establish trust and rapport with a potentially suicidal patient is fundamental to the assessment of suicidality. As such, evaluating and, if needed, enhancing these skills should be a focus of suicide prevention education for clinicians.**

> **Recommendation 14:** **Those supervising clinicians should consider the need to provide targeted education or training on depression and suicide as part of the clinician's Personal Learning Plan. Again, this needs to be prioritized on an individual basis based on the totality of the individual's educational needs.**

B. Screening and Assessment

Currently, the CF screens members for suicidal ideation both during the Periodic Health Assessment (PHA), which takes place for all Regular Force members every 2 – 5 years, and during the Enhanced Post-deployment Screening that is required 3 to 6 months after return from deployments of longer than 60 days, duration. Members also complete a screening questionnaire as they are preparing for a deployment. In all of these cases, the patient questionnaire includes a single question on suicidal thoughts. These instruments also contain screening questions on depression, PTSD, and alcohol use disorders, which are known risk factors for suicidal behaviour.

Consensus panels have concluded that there is no evidence that routine screening for suicide in primary care prevents suicide [37]. Nor, however, has harm been demonstrated, and data collected during screening programs can have surveillance value.

Nearly all suicide victims have evidence of a mental disorder, with depression predominating [6]. However, many patients with depression go unrecognized and untreated in primary care settings [38]. Effective care for depression is available, and it attenuates suicide risk.[xvii] This provides a sound theoretical rationale for screening for depression.

[xvii] This will be discussed in detail in the following two sections.

There is good evidence that routinely screening for *depression* in primary care can be superior to usual care, provided that certain additional conditions are met (such as having a systematic way of assuring follow-up of depressed patients [39;40]). Different consensus groups reviewing the more or less the same evidence base have recommended screening with varying levels of enthusiasm. For example, the US Preventive Services Task Force (UPSTF) recommended "screening adults for depression in clinical practices that have systems in place to assure accurate diagnosis, effective treatment, and follow-up," summarizing the evidence thusly:

> *"The USPSTF found good evidence that screening improves the accurate identification of depressed patients in primary care settings and that treatment of depressed adults identified in primary care settings decreases clinical morbidity. Trials that have directly evaluated the effect of screening on clinical outcomes have shown mixed results. Small benefits have been observed in studies that simply feed back screening results to clinicians. Larger benefits have been observed in studies in which the communication of screening results is coordinated with effective follow-up and treatment. The USPSTF concluded the benefits of screening are likely to outweigh any potential harms." [39]*

The Canadian Task Force on Preventive Health Care concluded that:

> *"…there is fair evidence to recommend screening adults in the general population for depression in primary care settings that have integrated programs for feedback to patients and access to case management or mental health care." [40]*

In contrast, the Cochrane Collaborative found:

> *"There is substantial evidence that routinely administered case finding/screening questionnaires for depression have minimal impact on the detection, management or outcome of depression by clinicians. Practice guidelines and recommendations to adopt this strategy, in isolation, in order to improve the quality of healthcare should be resisted. The longer term benefits and costs of routine screening/case finding for depression have not been evaluated. A two stage procedure for screening/case finding may be effective, but this needs to be evaluated in a large scale cluster randomised trial, with a prospective economic evaluation." [41]*

The likely reason for Cochrane's different conclusion is that that group is reluctant to do post-hoc analysis of studies that show differential effects. This justifiably conservative position minimizes the chance of recommending something that is valueless or harmful. On the other hand, this approach does increase the risk of depriving people of effective interventions before the most definitive proof of efficacy is available.

The ideal frequency of depression screening is unknown, but the rationale for increasing the frequency of screening in the CF is as follows:

- Depressive symptoms fluctuate over time (sometimes quite rapidly).

- Depression has important consequences on well being and functioning, so truncating the period of suffering offers real benefits to the patient (and to the CF).

- Suicidal thoughts and intent also come and go in a somewhat unpredictable fashion in depressed patients. Suicidality can develop relatively rapidly after onset of depression, and suicidal behaviour commonly occurs after a very brief period of suicidal intent: One study showed that the period between the first current thought of suicide and the actual attempt lasted 10 minutes or less in almost half of those who attempted suicide [42].

- Most convincingly, comprehensive, systems-based quality improvement initiatives have shown significantly benefits in depression identification and treatment [43],[xviii] and many of these systems have involved more frequent screening for depression, with some using screening at every primary care visit [44].

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xviii These systems will be discussed in detail later in this report.

Screening for PTSD has attracted interest in military organizations, particularly in the US where high rates of this condition are being seen as a consequence of the conflicts in SW Asia [7;45]. Military organizations obviously have a special obligation to mitigate PTSD, given that it is not infrequently service-related [46]. In the context of suicide prevention in the CF, the rationale for screening is as follows: As with depression, PTSD is a risk factor for suicidality [47-50], and it often causes significant functional impairments [51;52]. PTSD is also reasonably prevalent in the CF: In 2002, the 12-month prevalence in the Regular Forces was 2.8% [53],[xix] and approximately 4% of CF members returning from deployment in support of the mission in Afghanistan identify significant symptoms suggestive of PTSD[xx] on their post-deployment screening [54]. Effective treatments are available, but less that half of PTSD sufferers are in care [55]. The primary reason for failing to seek care appears to be that the sufferer does not appear to realize they have a problem for which effective help is available [21;56]. Even for CF members who *do* seek care, there is often a substantial delay between onset of symptoms and first care [55].[xxi] However, while there is a sound *theoretical* rationale for mass screening for PTSD, data demonstrating clear benefits from doing so is limited and equivocal [45], and there is hence even more uncertainty about the optimal *frequency* of screening. However, the issue of the benefits and risks of screening for PTSD is being actively researched, so additional data to inform screening practices will be emerging over the coming years. For example, the US military is currently evaluating a primary care initiative that includes routine screening for PTSD [57].

> **Recommendation 15:** Additional mass screening for suicidal ideation in the CF is not recommended, though existing screening during the Periodic Health Assessment and pre- and post-deployment screening may continue as this practice provides useful surveillance data and harm is unlikely.
>
> **Recommendation 16:** Depression screening during the Periodic Health Assessment and the pre- and post-deployment screening should continue.
>
> **Recommendation 17:** The CF should consider increasing the frequency of depression screening, but only if it forms part of a systematic approach to primary care management of depression.
>
> **Recommendation 18:** The CF should follow the emerging literature on the benefits of more frequent PTSD screening in primary care and implement such screening if and when there is sufficient evidence of benefit.

Assessment of Suicidality

Optimal treatment of suicidality cannot occur without a strong assessment of both the underlying mental disorder(s) and of the suicidality itself. The American Psychiatric Association has published guidelines for the assessment and treatment of suicidality [58]. These guidelines delineate risk factors and warning signs for suicide and indicate when and how to assess suicidality. While these guidelines date from 2003, the Panel judged them to be a sound approach for the CF.

While a long list of suicide risk factors have been identified [58], these are poor predictors of suicide in any individual patient. Overemphasis on suicide risk factors is problematic if those perceived to be a low risk do not get the assessment or treatment they need. Thus, the clinical suicide assessment (rather than a series of socio-demographic risk factors) needs to be the primary tool for risk assessment. Risk factor assessment may however have other value in terms of surveillance, performance measurement, and treatment planning.

[xix] The current prevalence is unknown, but results from the 2008 Health and Lifestyle Information Survey will shortly provide a more current PTSD point prevalence estimate for the CF population as a whole.

[xx] That is, they have a score of 50 or greater on the PTSD Checklist, Civilian Version (PCL-C).

[xxi] The median delay for treatment seeking for service-related PTSD in the CF was on the order of 5.5 years in 2002, but more recent data suggests that the delay to first care is far shorter currently.

Some have suggested that suicidality is a "vital sign" in mental health care that should assessed by their clinician at each and every visit [59]. Panel members believed that this is unnecessary and that it might result in the trivialization of the assessment process. For many low risk patients who have never had suicidality and are doing well in care, repetitive inquiry about suicidality can send the message that the therapist really doesn't understand their situation. However, the Panel felt that this disadvantage might not apply to computerized questionnaires that have been shown to enhance the quality of care delivered [60;61].

Quality assurance reviews of suicide victims have consistently identified deficiencies in the clinical suicide assessment [4;62;63], suggesting that increased attention to this essential aspect of care is needed in clinical quality assurance activities.

> **Recommendation 19:** **The CF should adopt and disseminate the APA guidelines on assessment of suicidality.**
>
> **Recommendation 20:** **Assessment of suicidality should of course occur at the first encounter for evaluation of patients with symptoms of mental health problems in both mental health and primary care settings. Suicidality should be reassessed during care for patients who have deteriorated, have developed new symptoms or co-morbidities, have failed to improve as expected, or are experiencing a crisis or significant new stressors. Assessment of suicidality at each and every mental health encounter is not required and in fact may be counterproductive. However, this last finding may not apply to computerized mental health outcomes management systems.**
>
> **Recommendation 21:** **In its educational programming on suicide, the CF should emphasize the limited value of risk factors for predicting suicide on a case-by-case basis. Instead, suicide risk assessment hinges on the precise content of an individual's suicide ideation and plan.**
>
> **Recommendation 22:** **Given its central role in suicide prevention, the assessment of suicidality should be a target for quality assurance audits.**

Treatment of Suicidality

The most important decision in the treatment of suicidal patients is the *setting* of care (e.g., inpatient vs. outpatient). The American Psychiatric Association guidelines on this [58] were judged to be broadly applicable to the CF context.

The most important limitation in these guidelines is that they assume that inpatient psychiatric beds are always available for treatment of suicidal patients. In Canada, the reality is otherwise: The CF no longer has its own inpatient beds, and the inpatient system is seriously strained to the point that many high-risk patients cannot be accommodated for as long as their treating clinicians would like. Thus, the reality is that members with significant suicidal risk will need to be managed as outpatients.

Assuring the safety of a suicidal patient outside of the hospital is always a challenge, but the CF has several additional challenges: First, members may have been removed from their family of origin or other primary sources of social support as a consequence of their military duties. Second, members living in barracks do not have the same level of privacy as civilians usually enjoy. Finally, many CF members need to have access to firearms in order to do their jobs, but restricting access to these is an essential part of a harm reduction strategy for suicidal individuals.

These constraints have led to the use of a unit "buddy watch," in which others in the unit are charged with assuring the safety of a suicidal individual [64;65]. This approach is well-intentioned but problematic: It necessitates a large-scale breach of confidentiality to execute the watch, during a time

at which such confidentiality is most essential: The suicide attempt is stigmatizing in and of itself; many patients are ashamed at having attempted, and some are even embarrassed at having failed. In addition, those performing the "buddy watch" will have no experience in the management of suicidal patients, so the watch may not effectively control suicide risk. They may nevertheless feel responsible when tragedy supervenes. Finally, the period of significantly increased suicide risk lasts weeks to months, making a "buddy watch" difficult to sustain. All of that understood, the Panel agreed that under unusual circumstances (e.g., in a forward area on deployment) a "buddy watch" may be an essential and lifesaving intervention.

> **Recommendation 23:** The CF should empanel a separate group to develop best practices for outpatient management of individuals at high risk for suicidal behaviour (such as those discharged from an inpatient facility following a serious suicide attempt). The group should specifically address the issue of when a unit "buddy watch" is indicated as well as how precisely the watch is to be carried out. Because resources are likely to vary from region to region, a mixture of both national and regional solutions will be required.

> **Recommendation 24:** A unit "buddy watch" should be reserved for short-term use in truly exceptional circumstances, such as a serious suicide attempt at a remote Forward Operating Base.

C. Pharmacotherapy

Drug therapy is a cornerstone of treatment for the mental disorders that are most closely associated with suicidal behaviour, namely psychotic disorders, bipolar disorder, and depression. These medications reverse many of the primary symptoms of the condition, improve well being , and enhance functioning. Clozapine and lithium have been shown to significantly decrease the risk of completed suicide in patients with schizophrenia and bipolar disorder, respectively [6]. However, these benefits are likely to be limited for the CF because more severe mental disorders are generally incompatible with military service.

Abundant evidence shows that antidepressants significantly decrease suicidal thoughts in depressed patients, on average [66;67]. Demonstrating ironclad evidence that medication prevents suicides is difficult for a series of methodological reasons. Nevertheless, the Panel and most experts believed that the balance of evidence strongly suggests that antidepressants do indeed decrease the risk of suicidal behaviour in adults. However, there does appear to be a paradoxical increase in the risk of suicidal behaviour in the weeks to months after initiating (or increasing the dose of) antidepressants in a small but important minority of patients [68].

There are conventional guidelines for the use of antidepressants and other psychiatric medications in a broad range of common disorders, such as depression, PTSD, and panic disorder. In addition, there are guidelines for the use of medications in suicidal patients in particular [58].

CF Regular Force members currently enjoy excellent access to whatever psychiatric medications they need at no out-of-pocket expense. Civilians have much more uneven insurance coverage of medications, which are usually not covered by the provincial insurance plans. Even when covered though private insurance, there are almost always co-pays and deductibles that can result in significant out of pocket costs. The CF has about twice as many psychiatrists per capita as the rest of Canada, which means that waiting times for specialist consultation on psychiatric medications are shorter than those seen in the provincial system.

Recommendation 25: The CF should follow conventional, evidence-based guidelines for the drug treatment of mental disorders.

Recommendation 26: The CF should follow the guidelines of the American Psychiatric Association with respect to drug therapy for suicidal patients. These guidelines provide instruction on how to mitigate the increased risk of suicidal behaviour that can occur in the first weeks to months after the initiation of antidepressants.

D. Psychotherapy

Evidence-based psychotherapies are available for a broad range of common mental disorders that increase the risk of suicide, such as depression, panic disorder, borderline personality disorder, PTSD, and others. For many disorders, there is evidence that psychotherapy offers additional benefits over drug therapy alone.

Cognitive-behavioural approaches have been the best studied and hence have the best evidence of efficacy behind them. For this reason, the CF has recently completed a nationwide CBT training program for its mental health providers. However, other approaches such as interpersonal therapy, acceptance and commitment therapy, and mindfulness-oriented therapy have also shown benefit.

Cognitive therapy and dialectical behaviour therapy (DBT) have been shown in high quality studies to decrease the risk of suicidal behaviour in very high risk patients, such as those recently hospitalized for a serious suicide attempt or having a history of parasuicidal behaviour [6]. The three key targets of cognitive-behavioural therapy (CBT) for high-risk patients are impulsivity, emotional dysregulation, and hopelessness/pessimism [6;69].

Problem-solving therapy, interpersonal therapy, and even insight-oriented approaches have also been shown to be effective [6]. No high-quality studies have explored which of all of these approaches is best for suicidal patients, much less how to match individual patients to the treatment that is best for them personally.

What these therapies have in common is that *they target suicidality (or the interpersonal problems driving it) as an independent problem needing specific care* as opposed to simply being just a symptom of the underlying disorder. While the benefit of these approaches has been most convincingly demonstrated in patients with a history of suicidal behaviour, the Panel thought that other high-risk patients would also likely benefit from them.

As with medications, access to quality psychotherapy is much stronger in the CF than it is in the civilian sector in Canada. The CF will shortly have about twice as many psychologists and social workers per capita, compared to the Canadian provincial system. In addition, Regular Forces members have access to as much psychotherapy as they need at no out-of-pocket cost. As with medications, psychotherapy is poorly covered through the provincial health insurance plans, and private insurance generally has co-pays, deductibles, and benefit limits.

Recommendation 27: Suicidality should be identified and addressed as a separate problem in mental health patients. Patients with suicidal ideation, intent, or behaviour should receive evidence-based psychotherapy specifically targeting the suicidality and the interpersonal problems that are driving it.

Recommendation 28: Cognitive-behavioural approaches targeting impulsivity, emotional dysregulation, and hopelessness/pessimism are particularly appealing for psychotherapy of suicidality because of their strong evidence base and the broad familiarity with CBT among CF clinicians.

Recommendation 29: The decision to augment (or replace) suicidality-specific CBT with interpersonal therapy, purely cognitive therapy, problem-solving therapy, and insight-oriented approaches should be made by the treating clinician, in consideration of the totality of the clinical circumstances.

Recommendation 30: Where clinically appropriate, using manualized approaches of proven benefit should be strongly considered (given that these have the best evidence of efficacy behind them).

E. Follow-up Care for Suicide Attempters/High-risk Patients

The first weeks and months after a suicide attempt are a period of markedly higher risk for repetition of suicidal behaviour [70-72]. This period should thus be characterized by intensive efforts to optimize medications, engage in diagnosis- and suicidality-specific psychotherapy, enhance social support, reinforce coping skills, resolve interpersonal conflicts, etc. These interventions will only work if the patient consistently shows up for care. Not surprisingly, failure to keep follow-up appointments is common in patients who go on to commit suicide.

Patients fail to follow-up for many reasons, including ambivalence about receiving care, limited or slow improvement, chaotic social circumstances, competing demands for their time and energy, treatment side-effects, and so on. Their primary diagnosis or certain character traits may interfere with their ability to connect with the therapist and do the hard work that effective psychotherapy requires. Anxiety or avoidance may also serve as a barrier. For these reasons, simply holding the patient responsible for ensuring their own follow-up is not a viable option.

Instead, systematic efforts on the part of the treatment facility to ensure follow-up are needed [6]. These improve outcomes for mental disorders in general [43] and for suicidal behaviour in particular [6]. In the primary care setting at least, more intensive methods of follow-up (e.g., using a nurse care manager who follows-up proactively with patients) are better than less intensive measures (e.g., simply sending the patient a note in the mail telling them to reschedule their appointment) [43]. CF members with complex mental and/or physical health problems are eligible for its Case Management Program. CF case managers are registered nurses who provide monitoring, coordination of care, coordination of benefits, etc.

In the CF, each clinic has its own approach to ensuring follow-up. While there is no reason to suspect that these processes are systematically deficient, some are likely stronger than others.

Recommendation 31: The CF should consider developing and implementing a single, system-wide process for assuring follow-up for patients receiving care for mental disorders in both primary care and specialty mental health care settings.

Recommendation 32: The CF's existing Case Management Program can be used as a mechanism to improve follow-up for higher-risk mental health patients.

F. Restriction of Access to Lethal Means ("Means Reduction")

Suicide research largely focuses on the question of *why* people commit suicide, with the assumption being that understanding this is the key to suicide prevention. However, there is an increasing focus on *how* people commit suicide, that is, what specific *means* they use [73].

It had long been assumed that the means of suicide were not particularly important—if people were denied access to a particular means (e.g., handguns) they would simply switch to another method of equal lethality (e.g., jumping from a bridge). While this "means displacement" does occur, there is strong evidence that means reduction can work [73]. One of the best examples is the change in the composition of household cooking gas in the United Kingdom starting the early 1960's. Prior

to that, the UK produced essentially all of its household gas through coal gasification. Coal gas has a high concentration of carbon monoxide (CO) as an impurity, and CO is highly toxic. As a result, CO poisoning using household gas was a preferred method of suicide in the UK [74].

During the 1960's, a larger and larger proportion of household gas was produced using different methods, resulting in a drop from about 12% CO in 1960 to about 2% in 1970 [73]. Perhaps not surprisingly, suicides due to CO declined dramatically, from about 6 to 2 per 100,000 people per year [73]. Astonishingly, *the rate of suicide due to other methods did not change in men and increased only slightly in women*, with the end result being that the total suicide rate decreased significantly in both men and women [73]. Further analysis of this same data showed that this change was not likely due to other factors [75]. Subsequently, this means reduction phenomenon has been seen in other nations that changed the composition of household gas [76-78].
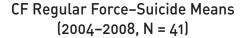
There is also evidence that other forms of means reduction can decrease the overall suicide rate; these include: [6]
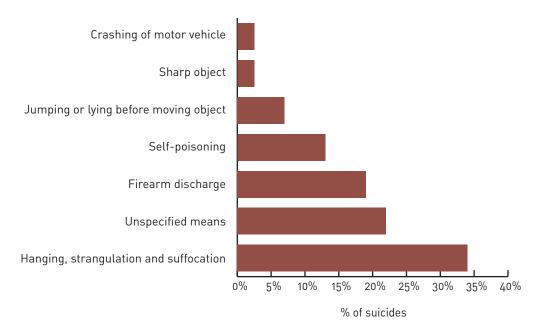
- Gun control;
- Changes in access to and packaging of high-risk drugs;
- Use of catalytic converters in automobiles; and
- Installation of bridge barriers to prevent jumping deaths.

Data for some interventions is stronger than others, but taken as a whole the Panel (and most suicide prevention experts) believe that means reduction can significantly reduce suicide rates. In fact, the evidence behind means reduction is far stronger than that behind mass education. All of these means reduction approaches target the larger community as opposed to a specific subgroup such as military personnel. Many of the potential targets for means reduction in the CF have already occurred (e.g., strict control of access to service firearms) or are outside of the purview of the CF (e.g., erection of a bridge barrier).

Means reduction needs to be driven by knowledge of the methods used in suicidal behaviour in the population at risk; this been captured since 2004 as part of the CF suicide surveillance system. As shown in Figure 5, the leading method has been hanging, strangling, or suffocation, for which means reduction is nearly impossible. In 22% of suicides, the means of suicide was not available to the epidemiologists responsible for suicide surveillance. Firearms were the next leading cause after "unknown," but the source of the weapon (service weapon vs. personal weapon) was not always known. In addition, the extent to which access control procedures were followed for service firearm suicides is not captured. While self-poisoning accounted for relatively few suicides, it does represent a potential opportunity for means reduction because the CF controls its formulary and dispenses both prescription and over-the-counter medications; changes in these practices might decrease the risk of suicide.

FIGURE 5

CF Regular Force–Suicide Means
(2004–2008, N = 41)

In light of this data, the Panel identified only two potential areas for means prevention in the CF, namely optimizing restriction of access to service firearms and changing the drug dispensing/packaging of high-risk medications.

Further restriction of access to service firearms would be beneficial only if:

- These accounted for a significant fraction of member suicides;
- A significant number of suicides occurred due to breeches in existing firearm access control measures; and
- Additional restrictions would not interfere with operational effectiveness. Firearms are essential work tools for many CF members, particularly while deployed.

Similarly, gains from changes in pharmacy practices would be realistic only if:

- Overdoses involved a limited number of high-risk drugs; and
- Drugs used in overdoses were largely procured from CF sources.

Means reduction is also essential at the level of the individual suicidal patient. For example, guns should be removed from the home and lethal medications disposed of.

Recommendation 33: The CF should ensure that suicide surveillance data captures the source of the firearm involved (service vs. personal), as well as enough information to determine whether policies and procedures for firearm access were followed. This surveillance data should inform any needed changes in firearm control policies.

Recommendation 34: The CF should also ensure that suicide surveillance data specifically addresses the agent used in drug suicides, as well as the source of the agent (CF pharmacy, civilian pharmacy using CF Blue Cross card, other), if known. The CF should review existing dispensing/packaging practices for high-risk drugs, with an eye towards identifying any additional opportunities for means reduction.

Recommendation 35: Restriction of access to lethal means at the individual level should be part of the plan for management of suicidal patients in the outpatient setting.

G. Media Engagement

There is evidence that reporting of suicides in the media can trigger suicidal behaviour in susceptible individuals [6]. For this reasons, there are guidelines for responsible media reporting about suicides [79;80]. Only suicides that are "newsworthy" are to be reported; these include suicides of prominent public figures (whose death would have newsworthy regardless of the manner of death). In theory at least, thoughtful reporting of suicides might also offer public *benefits* by increasing awareness, publicising community resources, motivating improvements in care systems, etc.

CF member suicides are often judged by the media to be newsworthy, particularly when there is a perceived connection with a deployment. The general theme of such coverage tends to be that the CF created a mental health problem by deploying someone and then failed to provide adequate care, leading directly to the suicide. The media likely believes that it is serving the public interest by bringing these tragic cases to light, so that the alleged deficiencies in the care system may be fixed. Of course, the facts behind these cases are often more complex than portrayed in the media, but the CF cannot respond because of privacy restrictions. Overly negative or unbalanced reporting threatens to create or sustain barriers to care by eroding the much needed trust CF members must have in their system if they are to come forward for help.

If the media were to come to believe that CF members actually have excellent access to high-quality mental health care and that member suicides are seldom a direct consequence of deployment, their interest in reporting member suicides would presumably be less.

Recommendation 36: The CF should explore opportunities to proactively engage with the local, regional, and national media in order to educate them on suicide and mental health in the CF, with the goal being to encourage responsible reporting of CF member suicides and enhance the confidence that CF members and the public have in the CF's mental health care.

H. Organizational Interventions Intended to Mitigate Work Stress and Strain

Work-related stress is a common contributor to mental disorders, especially depression [81]. In addition, PTSD and other traumatic stress disorders can be triggered by work-related traumatic events, particularly in occupations where exposure to such events is common. Workplace stress and conflict have been identified as common triggers for suicidal behaviour in service members. Thus, mitigation of work stress and strain though organization interventions such as training, policies, and programs might have suicide prevention effects.

Earlier, the Panel argued that ordinary good leadership skills were likely to be far a more potent suicide prevention tool than specific suicide prevention skills. This general principle applies when it comes to organizational policies: Those that effectively mitigate work stress are likely to be more powerful tools than suicide prevention policies *per se*. It should go without saying that preventing workplace stress and strain (e.g., through prevention of harassment) makes far more sense than helping employees cope with its consequences. And as was pointed out earlier, mitigation of work stress and strain will also offer innumerable benefits beyond suicide prevention.

Over the past decade in particular, the CF has implemented a number of policies and programs that target enhancement of quality of life and/or mitigation of work stress. These include its PERSTEMPO policy, screening and reintegration policy, dispute resolution policy, harassment prevention policy, and many others. Other policies and programs aim to support CF families, which should decrease family stress and, it is hoped, the failure of intimate relationships. The latter of course is an important trigger for suicidal behaviour [82].

The Panel mentioned earlier that educating leaders about managing the disciplinary process in ways that mitigate suicide risk offered some promise, at least in theory. The same is true for organizational policies and procedures relative to disciplinary procedures. For example, the US Air Force[xxii] has implemented what it calls a "hands-off" policy for airmen and airwomen under investigation [28].[xxiii] This requires that the interviewer "hand-off" the member being investigated to his or her chain of command immediately after the interview. Leaders are then supposed to assess coping and intervene as needed.

> **Recommendation 37:** The CF should continue to develop, implement, and evaluate policies and programs designed to mitigate stress and strain in the workplace, with the expectation that these may advance the CF's suicide prevention agenda, while at the same time offering many other advantages to the organization.

> **Recommendation 38:** Disciplinary and investigative policies and procedures should be reviewed with an eye towards identifying any additional opportunities for changes that will mitigate stress and lower suicidal risk. Consideration should be given to implementing a version of the US Air Force's "hands-off" policy for members under investigation. In order to be effective, such a policy would need to be supported by training and development of tools and resources for leaders, investigators, and the rank-and-file.

I. Selection, Resilience Training, and Risk Factor Modification

The CF's model of potential targets for suicide prevention emphasizes that prevention strategies play out against a backdrop of individual risk and resilience factors, such as early childhood adversity, genetic predispositions, and personality. These and other factors mediate and/or moderate the effectiveness of suicide countermeasures. For example, some genetic factors likely influence the efficacy of antidepressants, and some personality traits or disorders (e.g. borderline) lessen the effectiveness of conventional psychotherapies.

These mediators/modifiers are thus potential targets for suicide prevention. The Panel identified three avenues that might have at least some potential, namely 1) selection; 2) resilience training; and 3) risk factor modification.

Screening and Selection

The CF typically screens out a limited number of potential recruits who have a history of serious mental disorders such as schizophrenia, recurrent severe depression, and bipolar disorder. These conditions typically result in impairments that are incompatible with military service and are also associated with a significantly increased risk of suicide.

Members preparing for deployment undergo both medical and psychosocial screening to be certain that they are fit for their deployment; questions on depression, PTSD, alcohol use disorders, and suicidal ideation are completed as a part of this process.

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xxii   The USAF's suicide prevention program will be reviewed in detail in a later section.
xxiii   The USAF's choice of terminology here is unfortunate: In this context, "hands off" does *not* mean lack of leader or investigator involvement in the psychological well being of the member. Quite to the contrary, the intent of the policy is to *enhance* such involvement.

Screening out those who merely have *risk factors* for mental disorders (hence suicidality) is as difficult as it is ethically troubling. The problems with screening surround three fundamental issues:

1. The prevalence of the outcome of interest (serious, chronic, and poorly treatable mental disorders) is low in epidemiological terms;

2. The predictive value of existing screening/assessment tools is relatively low; and

3. The screening/assessment tools can be faked to a significant degree. That is, motivated candidates can readily identify the "right" answers to screening questions.

These three factors conspire to see to it that any such screening/selection tool will be poorly predictive at the individual level under real-world circumstances.

While *screening out* people who are merely at risk for future mental disorders is not feasible, selection on the basis of performance is possible. That is, those who cannot stand the rigours of military training end up being selected out. The fact that nearly everyone the CF deploys performs adequately suggests that this selection process is working as it should. However, while this selection process works well for identifying those who will *perform well while deployed*, it does not guarantee that those selected will *enjoy good long-term mental health* after their return.

While screening and selection might in theory be viewed as a suicide prevention strategy for military organizations, these interventions do not prevent suicide for the population as whole—they simply displace a suicide-prone population from the military into the civilian sector.

For all of these reasons, the Panel did not see any current opportunities to prevent suicide through screening or selection of members.

> **Recommendation 39: For the purposes of suicide prevention, the Panel does not recommend any additional screening or selection measures be implemented for either potential recruits or members preparing for deployment.**

Resilience Training

Psychological resilience has been defined as "…*the sum-total of psychological processes that permit individuals to maintain or return to previous levels of well being and functioning in response to adversity*" [83]. Training to enhance resiliency has strong common-sense appeal: Service members will face significant adversity, particularly when deployed on a difficult operation. There are psychological traits (notably neuroticism) that are associated with a significantly elevated risk of mental disorders. In psychotherapy, these traits can be moderated using cognitive-behavioural and other psychotherapeutic techniques. Applying such techniques to those with low-level depressive symptoms can decrease the odds of developing a full-blown major depression [84]. Stress inoculation therapy (SIT) can decrease anxiety and improve performance if undertaken prior to an upcoming anxiety-provoking event (such as parachuting) [85].

The high rate of serious mental health problems in personnel returning from the conflicts in SW Asia [7] and the operational requirement that many return for additional tours has kindled interest in resilience training in military organizations. However, there are no programs that have been shown to decrease the risk of mental disorders among service members. That understood, there are programs that show potential promise, such as the US Army's BATTLEMIND Training Program [25;86;87]. None of these programs have been shown to decrease suicidal behaviour, though they can modestly improve well being [86], which in turn may have suicide-preventive effects.

The CF has recently completed a 10-hour pre-deployment mental health training program that includes several modules that include aspects of resilience training. Other resilience-oriented modules will be included in the full mental health curriculum. As of yet, however, evaluation of these resilience training approaches in the CF is limited.

> **Recommendation 40:** The CF should continue to evaluate the resilience training aspects of its mental health training program.

> **Recommendation 41:** The CF should continue to monitor the scientific literature in the area of resilience training, modifying its own programming to reflect best practices.

Risk Factor Modification

In addition to the universal mental health education program coordinated by the Mental Health Education Advisory Committee, the CF routinely offers other evidence-based programs through the mental health and wellbeing program of "Strengthening the Forces". These include Managing Angry Moments, Basic Relationship Training, and Stress: Take Charge. None of these programs have been shown to prevent suicidal behaviour, but there is sound reason to believe that they might help. For example, failed intimate relationships are a common trigger for suicide, and Basic Relationship Training is designed to prevent or resolve relationship conflicts, enhance intimacy, and improve communication, hopefully preventing the failure of some relationships. Even if these programs do not prevent suicidal behaviour, they offer other concrete benefits to the CF, its members, and their families.

Alcohol misuse is a common risk factor and trigger for suicidal behaviour [6;88], and the CF has an active alcohol abuse prevention strategy. The CF also offers evidence-based treatment for alcohol use disorders through its Base Addictions Counsellors. Different programs target those with and without full-blown addiction.

Members seeking alcohol abuse treatment services have strong confidentiality protections: The only information that may be divulged to the member's chain of command without the member's permission is their medical employment limitations. There is no indication that this policy has jeopardized safety or operational effectiveness.

> **Recommendation 42:** The CF's Strengthening the Forces programs on anger management, stress management, and healthy relationships likely improve member and family wellbeing and mitigate primary risk factors for suicidal behaviour. For these reasons, they should continue to be offered.

J. Systematic Efforts to Overcome Barriers to Mental Health Care

As mentioned earlier, nearly all suicide victims have an apparent mental health problem at the time of their death, but many are not receiving care [89-92]. Because effective care can reduce suicidal risk, overcoming barriers to care must be an essential part of any suicide prevention program.

The principal strategy used in most suicide prevention programs to overcome barriers to care is mass education, with the goals being improved mental health literacy, stronger suicide intervention skills, and destigmatization of mental health problems. These address some but not all of the potential barriers to mental health care. For example, they do not touch structural barriers such as limited access to mental health providers, difficulty getting time off work, problems with transportation, linguistic barriers, etc.

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For this reason, the CF's Rx2000 Mental Health Project has included a broad range of initiatives to overcome barriers to care, including:

- Offering very strong confidentiality and career protection for those who seek care;
- Offering up to 10 sessions of confidential mental health care from a non-CF provider through the Canadian Forces Member Assistance Program (CFMAP). CFMAP also offers a 24 hour toll-free telephone line for individuals in crisis;
- Increasing the numbers of mental health providers—the CF will shortly have about twice as many mental health providers per capita as the average Canadian;
- Developing an innovative peer support program for those with Operational Stress Injuries (the OSISS program), which serves as an important bridge to care for members who are reluctant to seek it;
- Developing mental health training that targets stigma and other attitudinal barriers to care;
- Developing a high-profile public awareness campaign on mental disorders ("Be the Difference"; and
- Developing and implementing screening for common mental disorders during Periodic Health Assessments and post-deployment screening.

Much has been made of the special barriers that military personnel may face, such as stigma. Stigma is however only one barrier of many, and it may not be a greater problem in the CF than in the general population [21;23;56]. Furthermore, even if military personnel have special *barriers* to care, they also have special *access* to care: They receive any needed treatment at absolutely no cost during work hours, and services are available in both official languages nationwide. Transportation is provided (or reimbursed) for off-site services.

Even as far back as 2002 (that is, before most of the mental health initiatives had taken effect), CF members with mental health problems were significantly *more* likely to have sought mental health care than their general population counterparts [53]. Data collected since then shows that these initiatives are working: CF members now hold largely forward-thinking attitudes towards mental health care.[xxiv] In addition, more than half of those who reported symptoms of PTSD or depression at the time of post-deployment screening were already in care at the time of their screening, which took place on average 5 months after their return [54]. Finally, data from one garrison showed that approximately 32% of personnel returning from deployment in support of the mission in Afghanistan sought mental health care in the first year after their return [93].

While these data are encouraging, the best data on barriers to care in the CF dates from 2002 [56]. The barriers under the current system are likely different—as one barrier is addressed, others become more prominent. In order to better understand barriers to care, the CF now includes detailed questions on barriers to mental health care in its biennial Health and Lifestyle Information Survey (HLIS). Results from the 2008/2009 survey will be available within a few months.

All available data on barriers to care in the CF pertain to care in garrison as opposed to in deployed settings, where barriers may be different. The CF now deploys several mental health providers on its major operations, but the extent of unmet need on deployment is unknown. Access to lethal means (i.e. handguns) is far easier on deployment, and there are occasional suicides on operations. For these reasons, the CF is in the process of planning an in-theatre mental health needs assessment modelled after the US's Mental Health Assessment Team [25] approach.

[xxiv]   Data collected from more than 10,000 CF members returning for deployment in Afghanistan showed that only about 5% indicated that they would think less of a team member who was receiving mental health counselling.

The representatives on the Panel from the UK, US, and Australia indicated that their policies require that the chain of command be informed of suicidality in high-risk patients. They saw this as important for two reasons: First, the chain of command is fundamentally responsible for the member's wellbeing and for the safety and success of the unit's mission. Second, they felt that those in the chain of command could provide much needed support to a member of their unit who was struggling.

In contrast, CF representatives felt that strong confidentiality protections are essential if members are to feel safe in disclosing suicidal ideation. At the same time, though, CF representatives acknowledged that this should not preclude meaningful dialogue about medical employment limitations with the chain of command. Finally, voluntary disclosure by the member was acknowledged as often being helpful for their recovery.

Wait times are known to be a potential barrier to mental health care in Canadian civilians [23]. Wait times for mental health services in the CF are largely similar to or better than those experienced by Canadian civilians. Individuals are usually ambivalent about seeking mental health care—they recognize at some level that they are suffering but have concerns about whether care will work for them, what the consequences of care seeking will be, and so on. This ambivalence manifests itself in fluctuating levels of commitment to get care. Such fluctuation may be particularly prominent in those with personality traits that are known to predispose to suicidal behaviour, such as borderline traits and impulsivity.

Even for those who firmly commit to getting help for a longstanding problem will remain at risk for suicide (and for functional impairment) until they receive definitive care. Rapid triage evaluation of suicidality in such patients can only provide so much reassurance: Disclosing suicidal thoughts may require a stronger relationship with the therapist than can be established during a triage visit. Finally, even where wait times are not harmful, no one likes to wait more than they have to for any service. For all of these reasons, the Panel saw a potential opportunity to further improve satisfaction (and perhaps mitigate suicide risk) by shortening wait times further, even for "routine" cases.

> **Recommendation 43:** The CF should continue to identify the remaining barriers to mental health care (both in garrison and on deployment) and to make any needed changes to address these.

> **Recommendation 44:** Confidentiality with respect to suicidal thoughts and behaviour offers both advantages and disadvantages. CF mental health specialists believe that the effects of the CF's policy of strong confidentiality protections surrounding suicidality are, in the balance, far more positive than negative. Nevertheless, CF clinicians should engage in meaningful dialogue about medical employment limitations with the operational chain of command. In addition, clinicians should encourage members to disclose details about their mental health problems when doing so can contribute to their recovery.

> **Recommendation 45:** The CF should continue to drive down wait times for mental health services to as low as is feasible.

K. Systematic Clinical Quality Improvement Efforts

The Panel alluded earlier to the "quality chasm" in mental health care. Data from other settings shows that relatively few mental health patients are receiving what experts would consider optimal care. For example, only 55% of Canadians receiving care for depression were judged to have received *minimally* adequate care [94]; multiple other studies from the US [95-97] and Canada [98;99] show similar or even more disappointing results. Guideline-consistent depression care in primary care settings has been shown to be as low as 8% for depressed patients in Canada [98] and as low as 13% in the US [100]. Data from disorders other than depression paints a similarly disturbing picture [101-106]. Tragically, care for those who attempt or complete suicide is, on average, particularly poor [107;108].

There is, however, evidence that guideline adherence is significantly better in specialty mental health vs. primary care settings, though there is substantial room for improvement there as well [100;109-113].

The causes of this "quality chasm" are complex and poorly understood. What is clear, though, is that simply having well-educated, well-trained, well-equipped professionals is not enough. These elements are *necessary* but not *sufficient* for the delivery of quality mental health care. Simply disseminating clinical practice guidelines or exhorting clinicians to try harder is expected to have little or no effect on performance or on patient outcomes. Thus, the Panel realizes that without additional effort, its recommendations on the optimal clinical management of suicidality will have little or no impact.

The data cited above comes from settings other than the CF, so it is possible that the well-resourced CF mental health care system[xxv] is performing better. Certainly the CF has built a system that should be *capable* of delivering high-quality care, but it has no way of proving that it is actually delivering it. Likewise, it cannot document the outcomes of care for those who seek it [114].

The CF's mental health clinic model includes one Quality Improvement Coordinator at each of its 20 largest clinics. These individuals largely work at the local level to address clinic-specific issues. A limited number of headquarters staff are also involved in quality improvement in mental health care.

While these efforts are laudable, what is needed is a more systematic, national approach to quality improvement in mental health services. This requires detailed information on:

- Who sought care;
- The baseline characteristics of care seekers[xxvi];
- When they sought care;
- How much care they received;
- Where they sought care;
- Which diagnoses were made;
- What precise types of care was delivered; and
- What sorts of outcomes were realized by the end of treatment.

Information needs to be captured in near real time and stored in an electronic data repository. Without rich electronic data, quality improvement efforts are hard to initiate and harder still to sustain. Epidemiological expertise is needed to be able to manipulate, analyze, report, and interpret the data.

Currently, usable system-wide data for quality assurance is limited. Planned enhancements to the Canadian Forces Health Information System (CFHIS) will help, but there will still be important blind spots (notably, detailed enough information on the process and outcomes of mental health care to support quality improvement).

This lack of an infrastructure to support quality improvement activities in mental health care is not unique to the CF. In 2006, the Standing Senate Committee on Social Affairs, Science, and Technology noted:

> *"Canada currently has no national picture of the status of mental health across the country. Collecting quality data will provide better information for policy and decision-makers inside and outside of government, as well as service providers and consumer groups."* [115]

[xxv] The CF spends approximately six times as much per capita on mental health care as does Canada as a whole.
[xxvi] Data on baseline characteristics that influence prognosis are important because these are required to perform valid comparisons.

The US Institute of Medicine made similar observations in its study, *Improving the Quality of Mental Health Care for Mental and Substance-Use Conditions* [116].

Systematic efforts to improve the quality of mental health care can be effective. Such efforts generally involve "re-engineering" of the system of care rather than simply educating clinicians. For primary care settings, implementation of "collaborative care" models has been shown to dramatically increase the quality of care delivered to depressed patients [117]. One of the better known of these approaches is the RESPECT model [44;118], which has three main components:

1. A "prepared practice"—this involves education on the program and on depression, as well as implementing regular screening for depression;

2. A nurse "care manager," who contacts patients by telephone regularly throughout their care, assessing residual symptom burden, medication compliance, side effects, etc.; and

3. Enhanced access to specialty mental health services for patients (for formal consultation, ideally on-site in the primary care clinics) and for primary care providers and care managers (for informal consultation).

An adaptation of this model that targets both depression and PTSD is showing very promising results in the US Army [57].

> **Recommendation 46:** **The CF must reinforce its capabilities in clinical quality improvement in mental health care. It must capture enough data on the processes and outcomes of care to permit identification of potential problem areas and to evaluate the effect of any countermeasures.**

Post-suicide investigations represent a potentially powerful quality assurance tool. Current CF policy [119] requires that all member suicides be investigated by a Board of Inquiry (BOI). While BOI's perform a very thorough investigation, the Panel felt that this was a weak and inefficient tool for suicide prevention, particularly for the CF Health Services Group.[xxvii] A number of factors limit the usefulness of the BOI:

1. The process may take more than a year to reach firm conclusions, constraining the value of any useful intelligence provided. By the time the report has been finalized, an additional 10 or more CF members may have committed suicide;

2. By the time the BOI is empanelled and witnesses are called, important events may be many months in the past. This makes accurate assessment of key facts more difficult;

3. While the investigations are painfully detailed in some areas, key information required for suicide prevention is sometimes missing;

4. BOI members are dedicated and experienced service members, but they have little or no training or experience doing suicide investigations;

5. The medical advisor on the BOI and witnesses provided by Health Services are taken away from other important duties;

6. The investigation can be intrusive to friends and family members, particularly when it fails to provide the answer they were seeking;

7. There is little corporate memory about the findings and recommendations of previous suicide BOI's. Hence, similar recommendations get made time after time; and

8. Having a BOI for all suicides may send the message that all CF suicides are preventable or the CF's "fault." After all, there is no requirement for a BOI when a member dies in an accident in their own vehicle, nor is there a requirement when a member dies of a heart attack while on duty.

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xxvii   Suicide BOI's may, of course, serve other purposes.

Because of these limitations, the Panel felt that a rapid clinical suicide investigation immediately after a suicide would be far more valuable than the BOI for medical quality assurance purposes.

Psychological autopsies are not a typical part of suicide investigations in the CF, and the Panel felt that their value as a routine tool is questionable. In the US, these are reserved for cases in which the cause of death or the intent of the victim is in doubt, e.g. homicide vs. suicide, intentional vs. accidental overdose, etc.

> **Recommendation 47:** **After each suicide, a clinical suicide investigation should take place as soon as possible:**
>
> 1. **The primary purpose of this investigation should be to explore any opportunities for improved suicide prevention or care in the future, with a focus on health care and communication/collaboration between health professionals and the chain of command;**
>
> 2. **A secondary purpose should be to feed useful epidemiological data into the CF's suicide surveillance system;**
>
> 3. **The investigation should be performed by one or more health professional(s) with special training/experience in suicide investigation;**
>
> 4. **Investigators should be drawn from a limited pool of qualified investigators for whom performing such investigations would be one of their primary duties;**
>
> 5. **The investigation should follow a standard protocol—the US's Department of Defense Suicide Event Report would serve as a useful template;**
>
> 6. **Psychological autopsy should be reserved for cases in which there is significant uncertainty about the cause of death (e.g., suicide vs. homicide). Those responsible for doing psychological autopsies should have specific training and experience in their execution.**
>
> 7. **The CF should seek legal counsel to determine the extent to which the information in the clinical suicide investigation can be protected as a quality assurance activity; and**
>
> 8. **The clinical suicide investigation (or some extract thereof) can serve as a useful reference document for BOI's.**

Surveillance is an essential component of any prevention program. Since 2004, the CF has implemented a suicide surveillance program, which is described in detail in ANNEX I. While this represents a significant advance over the previous system, key information for evaluation of prevention efforts is often missing. For example, documentation available to staff involved in suicide surveillance may not indicate the source of the weapon (personal vs. CF) for firearm suicides.

The CF has no mechanism for capturing information about suicides in Reservists, for whom the CF has much more limited potential for suicide prevention. Class A Reservists (who form the bulk of the CF Primary Reserve personnel) spend only a few hours per week in their military workplace and receive almost all of their healthcare through the provincial system.

Until recently, there was no ongoing surveillance mechanism within the CF or within Veterans Affairs Canada for suicide in veterans (that is, after separation from military service). This is an important blind spot because of evidence that service members may be at increased risk for suicide only *after* they release [12;120]; risk appears to be highest in the first few years after release [120;121].

To address this, the CF and Veterans Affairs Canada are working with Statistics Canada to develop the capacity to look at cancer incidence and mortality (including suicide-related mortality) in members and in veterans (including Reservists) who served since 1972.[xxviii] This will involve linking CF personnel records with the national death and cancer registries on a periodic basis.[xxix]

The CF has other effective surveillance mechanisms for suicide-related information, including suicidal ideation, *self-reported* suicide attempts, symptoms of mental health problems, and barriers to mental health care. Data from elsewhere suggests that military suicide attempts are largely similar to completed suicides, with the exception of the use of less lethal means. Serious suicide attempts likely outnumber completed suicides by about a factor of five, providing additional statistical power for evaluation of suicide prevention programs.

Recommendation 48: **The CF should review the information required for its suicide surveillance activities, making sure that it has a reliable mechanism for capturing the information that is most likely to be helpful for quality assurance. In particular, more detail is required on:**

1. **Means;**
2. **Triggers;**
3. **Mental health care; and**
4. **Communication/collaboration with the chain of command**

Recommendation 49: **The US Department of Defense Suicide Event Report may serve as a useful template for suicide surveillance data.**

Recommendation 50: **The clinical suicide investigation should be used to capture the data needed for suicide surveillance; investigators should be trained in the use of the suicide event report.**

Recommendation 51: **For the present, the CF should focus on completed suicides as it fine-tunes its suicide surveillance system. However, in the future, the CF should look towards finding ways of capturing similar information on serious suicide attempts as well.**

Recommendation 52: **The CF should continue to monitor suicide risk factors (including barriers to mental health care) using its periodic Health and Lifestyle Information Survey.**

Recommendation 53: **The CF should specifically look at suicide rates in currently serving and former members in its planned cancer and mortality linkage study.**

Recommendation 54: **The CF should develop a set of performance measures (and ways to capture these) for its suicide prevention program. The completed suicide rate will have limited value as a performance measure because the numbers are expected to be low enough that detecting important changes will be difficult. Thus, other performance measures will be needed (such as the fraction of those with mental health problems who are in care, the prevalence of suicidal ideation, the fraction of mental health patients with a complete suicidality assessment documented in their medical record, etc.).**

[xxviii] 1972 was selected because is the first year in which reliable electronic personnel data are available in the CF.

[xxix] Such linkage studies have been performed in Gulf War veterans from a number of countries, and no increased risk of suicide has been demonstrated relative to veterans of the same era who did not deploy in that conflict.

A SYSTEMS APPROACH TO SUICIDE PREVENTION IN THE CF

The foregoing sections make it clear that the CF is already heavily involved in activities with potential suicide preventive effects. In some areas, though, added attention may further strengthen its program, while at the same time providing other benefits to the CF (e.g., improved mental health care).

How does the CF's approach stack up against a benchmark program? In 1999 the US Air Force implemented a multi-faceted community-based suicide prevention program [122]. The program included a number of different interventions (ANNEX B). In 2004, they reported that their suicide rates had declined significantly, and they identified other apparent benefits of the program (decreases in homicide, accidental deaths, and more severe forms of family violence) [122].

The program evaluation consisted principally of a comparison of pre- and post-program suicide rates. This design has methodological weaknesses, particularly for outcomes like suicide rates that fluctuate for incompletely understood reasons. Critics have pointed out that suicide rates were declining in the US general population at the same time [123;124]. The authors countered [125] that the rates in the general population did not decline as much as they did in the USAF and that the general population decrease was due to factors that would not have been as important in the Air Force population (specifically, decreases in unemployment and hard drug use) .

There may also be some "regression to the mean" occurring—suicide prevention programs tend to get implemented when suicide rates are spiking, at times due to random variation, so the apparent decrease in rates in subsequent years may simply reflect further random variation. However, more recent data from the USAF refutes this in that data through 2008 show that the suicide rate has remained lower than the pre-program rates. Finally, proponents of the program point out that similar programs in a broad variety of settings have shown some evidence of benefit, albeit less convincingly [19].

For the CF's purposes, there will likely never be a more definitive study of population-based suicide prevention programs in a military organization drawn from a culture similar to our own.[xxx] Evidence-wise, this is as good as it is likely to get. Military organizations will have to make decisions on suicide prevention programming using scientific data that has potentially important limitations.

The CF's suicide prevention program is compared to the USAF program in ANNEX B. Most of the elements of the USAF program have already been implemented in the CF. In some cases (e.g., confidentiality protections), the CF has gone far beyond the USAF standard, and there are additional targets for suicide prevention that the CF is addressing (e.g., improving clinical interventions for suicidal patients).

One intervention that the CF is not currently pursuing is yearly briefings to commanders on available mental health resources. The Panel did not view this as an essential strategy, and there was concern that this could risk trivializing the whole issue. Mandatory yearly training tends to turn valuable health education into a perfunctory exercise. Instead, this information on sources of care could be rolled into the overall mental health training approach for CF leaders. The frequency of any particular element of the programming should be driven by demonstrable educational needs rather than a desire to demonstrate due diligence. Periodic surveillance of the level of awareness of different programs informs the need for targeted awareness campaigns; this information is already being collected in the biennial Health and Lifestyle Information Survey.

[xxx] Reasons for this include: 1) Only a limited number of military organizations have enough suicides each year to be able to detect the sorts of modest benefits that suicide prevention programs are likely to offer; 2) Enthusiasm for suicide prevention is strong enough that developing and implementing a control condition would be difficult or impossible; 3) Suicide has strong cultural influences, and only a limited number of countries have cultures similar enough to our own that results seen elsewhere would be generalizable to the CF; and 4) The military is a tightly knit organization, meaning that it would be impossible to completely prevent some spill-over of the suicide prevention program into the control condition.

The other intervention that is not part of the CF's current approach is the so-called "hands-off" investigative interview policy. The Panel recommended that the CF consider adopting such a policy given the importance of disciplinary action as a trigger for suicidal behaviour.

Several interventions that are part of the USAF suicide prevention program are already being addressed in the CF, but further attention might lead to better outcomes. These include:

- Leader education on mental health and suicidality during career courses: The CF is in the process of developing and implementing a comprehensive mental health education program; only one module has been developed so far, but others are expected to be completed over the next few years.

- Rank-and-file education focussing on buddy aid: This is also being developed, with the target periods being during recruit training, pre-deployment training, and post-deployment reintegration.

- Suicide surveillance: As noted earlier, there are some opportunities for improvement in the CF's suicide surveillance system.

   Recommendation 55: Leader education on available mental health services should be integrated into the CF's comprehensive mental health education program. The frequency of this training should be guided by demonstrable educational needs rather than any fixed schedule.

   Recommendation 56: "Buddy aid" mental health skills should also be integrated into the CF's comprehensive mental health education program.

IMPLEMENTATION ISSUES

The recommendations above rely almost entirely on existing mechanisms, processes, and resources. A notable exception is the recommendation that all suicides trigger a standardized clinical quality assurance investigation. Setting up the infrastructure (personnel, protocols, data capture mechanisms, training, quality control, logistics, etc.) will require substantial effort over a year or more. Ongoing funding will be required largely for travel to bases to complete the investigations.

The recommendation to have a separate group develop best practices for management of high-risk individuals in outpatient settings will have limited resource implications, though it will require active participation of those in the operational chain of command. The same is true of the recommendation to consider implementing a version of the USAF "hands-off" policy for those under investigation.

The resources required for reinforcing the CF's ability to systematically improve the quality of mental health care it delivers will be substantial, but the benefits to the CF will be substantial as well. Quality improvement needs to occur for reasons that go far beyond suicide prevention. Given that the cornerstone of quality improvement efforts is rich electronic data on the process and outcomes of mental health care, substantial resources and effort will need to be directed towards capturing, analyzing, and interpreting such data. These efforts are likely to be not only cost-*effective*, but actually cost-*saving*, with improvements in productivity, decreased absenteeism, and decreases in other medical expenses typically exceeding incremental program costs [126-128].

Educating key stakeholders about the CF's approach to suicide prevention will be best accomplished by developing a formal communications plan that consistently emphasizes the same key messages. A central goal of the communication plan should be to enhance confidence in the CF's suicide prevention strategy.

> **Recommendation 57:** An implementation plan for all of the Panel's recommendations should be developed. Because of the resource implications and the complexities involved, the plans for development of a clinical suicide quality assurance investigation system and the overall reinforcement of the CF's quality improvement capacity for mental health care should be emphasized.

> **Recommendation 58:** A comprehensive communications plan should be developed to educate all stakeholders about the CF's suicide prevention program. The efforts to engage the media to encourage responsible reporting of suicides should be rolled into this comprehensive plan.

> **Recommendation 59:** The CF's suicide prevention program has progressed enough that CFAO 19-44 should be repealed and replaced with a suitable policy instrument that sketches out the essential features of the CF's current approach.

CONCLUSION

The CF is interested in suicide prevention because suicide is an important public health threat that is a leading cause of premature mortality in men of military age. The above discussion of targets for suicide prevention in the CF demonstrates that military organizations have a number of conventional opportunities for suicide prevention that go far beyond the tools that a typical civilian employer has at its disposal: For example, military organizations can mandate mass education and screening. They control most of the health system that should be providing appropriate care in the form of medications, psychotherapy, and follow-up of high-risk patients. While the CF cannot directly control media reporting of suicides, it can attempt to engage with the media to minimize the risk of imitative suicidal behaviour. Opportunities for means reduction are limited by the extent to which suicidal individuals access their lethal means outside of the CF, but additional efforts in terms of controlling access to service firearms and changes in drug packaging might offer incremental benefits.

Military organizations also have points of influence that go beyond this conventional list of potential targets for suicide prevention. They can mitigate work stress through effective leadership and through policies that are intended to decrease work stress (e.g., PERSTEMPO policies). They can exploit primary risk factor modification through resilience training, at least in theory. Military organizations can take steps to overcome a broad range of barriers to mental health care. Finally, they can take systematic steps to improve the quality of mental health care delivered within their walls. Because the CF does not provide inpatient care, it does not have control over one of the key pieces of the suicide prevention puzzle. The best it can to in this area is to coordinate aftercare as effectively as possible.

The CF is already engaged in at least some activities in each of the conventional and more military-specific areas. Efforts to overcome barriers to mental health care have been particularly strong in the CF, and data is starting to show that these efforts are bearing fruit. The CF's effort to develop and deliver a coordinated mental health education program across the career cycle is still in its early phases, but it shows great promise. Viewed broadly, the CF thus has a strong and comprehensive suicide prevention program. Its program compares favourably with those of its closest allies, including the US Air Force's benchmark program.

The area in which the most potential gains can be made in the CF is in the realm of systematic efforts to improve the quality of mental health care. It has built a strong system that *should* be delivering quality care, and it has Quality Improvement Coordinators at its major clinics, who will be able to drive continuous improvement locally. However, the CF has little capacity to measure and document the quality of care it is delivering and the favourability of the outcomes it is seeing. Having well-trained, motivated, and well-equipped mental health providers is not in and of itself a reliable recipe for the consistent delivery of excellent care.

The foregoing discussion should also demonstrate that responsibility for suicide prevention must be shared among leaders, members, clinicians and other providers of in-service support. Clinicians have a responsibility to provide optimal, evidence-based care (to include systematic efforts to follow-up on high-risk patients). They are also responsible for identifying and addressing weaknesses in their knowledge or skills in the management of potentially suicidal patients. They need to be responsible for doing outreach and making other systematic attempts to overcome the broad range of barriers to mental health care. Finally, they must take the lead in pursuing systematic efforts at quality improvement in their clinics.

The primary responsibility of leaders is to provide excellence in leadership. Relatively little of the positive impact of good leadership on suicide rates is likely to be due to suicide-specific knowledge or skills. However, because leaders act as gatekeepers, they do need strong skills to be able to facilitate effective care for those in need of it, whether they are suicidal or not. Senior leaders need to enact

and enforce policies that promote mental health and wellbeing (e.g., those targeting harassment, workplace conflict, and family integrity). Both clinical and non-clinical leaders need to assure that clinicians have the resources, tools, and supports in order to excel in mental health care.

Members have a responsibility to recognize when they need help, to seek help and to comply with recommended treatment. They also have a responsibility to watch out for and support peers and colleagues who may be contemplating suicide, and to take effective steps when others voice suicidal thoughts or intent. The psycho-education that CF members receive throughout their career will facilitate these roles.

Many suicide prevention programs (including the CF's 1996 policy) have mass education as their "centre of gravity." The Panel proposes instead that the centre of gravity for the CF's program should be *the delivery of effective mental health care to those who need it*. This is because effective mental health care is what "fixes" suicidal ideation and behaviour. Leaders and the rank-and-file can play a facilitative role, but for suicide prevention at least, the ultimate focus of their actions needs to be getting those with mental health problems and/or suicidal ideation into effective care.

In closing, it is important to have reasonable expectations about how effective the CF's suicide prevention program can be: The benchmark USAF program appears to have decreased completed suicides by at most 30%. Given that the CF has already implemented most of the elements of the USAF program, the results it will see will likely be less than that. This would translate into the prevention of at best a few suicide deaths a year, a change that would be difficult to detect over the coming years. Nevertheless, even this relatively small preventive effect will be priceless for the individuals and families touched by suicide.

Many factors contribute to the limited preventability of suicide, including intrinsic technological limitations in mental health care, the complexities of providing mental health care, the broad range of contributors to suicidal behaviour, and important scientific uncertainties as to how best to treat mental disorders and prevent suicides. While mental health treatments are better than ever, mental illnesses are powerful disorders: Even the best equipped clinicians cannot pry every patient from their grasp. It is for these and other reasons that only 20 to 25% of suicides in those in mental health care are judged to be preventable.

The Panel included a number of recommendations that are of uncertain (though plausible) benefit with respect to suicide prevention. In most cases, though, the recommended interventions have other tangible benefits that should sustain them. For example, better leadership *may* have suicide preventive effects, but it *certainly* offers many other benefits to the organization. In fact, it is these ancillary effects of the CF's suicide prevention strategy that will likely overshadow its impact on suicide *per se*.

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ANNEX A: THE PANEL'S RECOMMENDATIONS

Recommendation 1: The CF should continue to leverage its existing mechanisms for developing, implementing, and evaluating mental health training, specifically the MHEAC and the JSB.

Recommendation 2: Routine suicide awareness and prevention training should be incorporated into the rest of the regular, coordinated mental health training that will occur across each member's career and deployment cycle.

Recommendation 3: The US Army's "ACE" program targets the key competencies for suicide prevention and should be strongly considered for the CF's mental health education efforts.

Recommendation 4: The development of suicide awareness and prevention training should follow sound principles of curriculum development and adult education. Specifically, such training should incorporate opportunities for learners to practice suicide-specific skills, such as asking a friend about suicidal thoughts.

Recommendation 5: The fate of the StF module on suicide prevention should be decided by the Mental Health Education Advisory Committee. Until such time as the full mental health training program has been implemented, the StF suicide prevention program should continue to be available as a training option, particularly for those in gatekeeper roles.

Recommendation 6: For mass education, shorter programs should be favoured over longer ones until such time as there is evidence that longer programs lead to superior outcomes.

Recommendation 7: The Panel does not see the need to mandate that all members receive suicide prevention training by a certain date.

Recommendation 8: The linkage between good leadership, work-related stress, and mental health problems should be covered in the CF's routine mental health education program, as should the leader's role in overcoming barriers to mental health care.

Recommendation 9: General leadership skills that form the backbone of leadership training in the CF are probably more important for suicide prevention than specific suicide prevention skills. However, there is enough evidence of potential benefit of suicide prevention training that it should be incorporated into the CF's mental health education program across a leader's career cycle. Stand-alone suicide prevention training may be considered for leaders who will not be receiving suicide prevention training as part of a career course (or other training) over the new few years, but such training should not be considered mandatory. Instead, leaders should prioritize the need for suicide prevention training against other unit and individual training needs.

Recommendation 10: Educational programming for leaders should specifically address ways of managing the disciplinary process in ways that mitigate suicide risk.

Recommendation 11: Those who manage the ongoing education of CF trades that have an increased likelihood of encountering patients at suicide risk (such as MP's) should consider the need for specific suicide prevention training for their occupational group. The priority of this training should be weighed against the many other educational needs of a given occupational group.

Recommendation 12: Those managing the educational programming for CF health professionals should consider offering educational programming on depression and suicide as part of their regular educational activities (e.g., occupation-specific training at CFB Borden). These individuals should weigh the priority of such training against the many other educational needs of their occupational group.

Recommendation 13: The ability to establish trust and rapport with a potentially suicidal patient is fundamental to the assessment of suicidality. As such, evaluating and, if needed, enhancing these skills should be a focus of suicide prevention education for clinicians.

Recommendation 14: Those supervising clinicians should consider the need to provide targeted education or training on depression and suicide as part of the clinician's Personal Learning Plan. Again, this needs to be prioritized on an individual basis based on the totality of the individual's educational needs.

Recommendation 15: Additional mass screening for suicidal ideation in the CF is not recommended, though existing screening during the Periodic Health Assessment and pre- and post-deployment screening may continue as this practice provides useful surveillance data and harm is unlikely.

Recommendation 16: Depression screening during the Periodic Health Assessment and the pre- and post-deployment screening should continue.

Recommendation 17: The CF should consider increasing the frequency of depression screening, but only if it forms part of a systematic approach to primary care management of depression.

Recommendation 18: The CF should follow the emerging literature on the benefits of more frequent PTSD screening in primary care and implement such screening if and when there is sufficient evidence of benefit.

Recommendation 19: The CF should adopt and disseminate the APA guidelines on assessment of suicidality.

Recommendation 20: Assessment of suicidality should of course occur at the first encounter for evaluation of patients with symptoms of mental health problems in both mental health and primary care settings. Suicidality should be reassessed during care for patients who have deteriorated, have developed new symptoms or co-morbidities, have failed to improve as expected, or are experiencing a crisis or significant new stressors. Assessment of suicidality at each and every mental health encounter is not required and in fact may be counterproductive. However, this last finding may not apply to computerized mental health outcomes management systems.

Recommendation 21: In its educational programming on suicide, the CF should emphasize the limited value of risk factors for predicting suicide on a case-by-case basis. Instead, suicide risk assessment hinges on the precise content of an individual's suicide ideation and plan.

Recommendation 22: Given its central role in suicide prevention, the assessment of suicidality should be a target for quality assurance audits.

Recommendation 23: The CF should empanel a separate group to develop best practices for outpatient management of individuals at high-risk for suicidal behaviour (such as those discharged from an inpatient facility following a serious suicide attempt). The group should specifically address the issue of when a unit "buddy watch" is indicated as well as how precisely the watch is to be carried out. Because resources are likely to vary from region to region, a mixture of both national and regional solutions will be required.

Recommendation 24: A unit "buddy watch" should be reserved for short-term use in truly exceptional circumstances, such as a serious suicide attempt at a remote Forward Operating Base.

Recommendation 25: The CF should follow conventional, evidence-based guidelines for the drug treatment of mental disorders.

Recommendation 26: The CF should follow the guidelines of the American Psychiatric Association with respect to drug therapy for suicidal patients. These guidelines provide instruction on how to mitigate the increased risk of suicidal behaviour that can occur in the first weeks to months after the initiation of antidepressants.

Recommendation 27: Suicidality should be identified and addressed as a separate problem in mental health patients. Patients with suicidal ideation, intent, or behaviour should receive evidence-based psychotherapy specifically targeting the suicidality and the interpersonal problems that are driving it.

Recommendation 28: Cognitive-behavioural approaches targeting impulsivity, emotional dysregulation, and hopelessness/pessimism are particularly appealing for psychotherapy of suicidality because of their strong evidence base and the broad familiarity with CBT among CF clinicians.

Recommendation 29: The decision to augment (or replace) suicidality-specific CBT with interpersonal therapy, purely cognitive therapy, problem-solving therapy, and insight-oriented approaches should be made by the treating clinician, in consideration of the totality of the clinical circumstances.

Recommendation 30: Where clinically appropriate, using manualized approaches of proven benefit should be strongly considered (given that these have the best evidence of efficacy behind them).

Recommendation 31: The CF should consider developing and implementing a single, system-wide process for assuring follow-up for patients receiving care for mental disorders in both primary care and specialty mental health care settings.

Recommendation 32: The CF's existing Case Management Program can be used as a mechanism to improve follow-up for higher-risk mental health patients.

Recommendation 33: The CF should ensure that suicide surveillance data captures the source of the firearm involved (service vs. personal), as well as enough information to determine whether policies and procedures for firearm access were followed. This surveillance data should inform any needed changes in firearm control policies.

Recommendation 34: The CF should also ensure that suicide surveillance data specifically addresses the agent used in drug suicides, as well as the source of the agent (CF pharmacy, civilian pharmacy using CF Blue Cross card, other), if known. The CF should review existing dispensing/packaging practices for high-risk drugs, with an eye towards identifying any additional opportunities for means reduction.

Recommendation 35: Restriction of access to lethal means at the individual level should be part of the plan for management of suicidal patients in the outpatient setting.

Recommendation 36: The CF should explore opportunities to proactively engage with the local, regional, and national media in order to educate them on suicide and mental health in the CF, with the goal being to *encourage responsible reporting* of CF member suicides and *enhance the confidence* that CF members and the public have in the CF's mental health care.

Recommendation 37: The CF should continue to develop, implement, and evaluate policies and programs designed to mitigate stress and strain in the workplace, with the expectation that these may advance the CF's suicide prevention agenda, while at the same time offering many other advantages to the organization.

Recommendation 38: Disciplinary and investigative policies and procedures should be reviewed with an eye towards identifying any additional opportunities for changes that will mitigate stress and lower suicidal risk. Consideration should be given to implementing a version of the US Air Force's "hands-off" policy for members under investigation. In order to be effective, such a policy would need to be supported by training and development of tools and resources for leaders, investigators, and the rank-and-file.

Recommendation 39: For the purposes of suicide prevention, the Panel does not recommend any additional screening or selection measures be implemented for either potential recruits or members preparing for deployment.

Recommendation 40: The CF should continue to evaluate the resilience training aspects of its mental health training program.

Recommendation 41: The CF should continue to monitor the scientific literature in the area of resilience training, modifying its own programming to reflect best practices.

Recommendation 42: The CF's Strengthening the Forces programs on anger management, stress management, and healthy relationships likely improve member and family wellbeing and mitigate primary risk factors for suicidal behaviour. For these reasons, they should continue to be offered.

Recommendation 43: The CF should continue to identify the remaining barriers to mental health care (both in garrison and on deployment) and to make any needed changes to address these.

Recommendation 44: Confidentiality with respect to suicidal thoughts and behaviour offers both advantages and disadvantages. CF mental health specialists believe that the effects of the CF's policy of strong confidentiality protections surrounding suicidality are, in the balance, far more positive than negative. Nevertheless, CF clinicians should engage in meaningful dialogue about medical employment limitations with the operational chain of command. In addition, clinicians should encourage members to disclose details about their mental health problems when doing so can contribute to their recovery.

Recommendation 45: The CF should continue to drive down wait times for mental health services to as low as is feasible.

Recommendation 46: The CF must reinforce its capabilities in clinical quality improvement in mental health care. It must capture enough data on the processes and outcomes of care to permit identification of potential problem areas and to evaluate the effect of any countermeasures.

Recommendation 47: After each suicide, a clinical suicide investigation should take place as soon as possible:

1. The primary purpose of this investigation should be to explore any opportunities for improved suicide prevention or care in the future, with a focus on health care and communication/collaboration between health professionals and the chain of command;

2. A secondary purpose should be to feed useful epidemiological data into the CF's suicide surveillance system;

3. The investigation should be performed by one or more health professional(s) with special training/experience in suicide investigation;

4. Investigators should be drawn from a limited pool of qualified investigators for whom performing such investigations would be one of their primary duties;

5. The investigation should follow a standard protocol—the US's Department of Defense Suicide Event Report would serve as a useful template;

6. Psychological autopsy should be reserved for cases in which there is significant uncertainty about the cause of death (e.g., suicide vs. homicide). Those responsible for doing psychological autopsies should have specific training and experience in their execution.

7. The CF should seek legal counsel to determine the extent to which the information in the clinical suicide investigation can be protected as a quality assurance activity; and

8. The clinical suicide investigation (or some extract thereof) can serve as a useful reference document for BOI's.

Recommendation 48: The CF should review the information required for its suicide surveillance activities, making sure that it has a reliable mechanism for capturing the information that is most likely to be helpful for quality assurance. In particular, more detail is required on:

1. Means;
2. Triggers;
3. Mental health care; and
4. Communication/collaboration with the chain of command

Recommendation 49: The US Department of Defense Suicide Event Report may serve as a useful template for suicide surveillance data.

Recommendation 50: The clinical suicide investigation should be used to capture the data needed for suicide surveillance; investigators should be trained in the use of the suicide event report.

Recommendation 51: For the present, the CF should focus on *completed* suicides as it fine-tunes its suicide surveillance system. However, in the future, the CF should look towards finding ways of capturing similar information on serious suicide *attempts* as well.

Recommendation 52: The CF should continue to monitor suicide risk factors (including barriers to mental health care) using its periodic Health and Lifestyle Information Survey.

Recommendation 53: The CF should specifically look at suicide rates in currently serving and former members in its planned cancer and mortality linkage study.

Recommendation 54: The CF should develop a set of performance measures (and ways to capture these) for its suicide prevention program. The completed suicide rate will have limited value as a performance measure because the numbers are expected to be low enough that detecting important changes will be difficult. Thus, other performance measures will be needed (such as the fraction of those with mental health problems who are in care, the prevalence of suicidal ideation, the fraction of mental health patients with a complete suicidality assessment documented in their medical record, etc.).

Recommendation 55: Leader education on available mental health services should be integrated into the CF's comprehensive mental health education program. The frequency of this training should be guided by demonstrable educational needs rather than any fixed schedule.

Recommendation 56: "Buddy aid" mental health skills should also be integrated into the CF's comprehensive mental health education program.

Recommendation 57: An implementation plan for all of the Panel's recommendations should be developed. Because of the resource implications and the complexities involved, the plans for development of a clinical suicide quality assurance investigation system and the overall reinforcement of the CF's quality improvement capacity for mental health care should be emphasized.

Recommendation 58: A comprehensive communications plan should be developed to educate all stakeholders about the CF's suicide prevention program. The efforts to engage the media to encourage responsible reporting of suicides should be rolled into this comprehensive plan.

Recommendation 59: The CF's suicide prevention program has progressed enough that CFAO 19-44 should be repealed and replaced with a suitable policy instrument that sketches out the essential features of the CF's current approach.

ANNEX B: EVALUATION OF THE CF'S SUICIDE PREVENTION APPROACH AGAINST THE US AIR FORCE SUICIDE PREVENTION PROGRAM

Initiative	USAF Activities	Corresponding CF Activities—Current	Corresponding CF Activities—Recommended
Leadership involvement	Regular messages delivered by USAF Chief of Staff on importance of suicide awareness, overcoming barriers to care, etc.	"Be the Difference" campaign	
Dealing with suicide through professional military education	Incorporate suicide prevention training into professional military education curricula through required training	Suicide awareness and skills training integrated into the mental health training for PLQ course for junior leaders

Information on services available integrated into pre- and post-deployment mental health training | Integration of suicide awareness and skills training into mental health education for all career courses |
| Guidelines for commanders: use of mental health services | Annual briefings to commanders included resources for referral to mental health, substance abuse, family advocacy, or emergency evaluation (as of 2003, resources accessible through AF website for commanders) | Outreach of mental health providers into military units

Public awareness campaigns for various programs, services (CFMAP, OSISS, etc.) | Integrate information on CF services into regular mental health education programming throughout career/deployment cycle

Assess knowledge/awareness of existing programs and services periodically and tailor awareness strategies/campaigns accordingly |
| Community preventive services | Increase preventive services performed by mental health professionals (including increasing the number of mental health professionals per clinic by 1 full time equivalent) | Tripling of mental health clinician FTE's over past five years

Regular outreach of clinicians into units

Development of Strengthening the Forces Mental Health and Wellbeing educational program

Development of Joint Speaker's Bureau for delivery of mental health education | |
| Community education and training | Required training at two levels for non-professionals in basic suicide factors, intervention skills, and referral procedures for people potentially at risk | Optional stand-alone suicide awareness/prevention training through Strengthening the Forces

Integration of suicide awareness into PLQ course, pre-deployment training, and post-deployment training | Continued integration of suicide awareness and prevention skills training into the rest of mental health education program across career and deployment cycle |

Initiative	USAF Activities	Corresponding CF Activities—Current	Corresponding CF Activities—Recommended
Investigative interview policy ("hands-off" policy)	Investigators "hand-off" members to their chain of command after any investigative interview; chain of command assesses coping, makes referrals as needed, etc.	No consistent process	Consider development of an analogous policy, given potential role of disciplinary action as suicide trigger
Critical Incident Stress Management	Teams developed to provide management of critical incidents	CF Policy on Early Psychological Intervention advocates a more flexible approach to responding to potentially traumatic events (more in keeping with current literature)	
Standing subcommittee for "Integrated delivery system (IDS) for human services prevention"	Establishment of seamless system of services across multidisciplinary human services prevention activities, which functions to provide centralised information and referral and collaborative marketing of preventive services	Appears to be similar to the role of the CF Mental Health Advisory Committee	
Limited patient privilege	Provided limited client-therapist confidentiality to suicidal individuals under investigation only	Strong confidentiality protections for all patients—only medical employment limitations may be communicated to chain of command	
Behavioural health survey	Tools for assessing behavioural health status of any unit are available to commanders	DGMPRA offers analogous assessment tools for commanders (e.g., Human Dimensions of Operations survey) Biannual Health and Lifestyle Information Survey assesses need, barriers to care, etc. in garrison 2002 CF Supplement to Canadian Community Health Survey, Cycle 1.2	In-theatre needs assessment to explore need and barriers to care on deployment
Suicide event surveillance system	Central surveillance database	CF suicide surveillance system	Strengthen suicide surveillance system to better capture key information for prevention Post-suicide clinical quality assurance investigation

ANNEX C: MOST RECENT SUICIDE SURVEILLANCE REPORT FROM THE DIRECTORATE OF FORCE HEALTH PROTECTION

Suicide in the Canadian Forces 1995 to 2008

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D FHP/Epidemiology
17 Sept 2009

Introduction

There has been concern since the early 1990s about the apparent rate of suicide in the CF and its possible relationship to deployment. As a result, the Surgeon General has been asked to determine the rate of suicide among CF personnel overall in comparison to the Canadian population as well as the rate of suicide in those personnel with a history of deployment compared to those without such a history. Although DND keeps a current record of CF suicides, comparisons with the general Canadian population are dependent on the releases of Canadian mortality rates by Statistics Canada approximately 2 years after the end of data collection. CF suicide data are available until 2008; however, the most recent Canadian data are available until 2005.

This is not the first report on suicide in the CF. A study by Sakinofsky and colleagues in 1996 investigated the suicides of CF personnel between January 1990 and June 1995. This study found the male CF suicide rate to be 12.2/100,000 over the 5.5 years covered by the study compared to the Canadian rate for 20 to 54 year old males of 26.8/100,000. The assumption must have been made that Canadian suicide rates did not change after 1992 as the authors only had 1990 to 1992 Canadian data at the time of the study. The Sakinofsky study also found that deployment was not a risk factor for suicide.

D FHP has updated these findings and provides epidemiological reports on a regular basis that include CF suicide rates over time, comparisons to the general population and suicide analyses according to deployment history. This report only includes Regular Force suicides as Reserve Force records are incomplete for both suicides and those at risk. There is a high turnover for Class A Reservists, and suicides among this group are probably reported and investigated outside the military system unless they are specifically brought to the attention of DND. The number at risk is also uncertain due to the high turnover such that the definition of an active reservist is unclear. Since data on suicide attempts are often incomplete, this report only includes completed suicides. This is in keeping with other occupational health studies.

Method

1. Crude CF male suicide rates were calculated from 1995 to 2008 inclusive. Canadian rates for suicide in females are typically 1/3 to 1/5 of those for males. In conjunction with the low proportion of females in the CF, it is not unusual to have few female suicides in the CF over this short period of time. Due to the very low number of female suicides and instability of this data statistically, comparisons were made with male rates alone. Suicide rates prior to 1995 have not been calculated as the method of ascertainment of suicides has changed over the years.

2. To compare CF male rates with general Canadian male population rates, standardization by age using the indirect method was used to provide standardized mortality ratios (SMR) for suicide up to 2005. This method controls for the age difference between the CF male and general Canadian male populations. An SMR is the observed number of cases divided by the number of cases that would be expected in the population at risk based on the age- and sex-specific rates of a standard population (the Canadian population in this case) multiplied by 100%. Therefore, an SMR less than 100% indicates that the population in question has a lower rate than the Canadian population, while an SMR greater than 100% indicates a higher rate.

3. The calculation of confidence intervals for population-based data is controversial but is provided here for those who may want to generalize the results to other years. Confidence intervals (CIs) were calculated for CF male suicide rates and SMRs directly using Poisson distribution 95% confidence limits. In any case, CIs are valuable in illustrating the variability that is possible when dealing with such small numbers of cases.

4. Concern has been expressed that those with a history of deployment may have a higher risk of suicide. As a result, SMRs were calculated separately for those with and without a history of deployment. However, SMRs cannot be compared directly to each other as they are standardized to different population distributions.

5. To compare suicide risk among those with a history of deployment directly to those without, direct standardization was done using the total male population of the CF as the standard. Age-adjusted suicide rates for those with and without a history of deployment were compared using rate ratios. However, since age- and sex-specific rates for this population are extremely unstable, caution should be used when comparing directly standardized rates. Confidence intervals were calculated using the method in the text by Rothman and Greenland.[xxxi]

6. Information on the number of suicides was obtained from the Directorate of Casualty Support Management (DCSM). Demographic information (i.e. age, sex, and deployment history) originated from the Directorate of Human Resources Information Management (DHRIM). History of deployment was based on deployment Unit Identification Codes (UIC) from DHRIM. It should be noted that the number of personnel with a history of deployment back to 1997 has changed from previous reports due to updating of DHRIM records; some deployment inaccuracies may persist.

7. Canadian suicide rates by age and sex were obtained from Statistics Canada. Data were available up to 2005 at the time of preparation of this report. Canadian suicide rates are derived from death certificate data. Codes utilized for this report were ICD-9 E950-E959 (suicide and self-inflicted injury) in the Shelf Tables produced by Statistics Canada for 1998 and 1999. Prior to those years, suicide rates were taken from a table on the Statistics Canada website. For 2000, 2001, and 2005 the number of suicide deaths were based on ICD-10 codes X60-X84 utilizing CANSIM Table 102-0540 from Statistics Canada; for 2002 Causes of Death 84-208-XIE was used. For 2003 and 2004 suicide deaths were taken from CANSIM 102-0551. The Canadian population denominators were all taken from Statistics Canada publication no. 91-213. Denominators up to and including 2002 were final post-censal/intercensal figures, for 2003 and 2004 these were updated post-censal estimates, for 2005 these were preliminary postcensal estimates. There is some evidence that death certificate data underestimate suicide rates although the true rate is probably no more than 1.25 times the official rate (CDC National Center for Injury Prevention and Control estimate).

Results
A. Crude CF Suicide Rates (1995–2008)
Table 1 shows the CF rate for suicide per 100,000 for males. As the number of events was less than 20 in each year, rates were not calculated annually as these would not have been statistically reliable. Therefore 5 year rates have been calculated for 1995-99 and 2000-04 and a 4 year rate for 2005-08. Female rates were not calculated as female suicides were uncommon; there were no suicides in females from 1995 to 2001, there was one in 2002, 2 in 2003, one each in 2006, 2007, and 2008.

xxxi   Rothman KJ, Greenland S. Modern Epidemiology 2nd Edition, Lippincott, Williams, & Wilkins, Philadelphia, 1998, p.260-4.

TABLE 1 – MALE CF MULTIYEAR SUICIDE RATES, (1995-2008)

Year	Number of Male CF Personnel	Number Male CF Suicides	CF Male Suicide Rate per 105 (95% CI)
1995	62597	12	
1996	57608	8	
1997	55041	13	
1998	54485	13	
1999	53134	10	
1995-99	**282865 pys**	**56**	**19.8 (15,26)**
2000	51864	12	
2001	51008	10	
2002	52326	9	
2003	53752	9	
2004	53871	10	
2000-04	**262821 pys**	**50**	**19.0 (14,25)**
2005	53649	10	
2006	54308	7	
2007	55141	9	
2008	55709	13	
2005-08	**218807 pys**	**39**	**17.8 (13,24)**

pys = person years

As can be seen, CF suicide rates have not appreciably changed; the point estimates if anything are decreasing.

B. Comparison of CF Suicide Rates to Canadian Rates using Standardized Mortality Ratios: (1995-2005)

As the CF rates are somewhat unstable due to low numbers, the best approach is to compare suicide mortality by estimating the number of cases expected assuming Canadian rates applied to the military population. This method, known as indirect standardization, is used commonly in occupational studies. By dividing the number of observed cases by those expected (using Canadian rates), the standardized mortality ratio (SMR) can be calculated. This does limit calculations up to 2005 as Statistics Canada has only released suicide rates up to that year at present. Five year comparisons were calculated except for 2005 where the annual rate was calculated (Table 2). Since 2005 suicide rates for the Canadian population have recently become available from Statistics Canada, the 2005 data is presented even though limited conclusions can be drawn from such small number of deaths. Deaths from suicide annually in the CF are so few that the SMR for 2005 should be interpreted cautiously as small numbers lead to a greater likelihood that the result is due to chance.

TABLE 2 – COMPARISON OF CF MALE SUICIDE RATES TO CANADIAN MALE RATES USING STANDARDIZED MORTALITY RATIOS (SMRS): 1995-2005

Year	Age	Number of Male CF Personnel (pyrs)	Canadian Male Suicide Rate	Expected # of Male CF Suicides	Observed # of Male CF Suicides	SMR for Suicide (95% Confidence Intervals)
1995-99	15-19	3668	19.36	0.71	2	
	20-24	26729	26.77	7.15	7	
	25-44	224982	28.02	63.04	44	
	45-64	27486	25.56	7.03	3	
	Total			77.93	56	72% (54,93)
2000-04	15-19	5285	14.92	0.79	1	
	20-24	27958	21.61	6.04	6	
	25-44	199383	23.78	47.42	37	
	45-64	30195	24.55	7.41	6	
	Total			61.66	50	81% (60,107)
2005	15-19	1098	13.37	0.15	0	
	20-24	6754	20.13	1.36	1	
	25-44	38047	22.61	8.60	8	
	45-64	7750	24.37	1.89	1	
	Total			12.0	10	83% (40,153)

During 1995 to 1999, the SMR was 72% indicating that the number of CF male suicides was 28% lower than that expected based on Canadian male rates taking the different age distributions into account. This finding was statistically significant as the upper confidence limit was less than 100%. For the 2000 to 2004 time period, there were 19% fewer male suicides than would be expected based on suicide rates seen in the Canadian male population. This finding is not statistically significant as the confidence intervals include 100%. In other words, this finding could be due to chance. Similarly, the 2005 data indicate that the CF male population has a 17% lower suicide rate than the Canadian population after adjusting for the age differences between the populations. This SMR is also not significant and has a very wide confidence interval (wider in comparison to the 5 year estimates) indicating great variability in the SMR.

C. Comparison of CF Suicide Rates by Deployment History to Canadian Rates using Standardized Mortality Ratios: (1995-2005)

Concern has been expressed that those with a history of deployment may be more likely to die of suicide. The standardized mortality ratios according to a history of deployment are shown in Table 3.

TABLE 3 – STANDARDIZED MORTALITY RATIOS FOR SUICIDE IN THE CF MALE POPULATION BY HISTORY OF DEPLOYMENT: 1995-2005

Year	Age	Male CF Suicides With HX of Deployment			Male CF Suicides Without HX of Deployment		
		Expected	Observed	SMR (95% CI)	Expected	Observed	SMR (95% CI)
1995-99	15-19	.01	0		.70	2	
	20-24	1.36	2		5.80	5	
	25-44	25.74	17		37.30	27	
	45-64	2.73	0		4.30	3	
	Total	29.84	19	64% (38,99)	48.09	37	77% (54,106)
2000-04	15-19	.01	0		.78	1	
	20-24	1.35	1		4.69	5	
	25-44	26.28	19		21.14	18	
	45-64	3.87	4		3.54	2	
	Total	31.52	24	76% (49, 113)	30.14	26	86% (56,126)
2005	15-19	0.00	0		.15	0	
	20-24	.23	0		1.13	1	
	25-44	5.25	4		3.35	4	
	45-64	1.12	0		.77	1	
	Total	6.60	4	61% (17, 155)	5.40	6	111%(41, 242)

The SMRs in each of the 5 year time periods indicate that the observed number of male suicides is less than that expected using general Canadian male suicide rates. For example, in the period from 2000 to 2004, the number of suicides among male CF members with a history of deployment was 76% of that expected based on Canadian male suicide rates. For males who did not deploy, the SMR was 86%, indicating that compared to the Canadian population of males of the same age, male personnel who did not deploy were 14% less likely to commit suicide. Neither of these findings is statistically significant however. Furthermore, SMRs should not be compared to each other as they are based on different populations. In 2005, males who had a history of deployment were 39% less likely to die from suicide than Canadian males of the same age; however, this result is not significant. The SMR for CF males who do not have a history of deployment is also not significant, indicating that the rate in the CF population is not statistically higher than the suicide rate in the Canadian population of males the same age. Furthermore, the extremely wide confidence intervals for the 2005 data highlight the variability in the annual data.

D. CF Suicide Rates by Deployment History using Direct Standardization: 1995–2008

Table 4 shows the results of the direct standardization. Suicide rate ratios less than 1.0 would suggest

that a history of deployment is protective; ratios greater than 1.0 would suggest a harmful effect of deployment.

TABLE 4 – COMPARISON OF CF SUICIDE RATES BY DEPLOYMENT HISTORY USING DIRECT STANDARDIZATION (1995-2008)

Year	Age	Total Male CF Person-Years	CF Male Suicide Rate Per 100,000		Age Adjusted Suicide Rate Per 100,000		Suicide Rate Ratio (95% CI)
			Hx of Depl	No Hx of Depl	Hx of Depl	No Hx of Depl	
1995-	15-19	3668	0	55.34			
1999	20-24	26729	39.38	23.09			
	25-44	224982	18.51	20.28			
	45-64	27486	0	17.83			
	Total	282865	17.65	21.12	18.4	20.8	.89 (0.50,1.57)
2000-	15-19	5285	0	19.25			
2004	20-24	27958	15.95	23.05			
	25-44	199383	17.19	20.25			
	45-64	30195	25.36	13.86			
	Total	262821	18.09	19.97	17.7	19.8	.89 (0.50,1.58)
2005-	15-19	5626	0	0			
2008	20-24	29932	53.55	20.55			
	25-44	148465	17.69	18.97			
	45-64	34784	13.84	7.63			
	Total	218807	18.67	16.84	21.5	16.9	1.27 (0.64, 2.55)

In each of the 5 year time periods, the standardized rate ratio suggest that having a history of deployment makes one less likely to die from suicide compared to those who do not have a history of deployment. In the time periods 1995 to 1999 and 2000 to 2004, the suicide rate ratios of .89 indicates that the rate of suicide among those male CF members with a history of deployment is 89% of that found among those without a history of deployment. The confidence intervals for both time periods include 1.0 indicating that these findings are not statistically significant. Data from 2005 to 2008 show that there is no statistically significant increase in suicide deaths among those with a history of deployment compared to those without a history of deployment. As with the other time periods, the confidence interval for the rate ratio contains 1.0 signifying that the result is non-significant and likely due to chance.

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Discussion

The finding that CF suicide rates are lower than the general Canadian population rates is not surprising as CF personnel are a screened, employed population and would be expected to have lower rates of suicide as well as lower rates of other medical problems. Reporting of CF suicides is probably more complete than those of the Canadian population as the latter derive from death certificate records, which are known to under-report suicides. Reporting of CF suicides is a product of both death certificate data as well as records kept by military police.

As shown in Table 1, no recent trend is apparent in CF suicide rates. However due to low numbers and low statistical power, detecting changes in CF suicide rates over time is limited to finding only very gross changes in suicide rates as the numbers are very small.

The SMR analysis comparing the number of observed CF cases to expected cases based on Canadian rates is also limited by the small numbers. Note that if the 95% confidence intervals include 100%, this indicates that if this was considered a sample, chance could not be excluded as a cause for the differences seen from the general Canadian population.

The SMRs comparing the observed number of cases of those with and without a history of deployment with the expected number of cases based on Canadian rates also demonstrate that deployment does not place CF members at high-risk. This is confirmed by the direct standardization rates, which up to 2008 show that there is no statistically significant relationship between history of deployment and risk of suicide.

The annual number of suicides in the CF male population is very small compared to the total CF male population. The value in presenting the 2005 annual data is debatable as a very small change in numbers of suicides results in a large relative change in the SMR estimate. Thus, conclusions drawn from the 2005 SMR analyses must be tentative and take into consideration the instability of the numbers. As future years' data becomes available, analyses will be conducted using an aggregate year group.

Conclusions

The following conclusions are reached with the understanding that a true difference can be missed due to the small sample size (i.e. the power of the study is low):

1. The crude rate of suicide in the Canadian Forces is below those of the general Canadian public, which is not unexpected for a screened, working population. From 1995 to 2008 there has been no clear change in male CF suicide rates.

2. The rate of suicide when standardized for age and sex is lower than that of the general Canadian population.

3. History of deployment is not a risk factor for suicide in the Canadian Forces.

ANNEX D: CFAO 19-44 – SUICIDE PREVENTION (ISSUED 1996)

Purpose

1. The purpose of this CFAO is to describe the policy, responsibilities, measures and procedures for suicide prevention, intervention and post-intervention.

Related orders

2. This CFAO should be read in conjunction with and supplementary to:

   a. 4-13, Reporting of Significant Incidents;

   b. 22-4, Security and Military Police Services;

   c. 24-1, Casualties – Reporting and Administration;

   d. 24-2, Report on Injuries;

   e. 24-5, Funerals, Burials and Graves Registration;

   f. 24-6, Investigation of Injuries or Death;

   g. 34-40, Hospital Admissions and Discharges — Reporting;

   h. 34-55, Management of Critical Incident Stress in the Canadian Forces;

   i. 56-15, Canadian Forces Social Work Services; and

   j. QR&O 21.56, Investigation of Aircraft Accidents.

Definitions

3. In this order:

   "attempted suicide" means unsuccessful suicide;

   "intervention" means use of measures including confrontation, therapeutic consultation and hospitalization to effectively manage incidents of suicide and attempted suicide;

   "post-intervention" means actions taken to reduce the trauma of the bereaved, as well as investigative and Critical Incident Stress Debriefing (CISD) activities to be undertaken following a suicide or attempted suicide;

   "prevention" means use of measures such as education and awareness through information to reduce the prevalence or probability of suicidal behaviour;

   "suicide" means intentional self-inflicted death.

General

4. In Canada, suicide is the fourth leading cause of death after motor vehicle accidents, cancers and cardiovascular diseases. While suicide occurs at all ages and rank levels, it is most common among younger Service personnel. Every suicide raises the question of whether the death could have been prevented. Moreover, suicide may lead to serious trauma and stress for bereaved family, friends and co-workers, and may induce suicidal thoughts and behaviour in others.

5. Most cases of suicide are preceded by warning signs. Some of these, such as giving away treasured possessions or openly expressing suicidal thoughts or intentions, are closely linked to suicidal acts. Other indicators of risk, such as alcohol or substance abuse, and changes of behavioural patterns or depression, are not unique to suicide. Evidence of such warning signs should not be discounted in any individual. Instead, the appropriate interventive measures should be initiated to ensure that these people receive prompt attention.

Policy

6. The goals of the Canadian Forces (CF) suicide policy are to reduce the incidence of suicide and attempted suicide to the lowest possible level, and to provide an immediate means for assisting a member who has attempted suicide or, in the event of a suicide, to assist bereaved family members, friends and co-workers.

Prevention

7. Suicide is an extremely complex and individual act. The cause and signs are varied and often difficult to identify. Signs of emotional distress or depression can indicate the risk of suicide. It is the ability to recognize these signs and the knowledge of how to react that are fundamental to suicide prevention.

8. Awareness and education can enable CF members to recognize the danger signals and respond appropriately. Educational programmes may also make distressed members aware that help is available.

9. The Director Medical Services (DMS) is responsible for providing advice and assistance to all staffs involved in developing suicide awareness programmes. DMS, in conjunction with the Health Promotion Advisory Group (HPAG), and the Directorate of Individual Training (DIT), will coordinate educational programmes, as appropriate, aimed at enabling all CF members to recognize and respond to indications and signs of suicide.

10. Commanding officers (COs) are responsible to ensure that suicide prevention is given appropriate priority within the unit.

Intervention

11. Suicide intervention should begin when the signs of potential suicidal behaviour are first observed and identified in an individual. Signs and symptoms of potential suicide must be reported immediately to medical staff, or if unavailable, to a social work officer (SWO) or chaplain, who shall initiate such action as is required.

12. Base commanders and COs are to develop appropriate intervention plans to allow a rapid, coordinated and effective response to reports that an individual displays signs of suicidal behaviour. It is recommended that local medical staff, military police, chaplains and SWOs jointly develop these plans and procedures, outlining the duties and responsibilities of personnel from each organization.

Post-intervention

13. Post-intervention consists of measures taken after successful intervention is completed or a suicide has occurred. The purpose of post-intervention strategies is to attempt to reduce the trauma of the member and/or the bereaved, prevent or discourage "copy-cat" behaviour by others, and reconstruct the events that led to the suicide or attempted suicide. Post-intervention is an essential component of the management of suicide, providing comfort and assistance to bereaved family members, friends and co-workers in addition to providing valuable information to be incorporated into prevention and intervention strategies.

14. The following are responsible for the indicated actions in the area of post-intervention:

a. it is essential for COs to ensure that social support services, including counselling, are offered to bereaved family members, friends and co-workers. COs will also ensure that summary investigations are carried out by an SWO, or, if unavailable, by an officer experienced and mature enough to conduct an investigation with the necessary tact and discretion to deal effectively with the victim's family, friends and co-workers. If circumstances require the convening of a board of inquiry, an SWO shall be included as a member to ensure family, friends and co-workers are treated in the appropriate manner. COs are also responsible for ensuring that CISDs are provided by a qualified team or individual at the proper time;

b. the investigating officer will carry out a complete investigation and ensure that all concerned professionals, supervisors, colleagues and friends are interviewed as appropriate. With a view to protecting the individual's immediate family, when an SWO is not available, family members shall be interviewed only when absolutely necessary and when the required information cannot be obtained from any other source. Guidelines for investigating a suicide are included in Annex A;

c. base and unit surgeons are responsible for ensuring, in consultation with the investigating officer, that an adequate medical investigation is carried out according to established procedures to help obtain information that could enhance prevention and intervention strategies; and

d. SWOs are responsible for providing required social support services and for arranging CISDs as requested by the unit CO.

(C) 1605-19-44 (DMS)
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ANNEX A — GUIDELINES FOR THE INVESTIGATION OF A SUICIDE

1. All suicides shall be investigated pursuant to 24-6. A complete investigation should address, but not necessarily be limited to, the areas listed below. In addition, under each area there are a number of suggested details that may be significant in certain cases. All interviews shall be conducted with the utmost sensitivity and tact. A complete report may not be possible and investigators should not press individuals for information they are not prepared to divulge.

2. The following are recommendations for the basic areas of inquiry that should be addressed during the investigation of every suicide:

   a. identifying information (from member's personnel record résumé (PRR)):
      (1) name,
      (2) service number (SN),
      (3) rank,
      (4) trade/classification,
      (5) sex,
      (6) race,
      (7) religion,
      (8) date of birth,
      (9) marital status,
      (10) unit,
      (11) home address, and
      (12) level of education;

   b. details of the incident:
      (1) date and time of suicide or attempted suicide,
      (2) location,
      (3) method,
      (4) details of discovery,
      (5) communication of suicidal intent (letter, tape, video, etc),
      (6) other actions that may have accompanied the suicide, and multiple or pact suicide or attempted suicide;

   c. military work history:
      (1) time in service,
      (2) time in rank,
      (3) time at present posting,
      (4) employment history, with particular attention to possible exposure to emotional trauma at work (e.g., through a critical incident, peacekeeping, involvement in a harassment case), and
      (5) awards;

   d. work performance:
      (1) problems accepting military life,
      (2) recent changes in job performance,
      (3) problems with being late, missing work,
      (4) problems with quality of work,
      (5) problems with supervisor, co-workers, and/or subordinates, and
      (6) victim's emotional state as perceived by others at work;

e. financial status:
   (1) describe financial situation including amount of debt,
   (2) ability to make debt payments, and
   (3) recent business losses, bad investments or failures;

f. disciplinary history:
   (1) criminal record — civilian and military,
   (2) time spent in detention (include description of offence),
   (3) accusations of sexual misconduct — child abuse, harassment, etc.,
   (4) any military or civilian charges pending, and
   (5) civil legal difficulties

g. recent agency contact — prior to committing suicide did the victim contact a professional such as a:
   (1) physician,
   (2) chaplain,
   (3) social worker,
   (4) nurse, or
   (5) others;

h. conclusion:
   (1) findings:
      (a) a statement based on the coroner's report indicating whether the incident was a suicide,
      (b) victim's state of mind prior to the suicide or attempted suicide,
      (c) the most probable reason for victim's decision to commit suicide, and
      (d) a statement as to whether the victim's supervisor or the medical system had identified a problem before the suicide occurred, and
   (2) recommendations — state what actions, if any, could have been taken to lower the risk of suicide in this case.

3. To be complete, the investigation of a suicide should include, in addition to the report of the investigating officer or of a board of inquiry, the following information and reports:
   (a) terms of reference for the investigation;
   (b) Military Police Report;
   (c) Medical Officer's Report;
   (d) Coroner's Report;
   (e) Toxicology Report;
   (f) form CF 98;
   (g) records of interviews conducted; and
   (h) comment on whether CISDs were employed.

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ANNEX E: PARTICIPANTS, CF EXPERT PANEL ON SUICIDE PREVENTION

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ANNEX F: CF EXPERT PANEL ON SUICIDE PREVENTION: TERMS OF REFERENCE

Aim

To provide a platform to review international best practices in suicide prevention and to provide recommendations to the Canadian Forces (CF) Surgeon General for the enhancement of: suicide prevention policy, clinical practice guidelines and a surveillance system for the Canadian Forces.

Background

Suicide amongst Canadian Forces Members is a major concern for all levels of leadership in the Canadian Forces. Since the early 1990s with the increased operational tempo, suicide in the CF and its possible relationship to deployment has generated considerable concern.

Director General Health Services (DGHS) tracks the rate of suicide among CF Regular Force personnel overall and compares these numbers to the Canadian population as the Canadian mortality rates become available. The rate of suicide among personnel with a history of deployment is also tracked and compared to those without such a history.

To date suicide rates in the CF remain stable. The rate of suicide among male CF personnel during the period 2005-2008 was actually lower than the rate during the period 2000-2004. Additionally, there appears to be no consistent relationship between a history of deployment and increased risk of suicide.

The most recent statistical comparisons with the general population were in 2004. The results indicate that the rate of suicide among male CF personnel between 2000 and 2004 was about 75% of the rate among Canadian males, once the two have been age-standardized. The number of suicides by female CF personnel is so low that it is not possible to compare with matched civilian statistics.

Under the Strengthening the Forces campaign the CF delivers suicide intervention and educational training on a regular basis. This ranges from a two day skill based workshop known as "ASIST" (Applied Suicide Intervention Skills) to shorter awareness sessions. While educational approaches to suicide prevention have intuitive appeal, convincing evidence of efficacy of programs is limited.

Within the CF Health Services extensive efforts are also expended to identify people at risk for mental health problems and to provide them with the assistance they require. Examples of these include: pre-deployment and post-deployment screenings, as well as, specific Mental Health (MH) assessment during Periodic Health Assessments.

We have an effective suicide prevention program. We are working to enhance it further because the death of even one CF member by suicide is one too many. This expert panel will provide an opportunity to examine current civilian and international military practice with a view to sharing lessons learned and to determine best practices in surveillance and prevention.

Strategic Objectives

a. Review civilian and international military experience in suicide prevention programs and lessons learned.

b. Review the available scientific evidence, epidemiology and current best practices in the area of suicide prevention and surveillance; and

c. Develop a series of recommendations for the management of suicide prevention and intervention in Canadian Forces that is balanced, feasible and logical given the available evidence. Suicide prevention recommendations will not be limited to educational approaches.

Mission Statement

The mission is to conduct a two day international expert panel to undertake a review of current civilian and international military practice regarding suicide prevention policy, clinical practice and surveillance systems.

Funding

a. Contracting International Subject Matter Experts to present details about their current programs and current scientific knowledge; and

b. TD for Workshop Participants.

Assigned Tasks

OPI for this project is Directorate of Mental Health, Canadian Forces Health Services group HQ.

Conclusion

This expert panel will provide a timely and important means to review evidence based best practices for suicide prevention in both a civilian and a military context. The panel will make specific recommendations that will be used to enhance our current CF programs.

ANNEX G: CF EXPERT PANEL ON SUICIDE PREVENTION, AGENDA

HALIFAX, N.S.

TIME	TOPIC – 22 SEP 09	OPI
0830- 0845	INTRODUCTIONS	LCOL JETLY
0845-0915	OPENING REMARKS	RADM MADDISON
0915-1015	KEYNOTE	DR. LINKS
1015-1030	DISCUSSION	DR ZAMORSKI
1030-1100	HEALTH BREAK	
1100-1130	CF PRESENTATION	DR WHITEHEAD MS L. MACDONALD
1130-1200	U.K. PRESENTATION	DR. FEAR & SURG CDR GREENBERG
1200-1245	LUNCH	
1245-1315	AUSTRALIAN PRESENTATION	LCOL COHN
1315-1345	NETHERLANDS PRESENTATION	LCOL HORSTMAN
1345-1415	U.S. PRESENTATION	COL RITCHIE
1415-1430	HEALTH BREAK	
1430-1500	DISCUSSION: RISK FACTORS AND TRIGGERS (INCLUDING KEY TARGETS FOR RISK FACTOR REDUCTION)	DR ZAMORSKI
1500-1530	BEST PRACTICES FOR SCREENING/ ASSESSMENT OF SUICIDE RISK AND SUICIDALITY IN CLINICAL SETTINGS	LCOL JETLY
1530-1600	DISCUSSION	DR ZAMORSKI
1600-1630	BEST PRACTICES FOR CLINICAL MANAGEMENT OF SUICIDAL INDIVIDUALS	LCOL JETLY
1630-1700	DISCUSSION	DR ZAMORSKI
TIME	TOPIC – 23 SEP 09	OPI
0830-0915	REVIEW OF DAY 1 FINDINGS	DR ZAMORSKI
0915 – 0930	SUICIDE PREVENTION TRAINING IN THE CF	MS. MACDONALD
0930-1000	DISCUSSION: WHAT DO MEMBERS AND LEADERS NEED TO KNOW ABOUT SUICIDE AND SUICIDE PREVENTION	DR ZAMORSKI
1000-1030	DISCUSSION: EDUCATIONAL STRATEGIES FOR MEMBERS AND LEADERS	DR ZAMORSKI
1030-1100	HEALTH BREAK	
1100-1130	BEST PRACTICES FOR POST SUICIDE INVESTIGATION	LCOL JETLY
1130-1200	DISCUSSION	DR ZAMORSKI
1200-1300	LUNCH	
1300-1315	SUICIDE PREVENTION IN MENTAL HEALTH CARE SETTINGS	LCOL JETLY
1315-1330	SUICIDE PREVENTION IN PRIMARY CARE SETTINGS	DR ZAMORSKI

1330-1400	DISCUSSION	DR ZAMORSKI
1400-1430	SUICIDE, BARRIERS TO CARE, AND QUALITY IMPROVEMENT IN MENTAL HEATLH CARE	DR ZAMORSKI
1430-1445	HEALTH BREAK	
1445-1515	DISCUSSION	DR ZAMORSKI
1515-1545	DISCUSSION: SUICIDE SURVEILLANCE PRACTICES IN THE CF	DR ZAMORSKI
1545-1630	CONSENSUS ON RECOMMENDATIONS TO BE INCLUDED IN FINAL REPORT	DR ZAMORSKI
1630-1700	DISCUSSION: IMPLEMENTATION ISSUES	DR ZAMORSKI

ANNEX H: SUICIDE AWARENESS AND INTERVENTION EDUCATION IN THE CF[xxxii]

The Canadian Forces health promotion program is Strengthening the Forces (StF), and resides within the CF Health Services Directorate Force Health Protection. The StF Subject Matter Experts (SMEs) are responsible for policy and program development, program implementation and evaluation. StF programs address primary prevention by adopting a population health approach, by pursuing programming with demonstrated efficacy and are not positioned to address diagnosed clinical health requirements. StF activities work towards the establishment of healthy work environments and in the development of skills to enable CF personnel and their families to maintain and improve their health.

The StF health promotion programs are delivered across the Bases and Wings via Health Promotion personnel. The four core programs are: Nutrition, Injury Prevention, Addiction Awareness and Prevention, and Social Wellness. Suicide awareness and intervention is part of the Social Wellness health promotion programming.

Strengthening the Forces (StF) has provided suicide awareness training since 2005 using the proprietary ASIST materials purchased from, and owned by, Livingworks. From 2005 to 2008, 288 two-day ASIST workshops have been delivered to 2,869 Regular Forces, 494 Reserve Forces, 1,065 Civilians, and 55 Family Members. In 2009, an evaluation of the two-day ASIST workshop was released.[xxxiii] Pre and post self-reported evaluations of ASIST courses given within the U.S. Army stated that 90% of the participants reported more than average confidence to help a person at risk for suicide after taking ASIST. The evaluation recommended that personnel who interact regularly with soldiers should take ASIST. The post-course and utilization rates are unknown.

Given the cost/benefit of in-house CF-specific programming, in the summer of 2009, a 3 hour suicide awareness workshop was developed by StF for a CF audience. The StF Suicide Awareness Workshop provides information and a process of intervening if and when necessary, explores myths and facts about suicide, explains the suicidal process, outlines resources in the CF and introduces the "ACE intervention process (used with permission from the U.S. Army). ACE stands for: Ask: ask about suicidal thoughts; Care: Understand that person may be in pain; and Escort: Take person to someone who can help.

In addition to the suicide awareness and intervention programs, StF offers Social Wellness health promotion programs that correspond to risk factors implicated in suicide.[xxxiv, xxxv] Stress: Take Charge: is a stress management workshop with components on stress and military life; creating social networks and building personal resilience. Managing Angry Moments is an anger management workshop for CF personnel who would like to improve how they respond in difficult situations. Basic Relationship Training is an effective communications workshop for couples. In addition, within the Alcohol, Other Drugs and Gambling Awareness area of health promotion, there is a CF Drug Control Program which is mandatory supervisor training for all CF members in leadership positions (DAOD 5019-3). The training consists of two parts: Recognizing and Responding to Early Warning Signs and Developing Effective Interview Skills.

[xxxii] This Annex was provided by Lucy MacDonald, Head of the Mental Health and Wellbeing Program of StF.
[xxxiii] ASIST Evaluation HQDA Tasker No. 09013001, April 2009
[xxxiv] James LC, Kowalski TJ. Suicide prevention in an army infantry division: a multi-disciplinary program. Mil Med 1996; 161:97-101.
[xxxv] McDaniel WW, Rock M, Grigg JR. Suicide prevention at a United States Navy training command. Mil Med 1990; 155:173-5.

ANNEX I: SUICIDE SURVEILLANCE IN THE CF[xxxvi]

Suicide surveillance practices in the CF have changed over the past 9 years and there will be further improvement in the near future. This will be discussed in 3 sections: suicide surveillance up to the present time, deficiencies in current suicide surveillance, and finally plans for the future. Suicide surveillance will be further divided into completed suicide, suicide attempts, and suicide ideation.

Suicide Surveillance, Past and Present

A. Completed Suicide

Suicide surveillance was not well organized prior to 2000 due to lack of staff. There was no calculation of rates and only irregular review of causes of mortality among CF personnel. Following concerns about a cluster of suicides in Quebec, a study by Sakinofsky and colleagues in 1996 investigated the suicides of CF personnel between January 1990 and June 1995. The Sakinofsky study also found that deployment was not a risk factor for suicide.

Since 2000 there has been a more rigorous approach to suicide surveillance. Crude CF male suicide rates have been calculated from 1995 to the most recent complete calendar year. This has been done for male Regular Forces personnel only. Due to the low numbers of suicides annually, five year averaged rates are usually calculated, and confidence intervals tend to be quite wide. Canadian rates for suicide in females are typically 1/3 to 1/5 of those for males. In conjunction with the low proportion of females in the CF, there are quite often no female suicides in any given year. There were no suicides in females from 1995 to 2001, there was one in 2002, 2 in 2003, one each in 2006, 2007, and 2008. These analyses only include Regular Force suicides as Reserve Force records are incomplete for both suicides and those at risk. There is a high turnover for Class A Reservists and suicides among this group are probably reported and investigated outside the military system unless they are specifically brought to the attention of DND.

Information on the number of suicides in the past has been obtained from the Directorate of Casualty Support Management (DCSM). Since 2004 all CF deaths have been reviewed by epidemiologists through review of Summary Investigations, Boards of Inquiry, and medical charts to confirm which deaths are in fact suicides. Disagreement with DCSM findings has been rare. Demographic information (i.e. age, sex, and deployment history) originates from the main CF personnel database (the Human Resource Management System or HRMS). History of deployment is based on deployment Unit Identification Codes (UIC) from HRMS. Canadian suicide rates by age and sex are obtained from Statistics Canada using death certificate data. Codes utilized have been ICD-9 E950-E959 in the past and currently ICD-10 codes X60-X84, both cover suicide and self-inflicted injury. Injury deaths of uncertain intent (E980-E989 and Y10-Y34) have not been included due to the concern that CF deaths are probably more intensively investigated than deaths among the general Canadian population, excluding these deaths gives a more conservative SMR result. Canadian population denominators are taken from Statistics Canada publications.

Since 2000 the following basic analyses have been completed on a regular basis:

1. Calculation of crude CF male suicide rates. The male Regular Force suicide rate is in the range of 17-20/100,000 per year. These rates appear to be slowly decreasing as is the rate in the general Canadian population. Means of suicide have only been recorded since 2004. The most common means of suicide is by hanging, strangulation, or suffocation.

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2. To compare CF male rates with general Canadian male population rates, standardization by age using the indirect method is used to provide standardized mortality ratios (SMR) for suicide. This controls for the age difference between the CF male and general Canadian male populations. The limitation to this approach is that there is currently a lag time of 3 years before Statistics Canada releases mortality data for all of Canada. The male Regular Force SMR is about 80% for suicide.

3. SMRs are calculated separately for those with and without a history of deployment. Concern has been expressed that those with a history of deployment may have a higher risk of suicide. The SMR for those with a history of deployment is in the 60 to 80% range.

4. As SMRs of those with and without a history of deployment cannot be compared directly to each other as they are standardized to different population distributions, direct standardization is done using the total male population of the CF as the standard. Age-adjusted suicide rates for those with and without a history of deployment are compared using rate ratios. The suicide rate ratio is approximately equal to one, mean that there appears to be no increased suicide risk among those with a history of deployment.

B. Suicide Attempts

Information on suicide attempts is available from anonymous surveys such as the Health and Lifestyle Information Survey (HLIS). The HLIS is a mail survey which has been conducted every 4 years up to 2008. The HLIS 2004 found that less than 1% of Regular Force respondents reported ever attempting suicide.

The 2002 CF Supplement to the Canadian Community Health Survey—Cycle 1.2 was a population-based survey done by Statistics Canada on CF Regular and Reserve Force members. At the time of the survey, 2.2% of CF men and 5.6% of CF women reported a suicide attempt at some point in their life. The reason for the difference between this rate and the CCHS rate is unknown—significant underreporting of suicide attempts has been shown in some contexts. Methodological differences may also account for some of this difference.

Military police may keep some type of suicide attempt records; however they are almost certainly incomplete. CF members who do attempt suicide and seek medical treatment will in the vast majority of cases receive treatment at civilian medical facilities. It is unknown if the severity of the intent is recorded.

C. Suicide Ideation

Information on suicide ideation is available from both the HLIS 2004 and from the CCHS DND Supplement 2002; the latter provided the figures that follow. Approximately 16% of CF Regular Force personnel have seriously considered suicide at some time during their life, 4% of CF personnel had those thoughts within the last 12 months. These numbers are comparable to the general Canadian population rates. A question on suicide ideation in the past 12 months has been added recently to the Periodic Health Assessment (PHA). The PHA is required every 5 years for CF personnel up to age 40 and then every 2 years thereafter.

Deficiencies in Current Suicide Surveillance

A. Completed Suicide

Risk factors for completed suicide are not recorded in a systematic fashion on all Summary Investigations and Boards of Inquiry. For example, it is unknown what proportion of CF members who completed suicide had financial problems. Knowledge of this type would help to steer suicide prevention efforts. Information about the means of suicides is not complete. Although death from firearms is the second most common means of suicide among CF personnel, it is unknown how many of these firearms were CF weapons.

Rates of suicide among Reserve Force personnel and released CF personnel are unknown. The latter are recorded in the provincial/territorial vital statistics systems while the former are captured incompletely by CF suicide records maintained by DCSM.

B. Suicide Attempts

There is no surveillance for attempted suicide at the present time. The military police do some type of tracking, it is unknown if severity of intent is recorded. It is important to record the severity of intent as the epidemiology of suicide attempts and completed suicides tend to be very different. Surveillance of suicide attempts is difficult in any population. However, some tracking would be possible through a combination of military police and medical records.

C. Suicide Ideation

A repeated personal interview mental health survey would provide higher quality and more comparative information than that obtained from the HLIS.

Plans for the Future

A. Completed Suicide

Improved recording of risk factors and means of suicide is required. This can be achieved through an improved Summary Investigation or Board of Inquiry process but the long delays (often 3 or 4 years) in completing these administrative investigations would argue for a new approach. A detailed yet succinct investigation by medical staff could meet this objective.

The lack of information on Reserve Force and released personnel suicides will be corrected through a linkage to Statistics Canada's mortality database as part of the CF Cancer and Mortality Study. This linkage is one component of a larger joint Veterans Affairs Canada – DND project known as the Transitional Outcomes Study, the linkage being Phase 3.

B. Suicide Attempts

There are currently no plans to institute surveillance of suicide attempts. If initiated, it should combine both military police and medical records and severity of intent should be measured where possible.

C. Suicide Ideation

Suicide ideation will continue to be measured on the HLIS and during the PHA. A repeat of the CCHS DND Supplement survey would add to the knowledge base in this area but would require agreement as well from Statistics Canada to conduct the survey among the general Canadian population to provide comparative data.