RÉSEAU QUÉBÉCOIS
DE RECHERCHE SUR LE SUICIDE

Partners for Life, an effective mental health literacy program: analysis and recommendations

Report prepared by
Alain Lesage and Jean-Claude Moubarac
Quebec Suicide Research Network (RQRS)

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Recommendations for the maintenance and promotion of the Fondation des maladies mentales (FMM)/Mental Illness Foundation's *Partners for Life* (PFL) program

Considering:

That it has not yet been proven that the other population-based strategies adopted in Québec have led to significant reduction in the youth suicide rate since 2000;

That the PFL program represents one of the population-based strategies recommended for reducing suicide rates;

1. **It is recommended that FMM/MIF's *Partners for Life* (PFL) program be maintained and promoted** and that, with the aim of enhancing the latter's value and recognition, the Fondation des maladies mentales (FMM/Mental Illness Foundation) commit itself to disseminate the findings of researcher-led evaluation studies published in peer-reviewed scientific journals.

2. **It is recommended that the new research fellowship** offered by FMM/Mental Illness Foundation in partnership with the Fonds de recherche du Québec–Santé (FRQS/Quebec Research Fund - Health) a) be dedicated to the study of youth suicide prevention strategy programs using a population-based approach aimed at promoting mental health and preventing mental disorders and addictions; b) include the PFL program evaluation in the research agenda; c) ensure FMM/Mental Illness Foundation resources be available to researchers to help them further evaluate the program, creating a services research laboratory; d) provide a Web page on the FRQS/Quebec Research Fund - Health site that explains the partnership between FMM/Mental Illness Foundation and the FRQS/ Quebec Research Fund - Health as well as FMM/Mental Illness Foundation's intention to undertake an assessment of the mental health promotion and suicide prevention programs, with special focus on its PFL program (see Annex 1).

3. **It is recommended that FMM/MIF pave the way in establishing a coalition of all community and non-governmental organizations involved in suicide prevention, mental health and addictions**. This coalition could thus assist the governmental departments of the Ministère de la Santé et des Services sociaux (MSSS/Ministry of Health and Social Services) involved in implementing and adequately funding a coherent province-wide program of activities directed at promoting mental health and preventing suicide, mental disorders and addictions, using evidence-based approaches. Integrating this broad coalition of groups—representing the education, research, civil society and justice sectors—into the existing biannual suicide prevention roundtable meetings of governmental departments would provide the MSSS//Ministry of Health and Social Services with greater support and a sense of social urgency in systematically implementing strategies to reduce the suicide rate in

Québec.

4. **It is recommended that the Government of Québec include in its suicide prevention action plans activities designed to develop mental health literacy about mental disorders and addictions**, and which have been proven to be effective and in line with the PFL model—currently **the sole mental health literacy activity for young people** with a real **potential for preventing suicide.**

Brief overview

Partners for Life (PFL) is a health literacy[1] program designed to enable Québec's senior high school students aged 14 to 18 develop their personal and social skills, and to help them and the adults in their lives understand the importance of recognizing the signs of depression, a major risk factor for suicide, and to seek help.

Every year since its inception in 1998, the program has reached 50 per cent of students in grades 9, 10 and 11 across Québec[2]. The program, however, has yet to be officially accepted as part of the mental health literacy strategy to prevent suicide by the Ministère de la Santé et des Services sociaux (MSSS/Ministry of Health and Social Services), which is responsible for suicide prevention, as well as by the Ministère de l'Éducation, du Loisir et du Sport (MELS/Ministry of Education, Recreation and Sports). Thus, both the Direction du programme de santé mentale (DPSM/Mental Health Directorate) and the MSSS/Ministry of Health and Social Services' Direction de la santé publique (DSP/Public Health Directorate) have failed to acknowledge the PFL program as a literacy strategy, justifying their position by claiming there is a lack of evidence-based data to substantiate the effectiveness of such a program.

And yet, the PFL program meets the seven criteria of a good health promotion program as established by Noar (2006):

1. **Documentation shows that preliminary research has been conducted with the program's intended recipients.** The PFL program was the focus of such research.

2. **The program logic model is based on a theoretical model.** The role of mental disorders in suicide, in particular that of depression, is well documented; detecting and recognizing behavioural changes or attitudes associated with depression, such as irritability and aggressiveness, including comorbidity of substance use disorders and suicidal ideation, are strong indicators of distress in young people; taking into account their reluctance to seek professional help and inclination to confide in their peers; and when it comes to encouraging people to get help from a healthcare professional, the main obstacle is not necessarily access to such services but rather accepting the existence of a mental health problem or addiction and the need for medical assistance. The program also constitutes a *de facto* training of student and teacher "gatekeepers." These components are well supported by the literature (Lesage, 2002) and can be found in the Government of Québec's 2005–2010 Mental Health Action Plan, which integrates the province's suicide prevention strategy (MSSS/Ministry of Health and Social Services, 1998) as a result of a positive evaluation by the Institut national de santé publique du Québec (INSPQ/Quebec

[1] Health literacy is the ability to access, understand and act on information for health.
[2] In Québec, those school grades are called «secondary 3 to 5».

Public Health Institute, 2004).

3. **The program was developed to serve a homogeneous group with the message tailored to address specific needs and preferences.** In this case, the PFL program is intended for adolescent students in grades 9, 10 and 11, an age group with one of the highest suicide rates in Western countries.

4. **The message has been designed to attract the target group.** The PFL program provides one-hour informative and interactive sessions—in between classes—led by teams of two dynamic and young facilitators who use inventive presentation styles.

5. **An appropriate medium is used.** The classroom is the best place to connect with teenagers and hold their attention for one full hour.

6. **Evaluations were performed.** Two evaluative studies were ordered by FMM/Mental Illness Foundation, not counting the ongoing internal evaluation of program quality; a third one, led by the Mental Health Commission of Canada (MHCC), is aimed at assessing the role of the PFL program in de-stigmatizing mental disorders compared to other Canadian programs. The first two studies (Forte & Boyer, 2000; Boyer & Forté, 2002) have shown that the message effectively reaches and is understood by the target population. Moreover, increased demand for help has been observed in the schools where the program is offered. These two studies on the PFL program were not, however, published in scientific journals; few studies exist on mental health literacy for youth.

Studies are also required to evaluate whether such programs have achieved their objectives with regard to improved awareness and knowledge in the target population, or more broadly, increased consultation rates when mental health problems are suspected and decreased suicide rates are observed. It is worth noting that such a mental health literacy program cannot constitute the lone population-based prevention strategy for suicide. It is, however, one of the four major strategies to have been evaluated and which are included in comprehensive, community-based suicide prevention programs, such as that of Nuremberg (Hegerl et al., 2006) and the US Air Force (Knox et al., 2003). The following specific population-based strategies we see in these programs are:

- Training of family physicians
- Mental health literacy
- Training of gatekeepers in the workplace and in health care and social service settings
- Active follow-up of “known risk” cases, for instance, people who have ended up in the emergency room after a suicide attempt or youth centre residents.

A multi-level evaluation of the PFL program that compares it with other population-based strategies used in Québec would allow to better assess its relative importance and impact on reducing youth suicides. Such an evaluation could assess the implementation and

potential outcome of the suicide prevention protocols introduced in youth centres in 2000, considering that, at that time, nearly half of the suicide victims had contacted or been admitted to a youth centre (Renaud & Marquette, 2002). A multi-level evaluation could also examine other population-based strategies. For example, have there been improvements in the primary care treatment of depression in young people? Have health literacy activities in the media or other generic health promotion activities been launched? How was the school-based and workplace gatekeeper training program carried out?

Nevertheless, during the period in which the PFL program was active, the suicide rate dropped by nearly 25 per cent in Québec, and by nearly 35 per cent in the under-18 age group (Gagné & St-Laurent, 2010). With the exception of the MSSS/Ministry of Health and Social Services media campaigns on depression in 2007, 2009 and 2010 aimed at adults (a campaign that, to our knowledge, has not been corroborated, even though it was based on national programs similar to those run in the United Kingdom and Australia that we describe in our literature review), no other comparable literacy program focussing on a known risk factor for suicide, specifically depression and failure to seek/obtain adequate help seeking, has reached a given age group to such an extent. The field of addiction in Québec sets itself apart with campaigns that target youth; we have seen the ads in our cities' bus shelters. Just as the PFL program does with depression, the addiction prevention campaigns entreat young people to seek professional help; but in terms of impact, none seem to have reached out and held the attention of such a great number of students for one full hour in a classroom setting as PFL has. Since addictions are risk factors that have similar effects to those of depression as a risk factor for suicide, these campaigns must also be seen as social and health literacy strategies, in support of suicide prevention; to our knowledge, they have not been evaluated as such according to the criteria set by Noar (2006).

7. **Funding must ensure the activity's long-term survival.** If it were maintained, the PFL program could be offered in Québec schools and funded by both the MSSS/Ministry of Health and Social Services' DPSM/Mental Health Directorate and DSP/Public Health Directorate, or co-funded by the MELS/Ministry of Education, Recreation and Sports as part of its Healthy School program (Simard & Deschenes, 2011). Funding for promotional activities such as social and health literacy is not provided automatically or exclusively by the MSSS/Ministry of Health and Social Services. For instance, the Ministry does not give money to Québec schools for teaching the *Canada's Food Guide*. In fact, even if the *Guide* is a Health Canada responsibility, Québec schools have integrated it into their curriculum, despite it not having been produced by the MELS/Ministry of Education, Recreation and Sports.

Partners for Life and its objectives

The FMM/Mental Illness Foundation's mission is the prevention of mental illnesses in order to reduce the suffering of those affected and their loved ones by mobilizing

individuals and society. In 1998, the Foundation created the PFL program, an innovative health literacy initiative on suicide prevention whose goal is to educate and raise awareness among high school students aged 14 to 18 years about the signs and symptoms of depression, substance abuse and suicidal behaviour. It also provided them with tools to assist others in distress and help them to find counselling resources.

The advantage of the 50-to-75-minute presentation is that it is all-inclusive, easily available and entirely free of charge for schools. This multi-faceted, interactive and dynamic program is adapted to today's reality, and the information is presented by two facilitators who talk about issues that high school students can relate to. According to Diane Piché, a high school grade 10 ethics and religious culture teacher at the Saint-Bruno-de-Montarville school, the presentation has the remarkable ability to capture and maintain the students' interest due to the appropriateness of the information, the enthusiastic facilitators and the pace of the presentation. In fact, each facilitator receives more than 150 hours of training on mental illness, presentation and counselling techniques, as well as a training session at Suicide Action Montréal's (SAM) crisis centre.

The presentation is seen by 50,000 to 60,000 teens every year. In total, FMM/Mental Illness Foundation estimates that the program has reached nearly 60 per cent of grades 9 to 11 students in Québec. Since the inception of this province-wide program, the facilitators have met more than 770,000 students in 672 French and English schools across Québec, as well as their parents, teachers and community advocates. In addition to high school students, the program has also been presented to a wide variety of groups like youth centre residents, students undergoing treatment, parents and other adults at school, as well as crisis centres for men and women.

Talking about competent health services and resources is an important aspect of the PFL program, since it enables students to learn about themselves, to interact with the facilitator and even, perhaps, to seek professional help. The program provides schools with three options to help their teen students: counselling agreements, reporting at-risk individuals by school staff, and support during crisis situations. The PFL creators have estimated that more than 14,000 at-risk students have been treated for depression, including 1,000 who were hospitalized. This program is upstream of the many health and social problems faced by youth, such as dropping out of school (Fortin et al., 2004) and attempting suicide. It sends a positive message of encouragement, focused on health promotion and protection, and makes clear that depression can be treated; by being given the tools to identify the signs and symptoms of depression, the students believe that they can make a difference and help their friends and family who are experiencing difficulties to seek help.

FMM/Mental Illness Foundation's objective for 2011 is to extend the reach of the PFL program to a larger percentage of the population in order to connect with, among others, elementary school students, employed dropouts, and adults in general. To achieve this, new strategies will be developed; for instance, public lectures, revamping the website, and

improving or adding online educational tools. In so doing, the PFL program seeks to develop and serve a broader client base.

Program development and evaluations

The PFL program content was developed and reviewed by a number of local mental health experts. During the development stage, FMM/Mental Illness Foundation assembled a team of psychiatric experts, teachers, actors, and mental health professionals from Centres locaux de services communautaires (CLSC/Local Community Service Centers) and government agencies. This committee of members included child psychiatrists from CHU Sainte-Justine and other health and social services professionals. Its mandate was to evaluate best practices in health promotion and protection and to develop a training presentation that would be both relevant and interesting to adolescents. Focus groups composed of boys and girls ages 15–17 were also created.

Once the first draft was completed, the program became part of a pilot project to assess its implementation; this was supervised by Dr. Richard Boyer, a researcher associated with the Fernand-Seguin Research Centre (affiliated with the Louis-H.-Lafontaine Hospital and Université de Montréal) (Forté & Boyer, 2000). The assessment carried out in 1999 among 15,000 students was designed to examine the relevance of the PFL program and ensure it had no adverse side effects. Questionnaires distributed to the participating students provided feedback on the quality of the program. The results revealed an extremely high rate of appreciation by the students (93 to 98 per cent) for both the content and the presentation. The study also showed that school staff acknowledged and appreciated the relevance of the information and the manner in which it was presented. The teachers confirmed that FMM/Mental Illness Foundation's message was highly appropriate for the students, and that they would recommend the PFL program to their colleagues. With regard to the students' use of mental health resources, the school administrators noted a slight increase in requests for counselling following a presentation and were able to meet those needs.

Another assessment was conducted in 2002 by Dr. Boyer (Boyer & Forté, 2002) to measure the effect of the program on the knowledge and attitudes of the students after they had participated in a session. This impact assessment also included a research design based on the case-control study format, involving students from grades 9 to 11 divided into two groups and who were observed pre- and post-presentation. The case group (N=197) and control group (N=88) were similar in terms of male/female ratio and average age. The assessment questionnaires were designed to measure the students' knowledge of depression and their propensity to seek professional help after the presentation. The results demonstrated that the program significantly increased the students' knowledge of depression and changed their attitudes to counselling. In addition, the study helped FMM/Mental Illness Foundation identify areas of knowledge the teenagers did not fully grasp, which led to a subsequent change in the content and delivery method.

The PFL program is subject to ongoing student evaluations. After every presentation, the school personnel and the facilitators are invited to complete a questionnaire. This allows the program leaders to adapt the information according to the needs of both the schools and the students, and thereby ensures it remains current (see Burrows & Kozakiewicz, 2010).

Lastly, the PFL program is presently evaluated as a strategy that is likely to reduce the stigma against people with mental disorders, according to a study conducted by Dr. Heather Stuart and Dr. Michelle Koller from Queen's University, Kingston, Ontario, as part of the *Opening Minds* project established by the Mental Health Commission of Canada (MHCC). The PFL program is evaluated on a regular basis, thereby ensuring both the quality and integrity of the product and FMM/Mental Illness Foundation's ability to respond to the changing realities of our society.

Program funding structure

Funding sources for the PFL program are varied and over the years have included government subsidies and grants, corporate donations resulting from fundraising events, and proceeds from the sale of the program to business organizations. The MSSS/Ministry of Health and Social Services provided financial support to get the program off the ground, and a further $100,000 donation was received from the MELS/Ministry of Education, Recreation and Sports.

Since its inception in 1998, the program's average annual budget is $593,000, which represents 43 per cent of FMM/Mental Illness Foundation's total budget. The number of students reached by the program depends directly on the budget allocated. Throughout the years, when income levels varied, that number went as low as 45,000 and as high as 80,000. For example, in 2010, the budget allocated to the program was $529,006, which included the facilitators' training and salaries, travel costs, and material and administrative expenses. In that year, nearly 50,000 benefitted from the program, which works out to an operating cost of about $10 per student. FMM/Mental Illness Foundation noted that the cost of operating the program is relatively small, both in terms of absolute numbers and positive impacts.

The fact remains that this health literacy program, unmatched in the province for this age group, is not recognized by the MSSS/Ministry of Health and Social Services, as mentioned earlier, because of a lack of scientific evidence to support its effectiveness in preventing suicide. It is therefore fitting to place it in context with other population-based suicide prevention strategies and the potential effectiveness of social literacy programs in health care, mental health and suicide prevention.

Literature review of suicide prevention initiatives and programs

Promotion and prevention

It is not always easy to distinguish between promotion and prevention (Lesage, 1999, 2003). In short, promotion focuses on increasing an individual's resilience (or tolerance), that is, the ability to cope with or support others facing adversity, especially with regard to the presence of risk factors such as mental disorders. Prevention focuses directly on the different risk factors. However, the difference is not clear-cut, and there is overlap between the two notions. Let's take the well-known example of *Canada's Food Guide*, taught in elementary schools, and also found in family medicine clinics and dietitians' offices. In the case of school-age children, one would think *the desire is to promote* healthy eating. From the moment the children learn this theory, they can persuade their parents to adopt new eating habits that are healthier for the entire family. However, in the case of a family already struggling with weight issues, that desire to promote healthy eating habits becomes one of prevention for this at-risk group, even if the message was initially intended for the whole population. We can therefore distinguish between promotion and prevention activities according to those that are intended for the general population and those intended for risk groups or groups already affected by disease.

In the mental health field, more specifically the mental health of children, adolescents and their families, certain activities and programs geared towards the prevention of mental disorders have demonstrated their potential effectiveness (INSPQ, 2008; Waddell et al., 2007; Offord et al., 1998). Insofar as they address the prevention of mental disorders, that is, known risk factors for suicide (Cavanagh et al., 2003), the programs and activities can be considered potentially effective in preventing suicide. Many of these programs can be non-specific, in the sense that they do not directly and exclusively target mental disorders or suicide, but rather overall health and social well-being, while recognizing the enormous potential for impact on physical and mental health, and academic and social performance.

A few examples

The $5-a-day child care program: implemented in Québec under the impetus of professor Camil Bouchard's work and his report *Un Québec fou de ses enfants* (translation: Québec, crazy about its children), this initiative was inspired by various enrichment programs for infants and pre-school children from underprivileged backgrounds. Pre- and post-natal home visits were initially conducted to support mother and child and promote psycho-social adjustment, but also included support and adjustment programs for pre-schoolers and school-aged children (INSPQ, 2008). These programs have demonstrated favourable outcomes in the United States not only for teenagers but also for their long-term impact on academic performance, drop-out rates, behaviour problems, hyperactivity, drug consumption and pregnancies among teenagers. Finally, more specific programs, like psychoeducation interventions, have been successfully tested for families and school-age

children with anxiety disorders (Waddell et al., 2007).

We can also think that, over time, these promotion and prevention programs increase the social capital and health of the entire community, over and above the individuals and families participating in such programs. In fact, studies on social change show that tipping points may occur and correspond to the moment when the knowledge has been assimilated and the risk factor recognized. It could therefore be argued that it took nearly forty years of talking about and showing the adverse health effects of tobacco in education campaigns; a few decades for the percentage of smokers to decrease gradually (from 50 to nearly 25 per cent in Québec); and a long time of waiting for the information delivered by health providers, family physicians and schools to have an impact and for society to accept and respect smoke-free public spaces. Where AIDS was concerned, sexual practices in the 1990s changed swiftly in the space of a decade, but this occurred only in Western countries where the media, social media and trust in scientific research played a considerable role. Developing countries are still struggling to contain the spread of the AIDS epidemic using these same means, given that certain governments oppose or attempt to block public health campaigns.

Risk factors for suicide

The factors contributing to suicide are as much biological, psychological and social as they are cultural (Lesage et al., 2009). They may be individual factors, as shown in the following diagram by Turecki (cited in Lesage et al. (2009)), as well as population-based factors.

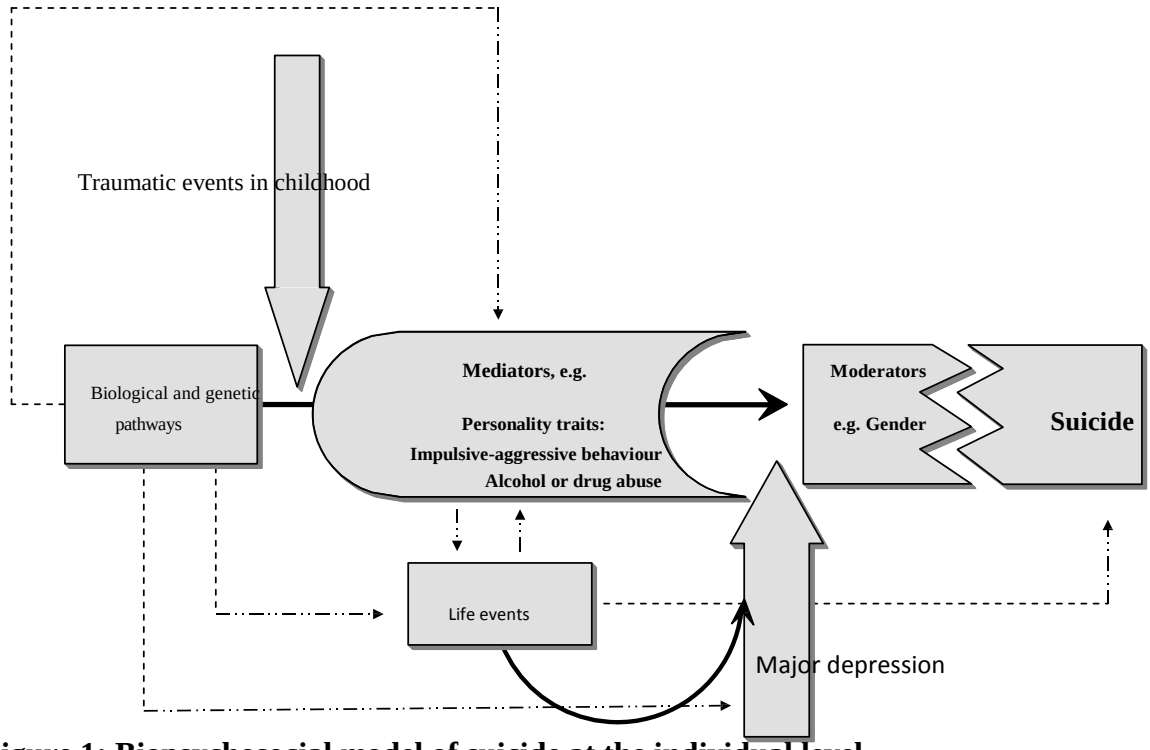

Figure 1: Biopsychosocial model of suicide at the individual level

The biological factors at the **individual level** include genetic factors and neurobiological processes. There is no suicide gene, but genetic factors and the neurobiological processes involved influence a person's susceptibility to anxiety, depression, aggressive behaviour and impulsivity. These have been shown to be definite risk factors for suicide. Psychological and psycho-developmental factors include traumatic events or situations during childhood (physical, sexual abuse; difficult parent-child relationships), which are linked to epigenetic alterations and have a significant impact on interpersonal skills, indeed even the appearance of relational disorders, which represent a clear risk factor for suicide in addition to triggering life events (separation, unwanted pregnancy, difficulties at work). Besides the traumatizing micro-social factors already mentioned, social factors include the social support an individual grows up with as well as chronic life difficulties/events (unemployment, stress at work, socio-economic conditions, disadvantaged neighbourhood environment), which contribute to the development or progression of mental disorders.

At the **population level**, public health recognizes the following health determinants for all diseases and conditions (Bernard et al., 2003):

1. Genetic
2. Environment
3. Lifestyle habits (alcohol consumption; eating habits)
4. Services

Using a population-based approach, disadvantaged socio-economic groups are shown to have consistently higher rates of mental disorders, either serious ones such as schizophrenia (1 per cent lifetime population risk) or common disorders such as anxiety, depression, or substance abuse. Approximately 10 to 15 per cent of the population—adult, child and adolescent—is affected annually by these disorders. Yet, for depression, the Québec population shows ratios of 2 to 3 for 1 among neighbourhoods or boroughs ranked between the first and the last quintile on the material and social deprivation index (Vanasse et al., 2011). This can be traced to two major social phenomena: the first, a slide down the social ladder, when a person no longer has the functional capacity to cope with school, work, or family and intimate relationships. A person affected by, for instance, schizophrenia or depression may lose a job, be unable to take advantage of available opportunities, and end up having to move to a more socially deprived neighbourhood. The second, a disadvantaged socio-economic area provides less material and social support for children, adolescents, parents, adults, and the elderly. For teenagers, this can mean easier access to drugs, dropping out of school, a lack of specialized resources at school, and the like. For "ordinary" people, this can mean finding themselves in precarious and insecure jobs that are not as rewarding and increasingly demanding in the context of globalization. All risk factors for higher populational rates of mental disorders (Dowrenwend et al., 1992; Lesage et al., 2010).

Health and social service agencies are thus seen by public health as determinants of population health. We often think of services as risk factors, such as hospitals, where susceptible individuals are at increased risk of secondary infections; however, there are also therapeutic actions—depending on their consistent application—that can make a difference in preventing disease outbreaks, which can lead to serious, sometimes fatal, complications.

The best known example comes from The Cochrane Collaboration, which was created out of a need for evidence-based health care. Founder Archie Cochrane had observed that the silver nitrate eye drops administered to newborn infants protected against eye infections that could lead to blindness. He had also noticed that, despite results of randomized studies that proved the effectiveness of this therapy, it had not been adopted on a systematic or widespread basis. In fact, the information collected had not been forwarded to those concerned, thus preventing the adoption of this practice and the benefits from reaching newborns in Britain. It was only after his critical summary had been published that this treatment became standard practice, including in Canada.

Generally speaking, it is important to remember that the purpose of the health and social services system is to ensure the population's optimal health through the following programs:

- Promotion and prevention
- Treatment

- Rehabilitation

The core function of health and social services is to strike a balance when allocating funds to various programs and activities in order to maximize population health. The same principle applies to mental health (Andrews & Henderson, 2000).

Mental disorders and suicide attempts: Do effective interventions include services?

In 2007, the Canadian Senate committee chaired by Senator Kirby produced a report called "Out of the shadows at last", which led to the formation of the Mental Health Commission of Canada (see http://www.mentalhealthcommission.ca/English/). Senator Kirby remarked that the tragedy was not so much the number of people who suffer from mental disorders (one in five every year), but that the interventions known to be effective were not being implemented. As with the Cochrane example, the report exposed a gulf between the discovery of effective interventions and their implementation on a social scale; this gulf was also reported by cardiologist Terrence Montague (www.terrymontague.ca) in his book *Patients First: Closing the Health Care Gap in Canada* (Montague, 2004; Montague and coll., 2007).

The following explains the situation in Québec and the rest of Canada: common mental disorders like anxiety, depression, and substance-related disorders affect 10 to 15 per cent of the child, adolescent and adult population on an annual basis (Lesage et al., 2010). The majority of people with a mental disorder admit to not seeking counselling to address their health issues. People with substance-use problems are the least able to obtain counselling; those with depression are more likely to obtain counselling; and in the event of a co-occurrence of depression and anxiety or depression and substance abuse, those affected are the most likely to seek counselling. When accessibility is cited as a barrier to counselling, the primary issue is acceptance, or rather denial, since most consider that the problems will take care of themselves. Only half of the respondents believe that proven effective interventions such as psychotherapy or medication to treat depression could help them. Moreover, a study conducted at Montréal-Centre revealed that less than 25 per cent had obtained potentially effective care in 2001 (Fournier et al., 2002). And yet, common mental disorders such as depression and anxiety are considered chronic illnesses just like diabetes, hypertension, cardiovascular diseases, chronic pain, asthma, and stomach ulcers. During a Canadian study on comorbidity with depression, over 60 per cent of individuals with depression also struggled with a chronic illness. This exceeds by far the comorbidity of depression and alcohol or drug abuse, which is below 5 to 10 per cent (Lesage et al., 2010; Schmitz et al., 2007). In the case of hypertension (McAlister et al., 2011), more than 70 per cent of patients are treated effectively, an impressive figure compared to 20 years ago when less than 20 per cent were well treated.

Knowledge of population-based suicide prevention strategies

In an article on suicide prevention, Gunnell & Frankel (1994) identified different population-based strategies aimed at reducing the suicide rate: 1. Family physician education programs for the diagnosis and treatment of depression; 2. Anti-depressant medication; 3. Suicide prevention centres; 4. More follow-ups with clients of the suicide prevention centres; 5. Systematic monitoring of psychiatric patients; 6. Media; 7. Restricted access to certain means (e.g. bridges, medication); 8. Detection and prevention programs for prisoners; 9. Prevention programs in schools (including gatekeepers); 10. Mental health promotion programs. No form of intervention exceeded a potential reduction in population effectiveness greater than three per cent, with the exception of family physicians being trained to detect and treat depression, which achieved a potential reduction of 20 to 48 per cent. This was the result of two training sessions for family physicians, each of which involved a two-day education program on the prevention and treatment of depression (Rutz et al., 1992).

In its scientific opinion on youth suicide prevention, the INSPQ/Quebec Public Health Institute (INSPQ, 2004) categorized the population-based prevention strategies into four broad groups: 1. promoting coping skills; 2. reducing risk factors (2.1 monitoring accessibility to means; 2.2 media outreach; 2.3 postvention); 3. identifying people at risk (3.1 school-based outreach programs; 3.2 peer support; 3.3 training of gatekeepers; 3.4 training of professionals; 3.5 telephone crisis lines); 4. joint action on a number of initiatives (4.1 comprehensive programs; 4.2 networking among partners). According to the INSPQ/Quebec Public Health Institute, their results were disappointing. The telephone crisis line, the hallmark of suicide prevention programs in Québec, did not always succeed in gaining a foothold among youth or adults; other forms of promotion were not linked to a potential short-term reduction in the number of suicides, even though their significance in terms of promoting better mental health was outlined in the INSPQ/Quebec Public Health Institute's notice on effective strategies for the promotion and protection of mental health (INSPQ, 2008). Nevertheless, the methods used to monitor the accessibility to means and the training of front-line professionals were supported by the INSPQ's scientific opinion.
A more recent systematic review (Mann et al., 2005) examined the following interventions: 1. awareness and education (1.1 public; 1.2 general practitioners; 1.3 gatekeepers); 2. detection; 3) therapeutic interventions (3.1 medication; 3.2 psychotherapy; 3.3 follow-up care after a suicide attempt); 4. restricting access to means of suicide; 5. media. The review confirmed the INSPQ/Quebec Public Health Institute's conclusions: the strategies for raising awareness among family physicians and restricting access to suicide means were proven to be at least 25 per cent effective in both cases. The results for access to means, however, varied according to the extent of such suicide means in a given population.

From a public health perspective, promoting the detection and treatment of mental disorders as a suicide prevention strategy was elaborated by Lesage (2002). Two

arguments must be emphasized here. Firstly, the association between mental disorders (including addictions) and suicide have been well established at the individual level: nearly 90 per cent of suicide cases were diagnosed with a mental disorder. Of these, at least 50 per cent had depression, and at least 50 per cent presented with addictive behaviours (systematic review of Cavanagh et al., 2003, records more than 150 studies over the last three decades that corroborate these observations; moreover, using seven studies as a basis, the population attributional risk of mental disorders and addictions for suicide was estimated at between 47 and 74 per cent). Secondly, the population-based studies show that most Canadians with mental disorders and addictions do not seek professional help. If they do, it is mostly at the primary health care level (Lesage et al., 2010). These two arguments demonstrate that a greater emphasis on detecting and treating common mental disorders and addictive behaviours by community and primary health care services would constitute an effective suicide preventive strategy.

Mann et al. (2005) underscored the added potential of training gatekeepers in two comprehensive programs: the US Air Force (Knox et al., 2003) and Nuremberg (Hegerl et al., 2006) studies, which both reported a 25 per cent drop in suicide rates as a result of the programs. The US Air Force study also reported a decrease in conjugal violence and domestic or spousal homicides. The US Air Force strategy consisted of eleven components that had an impact on the overall system and at all levels of organization: 1) leadership training; 2) suicide prevention incorporated in the training curriculum for all personnel; 3) increased personnel reference requests to assess mental health problems; 4) broader prevention roles for health care staff; 5) development and training of gatekeepers among the personnel; 6) adoption of policies for assessing the suicidal risk of individuals being investigated for legal issues; 7) establishment of a multidisciplinary team during or following traumatic events (including suicides); 8) implementation of a comprehensive system of psychosocial services and treatments that include programs for families, mental health clinics, services for children and adults, and involvement of the clergy; 9) guaranteed confidentiality of cases and files; 10) behavioural health survey available to commanders; 11) central surveillance, regular surveys and updates on behavioural, social and psychological risk factors; and a review of the results.

The Nuremberg program, called *Alliance Against Depression* (NAAD, Hegerl et al., 2006) and conducted in the city of Nuremberg (480,000 residents), addressed four intervention levels:

1. The training of family physicians
2. A public information campaign on depression and seeking professional help;
3. The training of “community facilitators” (teachers, priests, primary health and social services staff and community organizations, local media) that Mann et al. (2005) referred to as “gatekeeper training”;
4. Support for mutual aid activities for high-risk groups.

Focus on mental health literacy interventions

In its promotional material, the PFL program provides information on depression and encourages people to seek professional help. These strategies are very similar to those highlighted in the second component of the Nuremberg program and the compulsory section of the US Air Force curriculum. The purpose of all these strategies is to improve mental health literacy and knowledge of mental disorders, enhance the effectiveness of interventions, and raise awareness of the importance of seeking professional help. Such literacy strategies are part and parcel of promotion and prevention initiatives, more or less along the same lines as educating students about sexually transmitted diseases (in most Canadian high schools) and *Canada's Food Guide*.

According to the research group directed by Jorm in Australia, a country that is at the forefront of mental health services planning and financing (Kirby & Keown, 2006), improving mental health literacy consists of four intervention categories:

1. Campaigns that are rolled out to the entire population
2. Campaigns that reach out to young people
3. School-based interventions that focus on seeking help or information on mental health, and building resilience
4. Crisis intervention training programs (gatekeepers)

To support the last three categories, knowing when and how to seek help will happen only when young people and their families, friends and teachers are in a position to recognize the early signs or symptoms associated with the onset of a mental disorder, to identify the kind of help available, and to know how to get it.

The programs must take into account the research findings that show that 13-to-16-year-olds are just as likely to ask for help from a friend as from an adult, while adults prefer general or informal sources of support over specialized mental health services.

Studies on interventions that encourage mental health literacy and improve young adults' skills are rather rare and, those that do exist do not address all the aspects in the assessment of practices or programs. In contrast, there are a sufficient number of studies on interventions for reducing the risk of HIV transmission to produce meta-analyses. One of the most recent lists 44 studies that assessed 58 interventions among 19,000 participants. This meta-analysis used study data on the community at large, on interventions with small groups and individuals, or that have been proven for their effectiveness. The central theme was social stigma, which affects both young people and adults. The findings, however, cannot readily be generalized to similar interventions for suicide. In fact, a serious delay in designing, testing and assessing suicide prevention interventions, especially with regard to mental health literacy, precludes any meaningful comparison. Especially since we have yet to gain a good understanding of the program components that would have the most impact in mental health education services for children and adults. Nevertheless, health literacy

literature and the knowledge gained from working on media campaigns over the last decade have helped identify seven components for a successful program:

1. Conducting preliminary research on the target group to develop the message. Holding focus groups and doing research with a qualitative aspect to match the message to the audience.
2. Establishing a theoretical model. Programs assessed to date provide little or no information about such a model. And yet, models of action plans, change processes, disseminating innovations, to name but a few, are widely documented and could serve to develop suicide prevention or mental health literacy programs.
3. Ensuring the target audience is divided into homogeneous groups to fit the messages to their particular needs and preferences.
4. Tailoring the messages to each intended group. For instance, the needs of young adults at high risk for mental health problems could differ from those of young people in general. Message styles may also vary from one group to another.
5. Using the appropriate media to communicate the messages. For example, messages aimed at teenagers reach their audience better when delivered in movie theatres or other media relevant to young people, as opposed to major newspapers.
6. Undertaking assessments to ensure the messages are reaching the target groups.
7. Performing assessments of education and information campaigns to determine the success or failure of the desired changes, and whether these changes accomplished other objectives. Every campaign must be assessed at different levels to avoid a waste of resources (Noar, 2006).

To ensure further development of more effective strategies, it is important to take into account the lessons learned from the interventions. This is what Australia intends to do as it launches a new generation of media campaigns focusing on depression. Its *Beyondblue* initiative, established in 2000, was evaluated to gauge its impact on the public. Another program for young adults, *Headspace*, was also evaluated, but the results were less conclusive than those of *Beyondblue.* In fact, a telephone survey revealed that the majority of respondents aged 13 to 25 years preferred awareness campaigns aimed at the general public; yet *Beyondblue* scored higher than *Headspace* (Kelly & Jorm, 2007). Another study, which did an in-depth examination of the *Beyondblue* program with young people, found that the majority of young Australian adults recognized the program and that their knowledge of mental health had improved. Men and young teenagers, however, lagged behind and required more appropriate literacy tools (Jorm & Christensen, 2006). In addition, the fact of knowing about the program appeared not to correlate with the individual's psychological symptoms in the final year (Jorm, 2009).

A program was also created especially for at-risk and depressed individuals; they received a practical and evidence-based guide as well as a general information pamphlet on depression in the mail. The guide was associated with improvements in attitudes regarding treatment (pharmacotherapy was better accepted), but no decrease of symptoms or incapacity throughout the duration of the program was noted (Jorm & Griffiths, 2003).

Assessments of mental health literacy programs, therefore, focused on showing changes at the following levels:

1. knowledge
2. stigmatizing attitudes
3. availability and delivery of support (what is often called the mental health first-aid approach);
    a. Assess the risk of suicide or injury
    b. Listen without judging
    c. Reassure and inform
    d. Encourage the person to seek appropriate professional help
    e. Promote care strategies

Only three studies, two of which were randomized, examined the benefits of a mental health first aid training program (Kitchener, 2006). Although the training program helped participants improve their knowledge, their attitudes and their intention to help, the effects on the persons to whom such first aid support was dispensed were not evaluated. It is possible to show the effectiveness of skill-building courses, but the fact remains that a large percentage of the population must be educated to ensure that a well-informed person is available at any given time to help in an appropriate manner. CPR (cardiopulmonary resuscitation) courses are an excellent example of this. Cardiopulmonary arrests, however, occur far less often than common mental heath problems or drug addiction, which justifies the development of mental health literacy, monitoring, and/or first aid programs.

Funding non-governmental healthy literacy organizations

Generally speaking, intensive interventions provided in small groups as opposed to broad-based interventions provided to entire communities—both of which complement each other—have been integrated in depression campaigns (for example, the *Defeat Depression* campaign in the United Kingdom and the *Depression Awareness, Recognition and Treatment* (DART) program in the United States). Despite their proven effectiveness as population-based literacy campaigns, neither could be maintained for a long period, except for the one in Australia. It would be equivalent to publicizing the risks of smoking for ten years only to stop doing so for the following ten years!

Government funding is not the sole source of financial support for certain health promotion and protection programs. The Canadian Red Cross, for instance, has developed and self-financed CPR training programs. While some courses are offered free of charge, others are

given in the workplace or to individuals who wish to work in health services or brush up on their personal skills; as such, paramedics, lifeguards, daycare employees or interested individuals would have to find a certified private trainer and pay for the course themselves.

Suicide prevention strategies in Québec

Québec's 2003-2012 health program has two objectives regarding suicide prevention: to prevent suicide attempts and to reduce suicide rates.

In Québec, suicide prevention is the responsibility of the Direction du développement de l'individu et de l'environnement social (DDIES/Individual development and Social Environment Directorate) — which is under the MSSS's DSP/Public Health Directorate (see organization chart in the annex; the director is an assistant deputy minister in the MSSS) — that developed three activity sectors under the DSP. The first sector involves the development of province-wide gatekeeper networks. are community members trained to look out for and identify at-risk individuals and to build relationships with health and social service personnel. The second sector focuses on activities to raise awareness of the hazards of keeping unused medications and accessible firearms in the home. The third sector, planned but not yet implemented, is about how the media handle suicide cases.

Based on the work accomplished through the gatekeeper networks, the DDIES/Individual development and Social Environment Directorate developed two best practices guides for Centres locaux de services communautaires (CSSS/Health and Social Services Centres) stakeholders and practitioners. The guides were published in partnership with the CSSS-Institut universitaire en gériatrie de Sherbrooke (CSSS-IUGS/HSSC–University Institute of Geriatrics of Sherbrooke), the MSSS/Ministry of Health and Social Services, the Association québécoise de prévention du suicide (AQPS) and Suicide Action Montréal (SAM).

The DDIES/Individual development and Social Environment Directorate set up a provincial consultative committee, whose mandate consists of monitoring all interventions on suicide prevention. This committee is composed of various public health stakeholders: medical affairs, mental health, CLSC/Local Community Service Centers, as well as the new Institut national d'excellence en santé et services sociaux (INESSS/National Institute of excellence in health and social services), created in January 2011.

Finally, the Direction de la santé mentale (DSM/Mental Health Directorate), which reports to the MSSS's Direction des affaires médicales et universitaires (DAMU/Medical and University Affairs and Programs) (its director is a deputy minister in the MSSS) plays an equal role in suicide prevention and is in charge of two phases of the 2005–2010 Mental Health Action Plan. One is to develop pilot projects that study men in vulnerable situations; the other is to closely monitor people who go to a clinic or hospital after a suicide attempt. To date, no assessment of either phase has been made available.

It is clear that the implementation of different suicide prevention programs in Québec has resulted in or been subject to specific or strategic assessments with regard to their impact on reducing the suicide rate. The MSSS/Ministry of Health and Social Services deserves praise for having established a roundtable of various Directions under the MSSS and INESSS/National Institute of excellence in health and social services in late 2010. Unfortunately, partners from the various community sectors, the ministries of Education, Justice and Public Security, as well as the research and political sectors have not been invited yet.

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Annex 1: Proposed description of the FMM_FRQS mental health promotion/protection research scholar award for the FRQS website

Introduction

The mission of the Fondation des maladies mentales (FMM), hereinafter "Foundation", is the prevention of mental illnesses in order to reduce the suffering of those affected and their loved ones by mobilizing individuals and society. In June 2011, the Foundation signed an agreement to help increase the number of young researchers exploring mental illness prevention strategies among teenagers. To help achieve this objective, the partners created the "Jocelyne and Jean Monty Family-FRQS- Foundation" Junior 1 career award.

Under the agreement, the award applications will be submitted through FRQS's regular programs. To qualify for the partnership award (FMM-FRQS1), applicants are chosen by the FRQS board of directors from among those who participated in the regular competitions for the year in question. In this case, the FRQS and the Foundation will fund an equal part of the award, i.e. 50 per cent each. To qualify for the partnership award (FMM-FRQS2), applicants must have obtained a scientific score exceeding 70 from the FRQS peer review committee, but not have been chosen by the FRQS board of directors. In this case, the Foundation will fund 100 per cent of the award.

This agreement applies to two programs: Career awards (Scholar - award - Junior 1 (J1) and Clinician Research Scholars - award - Junior 1 (J1)).

TERMS OF THE AWARD

Applicants must submit their applications for the programs covered by this agreement through the regular competitions held by the FRQS.

To obtain a partnership award in accordance with this protocol, the applicants must meet the following conditions:

- satisfy the eligibility requirements of the competitions they have applied for;
- fulfill the criteria of relevance for the Foundation's research theme;
- undergo a scientific assessment by the FRQS peer review committee and be selected by the FRQS board of directors through the regular competitions held by the FRQS for the year in question (FMM-FRQS1); for the award (FMM-FRQS2), to have obtained a scientific score exceeding 70 from the FRQS peer review committee, but not have been chosen by the FRQS board of directors through the regular competitions held by the FRQS for the year in question.

Criteria of relevance for the Foundation's research themes

The Foundation runs several mental health promotion and protection programs, but its

flagship teen suicide prevention program, *Partners for Life*, or PFL, is what led to this award's creation.

Since 1998, the Foundation has led the PFL program, a social literacy initiative whose goal is to inform and raise awareness among teens aged 14 to 18 about the signs and symptoms of depression, and to provide them with the tools to help and guide a person in distress to the appropriate resources and counselling services. The advantage of this 50-to-75 minute program is that it is all-inclusive, easily available and entirely free of charge for schools. It is a multi-faceted, interactive and dynamic program adapted to today's reality. Two facilitators present the information to high-school students using a sensitive and non-judgemental approach. Each facilitator receives more than 150 hours of training on mental illness, presentation and counselling techniques, as well as a training session at Suicide Action Montréal's crisis centre.

The presentation is seen by 50,000 to 60,000 teens every year. Over the years, the Foundation estimates that it has reached nearly 60 per cent of secondary 3 to 5 students in Québec. Since its inception, the province-wide program's facilitators have met more than 715,000 students in 672 French and English schools across Québec, as well as their parents, teachers and community advocates. In addition to high school students, the program has also been used for a wide variety of groups like youth centre residents, students undergoing treatment, parents and other adults at school, as well as crisis centres for men and women.

The Québec Suicide Research Network carried out a strategic analysis of the program (results available on the Foundation website at http://www.fondationdesmaladiesmentales.org/awarness-programs.html?i=1). The basis of the suicide prevention program is built on the very strong connection between the presence of mental disorders, especially depression, but also addictions, and suicide. The program has already successfully passed a series of assessments that showed it may have contributed, along with other strategies for at-risk groups, in reducing the teen suicide rate in Québec since 2000. Compared with other health areas, such as AIDS, the analysis revealed a scarcity of studies on strategies promoting social literacy and general prevention of mental disorders and suicide.

There is a need to boost research into suicide prevention in Québec, which continues to have one of the highest suicide rates in Canada. In 2009, the FRQS and Fde recherché du Québec - Société et Culture (FRQSC/ Quebec Research Fund – Society and Culture) created the Réseau québécois de recherche sur le suicide (RQRS/Québec Suicide Research Network) and, with this joint initiative with the Foundation, want to specifically focus on promoting mental health and preventing mental disorders among youth.

Without limiting the creativity and innovation of young researchers working on mental disorder prevention, the Foundation will judge most relevant those research programs that:

i) include an analysis on the effectiveness of mental illness prevention strategies in terms of reducing the risk of suicide

ii) contain an analysis of mental health literacy programs in relation to suicide prevention

iii) propose, among other things, the continued assessment of the PFL program. For this, interested applicants are encouraged to contact the Foundation to establish a letter of agreement; the Foundation can assure that it will make its PFL resources available to potentially eligible applicants.

Annex 2: MSSS/Ministry of Health and Social Services organization chart