



**EVIDENCE >> INSIGHT >> ACTION**

**Issue Brief:**  
**Addressing Student Mental Health Needs at McMaster University**

10 April 2013

#### McMaster Health Forum

For concerned citizens and influential thinkers and doers, the McMaster Health Forum strives to be a leading hub for improving health outcomes through collective problem solving. Operating at the regional/provincial level and at national levels, the Forum harnesses information, convenes stakeholders, and prepares action-oriented leaders to meet pressing health issues creatively. The Forum acts as an agent of change by empowering stakeholders to set agendas, take well-considered actions, and communicate the rationale for actions effectively.

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#### Funding

The issue brief, and the stakeholder dialogue it was prepared to inform, were both funded by Forward with Integrity (President's Fund at McMaster University), McMaster Centre for Scholarship in the Public Interest, McMaster School of Graduate Studies, McMaster Undergraduate Student Initiative Fund, the Office of the Associate Vice President, Academic, Faculty of Health Sciences, McMaster University, the office of the Provost, McMaster University, and the McMaster Health Forum. The McMaster Health Forum receives both financial and in-kind support from McMaster University. The views expressed in the issue brief are the views of the authors and should not be taken to represent the views of the funders.

#### Conflict of interest

The authors declare that they have no professional or commercial interests relevant to the issue brief. The funders played no role in the identification, selection, assessment, synthesis or presentation of the research evidence profiled in the issue brief.

#### Merit review

The issue brief was reviewed by a small number of policymakers, stakeholders and researchers in order to ensure its scientific rigour and campus relevance.

#### Acknowledgements

The authors wish to thank Amanda Chen (B.H.Sc. Year 3) for her assistance in identifying and synthesizing research evidence about the problem, Lebei Pi (B.H.Sc. Year 4) and Emily Milko (Arts & Science Year 4) for their assistance with selecting and appraising systematic reviews, and Adriana Di Stefano (B.H.Sc. Year 4) for her assistance with appraising systematic reviews. The authors would like to extend their gratitude to John N. Lavis, Director of the McMaster Health Forum, and other McMaster Health Forum staff for assistance with preparing this issue brief. We are grateful to Steering Committee members for providing feedback on previous drafts of the brief. We are especially grateful to Susan Denburg, Janice Young and Gillian Mulvale for their insightful comments and suggestions. The views expressed in the issue brief should not be taken to represent the views of these individuals.

#### Citation

Tamboly S, Gauvin FP. Issue Brief: Addressing Student Mental Health Needs at McMaster University. Hamilton, Canada: McMaster Health Forum, 10 April 2013.

#### Product registration numbers

ISSN 2291-5354 (print)

ISSN 2291-5362 (online)

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## KEY MESSAGES

### What's the problem?

- There is a high prevalence of mental health concerns in the student population. In Canada, youth aged 15 to 24 are the most likely group to suffer from mental illness, substance dependency and suicide. Approximately 10 to 20% of Canadian youth are affected by a mental illness. Suicide accounts for 24% of all deaths among 15- to 24-year-olds, making it the second leading cause of death in this group. In Ontario, youth aged 15 to 24 are three times more likely to have a substance misuse problem than those aged 25 or more. They are also at a higher risk for experiencing mood disorders, such as depression and anxiety. Ontario university students report having mental distress that significantly affects their lives: 47% reported stress, 32% reported worry and sleep loss, 31% reported being unhappy or depressed, and 29% reported elevated levels of psychological distress.
- Mental health is driven by a complex interplay of factors, including social, economic, family and individual factors. Moreover, coping with mental illness can be complicated by the pervasive stigma associated with it.
- While there are many excellent programs and services in place to address student mental health needs at McMaster University, existing arrangements limit the reach and impact of these programs and services.

### What do we know (from systematic reviews) about three viable options to address the problem?

- Option 1 – Create and support the use of a one-stop access portal for information about available mental health resources and how to access them
  - Several systematic reviews outlined benefits for creating an interactive web-based portal that could contribute to better exposure to internet-delivered, healthy lifestyle-promotion interventions. While most reviews found limited evidence to support the effectiveness of network communication technologies and web 2.0 media, one review found a small beneficial effect for online campaigns to encourage voluntary health behaviour change.
- Option 2 – Reduce stigma associated with mental illnesses and promote early detection of mental illnesses through strategic advertising
  - Several systematic reviews found benefits for key components of this option, including: mental health literacy interventions and public awareness programs, especially those with direct contact strategies; gatekeeper training for suicide prevention; interventions aimed at providers of care to racial/ethnic minority patients for improving quality of care; and interventions to improve cross-cultural communication, as well as outreach interventions targeting religious settings.
- Option 3 – Coordinate available mental health resources on campus and support greater accessibility and continuity of care and support for those in need
  - Several systematic reviews outlined benefits related to: computer-generated summaries and standardized formats that could facilitate communication and more timely transfer of pertinent patient information; discharge planning and follow-up; crisis interventions; integrated care pathways; collaborative or shared care models; patient navigation; and advanced scheduling.

### What implementation considerations need to be kept in mind?

- Potential barriers to addressing student mental health needs at McMaster University can be identified at the level of students and parents (e.g., students may not be aware of the available resources and hence may under-utilize them), providers (e.g., providers may have to compete with more than 300 McMaster Student Union clubs and several other University services to get the attention of the student population), organizations (e.g., organizations with high staff turnover may be unable to take responsibility for the launch and upkeep of a portal), and systems (e.g., the University and key stakeholders may have difficulties in developing a shared vision).
- Efforts to address these barriers need to be aware of potential windows of opportunity that could facilitate or trigger positive change, and also need to draw lessons from other universities in Canada and abroad that faced similar barriers in successfully developing and implementing mental health strategies.



## REPORT

There has been a recent movement towards addressing the mental health needs of students and the challenges they face in post-secondary institutions across Canada.(1-3) Student and university leaders have been taking steps to proactively approach this topic and ensure that campus and community mental health systems are adequately prepared to meet the needs of the students.(1)

McMaster University has many excellent programs and services in place to address student mental health needs. These services are offered through the Student Affairs office that is responsible for presenting McMaster students with opportunities to “discover, learn, and grow.”(4) Mental health services on campus are primarily delivered through the Student Wellness Centre, which provides a wide range of services and resources for McMaster students, including medical and other health services, counselling services, and wellness education. The centre offers personal, psychological and group counselling to help students through emotional, personal or interpersonal problems. Additionally, the Student Wellness Centre helps students connect to relevant campus, community and online resources for further support.(5) Student Accessibility Services assists current and prospective McMaster students with academic and disability-related needs, including mental health disabilities.(6) Program coordinators at the office work with faculty and students to determine the appropriate accommodations to best meet the unique needs of the students seeking support.(7)

There is also a growing focus on improving mental health services on the McMaster campus to address the varied needs of the student population. In summer 2012, the McMaster Student Union (MSU) adopted the “Pink Elephant in the Room” branding and teamed up with the Student Wellness Centre to promote it. This branding is a part of MSU’s mental health training campaign for welcome week representatives, and it encourages students to talk about mental health.(8) McMaster University also launched a Mental Health Awareness Week from September 30 to October 4, 2012.(8) In 2011, COPE student mental health initiative connected with the Mood Disorders Society of Canada (MDSC) to launch MDSC’s national ‘Elephant in the Room’ campaign at McMaster University. This campaign seeks to promote a safe and stigma-free environment to talk about mental health issues.

### Box 1: Background to the issue brief

This student-led issue brief mobilizes both global and local research evidence about a problem, three options for addressing the problem and key implementation considerations. Whenever possible, the issue brief summarizes research evidence drawn from systematic reviews of the research literature and occasionally from single research studies. A systematic review is a summary of studies addressing a clearly formulated question that uses systematic and explicit methods to identify, select and appraise research studies, and to synthesize data from the included studies. The issue brief does not contain recommendations, which would have required the authors of the brief to make judgements based on their personal values and preferences, and which could pre-empt important deliberations about whose values and preferences matter in making such judgments. The preparation of the issue brief by McMaster University students involved five steps:

- 1) convening a Steering Committee comprised of representatives from the partner organizations and the McMaster Health Forum;
- 2) developing and refining the terms of reference for an issue brief, particularly the framing of the problem and three viable options for addressing it, in consultation with the Steering Committee and with the aid of several conceptual frameworks that organize thinking about ways to approach the issue;
- 3) identifying, selecting, appraising and synthesizing relevant research evidence about the problem, options and implementation considerations;
- 4) drafting the issue brief in such a way as to present concisely and in accessible language the global and local research evidence; and
- 5) finalizing the issue brief based on the input of several merit reviewers.

The three options could be pursued singly, simultaneously with equal or different emphasis, or in a sequenced way. Unlike a Forum evidence brief, a Forum issue brief does not involve as comprehensive an evidence review by Forum staff.

The issue brief was prepared to inform a student-led stakeholder dialogue for which research evidence is one of many considerations. Participants’ views and experiences and the tacit knowledge they bring to the issues at hand are also important inputs to the dialogue. One goal of the student-led stakeholder dialogue is to spark insights – insights that can only come about when all of those who will be involved in or affected by future decisions about the issue can work through it together. A second goal of the student-led stakeholder dialogue is to generate action by those who participate in the dialogue, and by those who review the dialogue summary and the video interviews with dialogue participants.



Additionally, the McMaster Health Forum Student Subcommittee convened in March 2012 a discussion on the subject of addressing student mental health needs at McMaster University.(9) With the support of the McMaster Science Society, the discussion brought together representatives from three of the mental health groups at McMaster University to examine the problem, options for addressing it, and key implementation considerations. This discussion also identified the need and opportunity for a student-led stakeholder dialogue to address the demand for cohesive and collaborative mental health programming strategies on campus. Later that same year, the MSU hosted a town hall meeting on mental health on October 1, 2012, to discuss the prevalence of mental health issues at the University, and what can be done at various levels of student government and University administration to address this.(10)

This issue brief and the student-led stakeholder dialogue it was prepared to inform were designed to address the mental health needs of undergraduate and graduate students at McMaster University. More specifically, they focus on how access to and coordination, promotion, and continuity of mental health support services can be improved to enhance the student experience. The issue brief reviews the research evidence about key features of the problem, which includes developing a clear picture of the magnitude of the problem, identifying those most affected, and understanding the complex array of both risk and protective factors to inform responses to challenges in the current system. Second, this brief discusses three viable options to address the problem. Finally, this brief concludes with a discussion of the implementation considerations related to moving forward with one or more of the options.

This issue brief uses two key terms that need to be clarified at the outset: mental health and mental illness. Mental health can be defined as a “state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community.”(11) These activities may include the promotion of mental well-being, prevention of mental disorders, and treatment and rehabilitation of those with mental disorders.(11) It is important to note that mental health is a continuum that can span from complete mental health (i.e., flourishing in life with high levels of well-being) to incomplete mental health (i.e., languishing in life with low levels of well-being).(12)

## **Box 2: Equity considerations**

A problem may disproportionately affect some groups in society (or in this case, on campus). The benefits, harms and costs of options to address the problem may vary across groups. Implementation considerations may also vary across groups.

One way to identify groups warranting particular attention is to use “PROGRESS,” which is an acronym formed by the first letters of the following eight ways that can be used to describe groups†:

- place of residence (e.g., rural and remote populations);
- race/ethnicity/culture (e.g., First Nations and Inuit populations, immigrant populations, and linguistic minority populations);
- occupation or labour-market experiences more generally (e.g., those in “precarious work” arrangements);
- gender;
- religion;
- educational level (e.g., health literacy);
- socio-economic status (e.g., economically disadvantaged populations); and
- social capital/social exclusion.

This issue brief strives to address all students, but (where possible) it also gives particular attention to two groups:

- international students; and
- students who are immigrant, refugee or second-generation Canadians.

Many other groups (such as ethnocultural or racialized groups, First Nations students, first-generation university students, students with disabilities, and lesbian, gay, bisexual and transgender students) warrant serious consideration as well, and a similar approach could be adopted for any of them.

† The PROGRESS framework was developed by Tim Evans and Hilary Brown (Evans T, Brown H. Road traffic crashes: operationalizing equity in the context of health sector reform. *Injury Control and Safety Promotion* 2003;10(1-2): 11–12). It is being tested by the Cochrane Collaboration Health Equity Field as a means of evaluating the impact of interventions on health equity.

The second key term, mental illness, refers to “alterations in thinking, mood or behaviour associated with significant distress and impaired functioning.”(13) Mental illnesses may include mood disorders, schizophrenia, anxiety disorders, personality disorders and eating disorders.(13;14)

The scope of this issue brief incorporates the above definitions and is focused on options that contribute to addressing the mental health needs of part-time and full-time undergraduate and graduate students enrolled at McMaster University. The brief also addresses the promotion and coordination of mental health services available at McMaster University, as well as the coordination of primary and secondary care for mental illnesses on-campus and in the community, and the continuity of care between on-campus and off-campus services.

This issue brief will not directly address the mental health needs of staff, faculty members or postdoctoral fellows. Furthermore, this issue brief does not directly address certain groups of students because other programs or delivery arrangements are currently meant to address their needs, such as students enrolled in the Centre for Continuing Education programs, DeGroot School of Business, McMaster Divinity College students, and postgraduate medical trainees registered with McMaster University. However, much of what is discussed in this issue brief may have implications for all of the aforementioned groups.

## **THE PROBLEM**

A number of features of the problem need to be taken into consideration when addressing student mental health needs at McMaster University. These problem features include: 1) the high prevalence of mental health concerns in the student population; 2) the complex interplay of factors that contribute to mental health among the student population; 3) how coping with mental illness is complicated by the pervasive stigma associated with it; and 4) how existing arrangements limit the reach and impact of programs and services. These four challenges are addressed in turn below.

### **High prevalence of mental health concerns in the student population**

In Canada, youth aged 15 to 24 are the mostly likely group to suffer the effects of mental illnesses, substance dependencies and suicide.(1) The Canadian Mental Health Association reports that approximately 10 to 20% of Canadian youth are affected by mental illness or disorder.(15) In Canada, suicide accounts for 24% of all deaths among 15- to 24-year-olds, making it the second leading cause of death in this group.(15;16) In Ontario, youth aged 15 to 24 are three times more likely to have a substance misuse problem than those aged 25 or more.(17) They are also at a higher risk for experiencing mood disorders, such as depression and anxiety.(17) Ontario university students report having mental distress that significantly impacts their lives: 47% reported stress; 32% reported worry and sleep loss; 31% reported being unhappy or depressed; and 29% reported elevated levels of psychological distress.(18)

Additionally, university often comes at a pivotal time in an individual’s life where there is a particular need for early identification, correct diagnosis, and provision of effective evidence-based interventions.(19) Approximately 70% of mental disorders can be diagnosed before the age of 25, with many of the chronic disorders having an impact on the personal, interpersonal, social and physical health of the individuals.(20-22)

### **Box 3: Mobilizing research evidence about the problem**

The available research evidence about the problem was sought from a range of published and “grey” research literature sources. Published literature that provided insights into alternative ways of framing the problem was sought using the qualitative research “hedge” in MedLine. Grey literature was sought by reviewing the websites of a number of Canadian and international organizations, such as the Centre for Addiction and Mental Health, Ontario Ministry of Health and Long-Term Care, Health Canada, Public Health Agency of Canada, Mental Health Commission of Canada, Canadian Mental Health Association, and World Health Organization.

Priority was given to research evidence that was published more recently, that was locally applicable (in the sense of having been conducted in Canada), and that took equity considerations into account.

If these concerns are not effectively and appropriately addressed early on, they can persist and lead to distress and impairment throughout adulthood.(21)

Compared to the general population, the overall health of students is poor, with emotional health problems usually outweighing problems with physical health.(23) A number of postsecondary institutions in the United States have noted a rising demand for mental health services on their campuses.(24) The National Survey of Counselling Directors 2011 report, containing data from Canada and the United States, noted that 91% of the directors reported a growing number of students with severe psychological concerns on their campuses.(25) Anxiety, depression and psychotic disorders are the major mental health concerns experienced by university students.(23) One study reported that the number of students seen with depression had doubled over a 13-year period, while the number of students seen every year with suicidal ideation or intent had tripled.(23;26)

According to the McMaster Student Wellness Centre's internal tracking system, of all the students who use their services, approximately 40% are depressed, and about 30% experience anxiety. In 2009, a survey revealed that approximately 6.5% of all the students at McMaster University had considered suicide.(27) Furthermore, in 2012, approximately 43% of the students using Student Accessibility Services had identified psychiatric/mental health concerns as their principal disability. This is an increase from 2009, when 37% of the students had identified psychiatric/mental health concerns as their principal disability.(28) In 2012, the Ontario Undergraduate Student Alliance (OUSA) listed distance from family and social support networks, competitive high-stress environments, and added economic pressure as potential stressors for students pursuing post-secondary education.(29)

### **Mental health driven by a complex interplay of factors**

The World Health Organization (WHO) report on preventing mental disorders focuses on the psychosocial risk and protective factors linked to the development of mental illnesses.(30) The report identifies a number of social, economic, family and individual factors that can have an impact on mental health.(12;30-33) Risk factors associated with an increased probability of developing mental health problems include: access to drugs and alcohol, displacement, isolation and alienation, peer rejection, poor nutrition, poverty, social disadvantage, work stress, academic failure and scholastic demoralization, child abuse and neglect, and stressful life events, among others.(12) Substance abuse is the fourth leading mental disorder in children and youth, and the use of these illegal substances has been linked to poverty, coercive family processes, social stress, poor academic outcomes, and social disadvantage.(34)

In the National Epidemiologic Survey on Alcohol and Related Conditions conducted in the United States, findings showed that the most prevalent disorders among college students were alcohol use disorders (20.4%) followed by personality disorders (17.7%).(35) Due to the added stressors in college life, some students use negative coping mechanisms such as binge drinking and other forms of substance use and abuse, engaging in self-mutilating behaviours, smoking, and excessive exercising, sleeping and spending.(36) These behaviours can further add to feelings of depression, anxiety, low self-esteem and being out of control.(36) In many cases, these negative coping mechanisms can lead to a number of negative outcomes, such as insomnia or hypersomnia, excessive weight gain or loss, dropping out or failing college, suicide, engaging in reckless behaviour, becoming physically sick, and engaging in arguments and fights.(36) Amotivation has also been strongly linked to several negative outcomes in students, such as poor psychosocial adjustment to university life stress, high levels of perceived stress, and poor well-being.(37)

On the other hand, protective factors against mental illness include empowerment, social participation, social support and community networks, ethnic minorities' integration, ability to cope with stress, self-esteem, exercise, and feelings of security, among other factors.(38)

## **Coping with mental illness complicated by the pervasive stigma associated with it**

Stigma has been identified as one of the most common reasons why students choose not to seek help. Students with untreated mental health problems most commonly reported that they did not seek services because they preferred to deal with issues on their own, or because they believed that stress is normal in a college/graduate school setting.(39) In the same study, 21.4% of students agreed that the fear of what others would think was one of their reasons for not seeking mental health services.(39)

WHO identified stigma as a major cause of discrimination and exclusion for those living with mental illness. Mental illness and associated stigma may negatively affect one's self-esteem, disrupt relationships, and limit prospects for obtaining housing, jobs, and/or education.(23) One study reported that students may fear that their mental health concerns will be viewed as a weakness by their peers, and may negatively affect their career progression.(23)

Help-seeking behaviour can be affected by public stigma (meaning a naïve public endorsing prejudices about the stigmatized group) and self-stigma (internalization of feelings of guilt, shame, inferiority and desire for secrecy experienced by people with mental illness).(40-42) One study noted a significant association between personal stigma (in this case, how one views people who seek mental health services) and various measures of lower help-seeking.(43) One study found that perceived public stigma is negatively associated with perceived need to seek mental health services among individuals between ages 18 and 22.(44) However, this negative relationship did not hold for older students. The same study hypothesized that this may be because younger students, who may be experiencing mental health concerns for the first time, are more wary of being labelled as having a mental illness, and may wish to avoid the stigma and potential loss of social status.

In order to reduce the stigma surrounding mental illnesses, 16 Ontario colleges and universities adopted the 'Opening Minds' anti-stigma initiative launched by the Mental Health Commission of Canada (MHCC) in 2009.(45;46) Many Ontario colleges and universities also collaborated with MHCC to adopt a Mental Health First Aid program directed specifically at youth ages 12 to 24. This program trains staff, faculty and university and college students to recognize signs of mental health problems, and to refer those in need to the appropriate services and resources.(39);(46)

At McMaster University, all faculty and staff members who work directly with students receive an "orange folder" containing information on mental health resources available to students.(2) However, there may be discomfort among staff and faculty members when it comes to proactively identifying and addressing mental health concerns in their students. The Mental Health and Wellness report by Queen's University notes that often faculty members are unable to refer students to the appropriate services, and that there were inconsistencies in approaches taken by the faculty, particularly those involved in supervising graduate students.(47)

## **Existing arrangements limit the reach and impact of programs and services**

While there are many excellent programs and services in place to address student mental health needs at McMaster University, the delivery, financial and governance arrangements within which these programs and services are provided limit the reach and impact of these programs and services.

### *Delivery arrangements*

The University-run mental health services are a key component of the mental health service delivery system on campus. The Student Wellness Centre provides a wide range of health services to students, including personal, psychological and group counselling services. The Student Wellness Centre has a triage system that allows the counsellors to see all students within 1-2 days if they state that their need is urgent. Students can also book an appointment at a future date based on their scheduling preference. After the initial assessment,

the students are referred to a counsellor, group counselling or other services based on their needs. Students in distress or dealing with mental illness are offered follow-up appointments based on the triage system. The follow-up appointments for counselling, therapy or treatment may range from two to six weeks.

A number of MSU groups also offer peer support services to students. For example, the Student Health Education Centre (SHEC) offers a peer support service for students struggling with a number of issues, including those pertaining to mental health and personal well-being.(48) On February 13, 2013, MSU launched the Peer Support Line (pilot project) to provide confidential peer support and assistance to callers in the areas of mental health, academic issues, personal issues, grief and bereavement, among others. The pilot project will be evaluated at the end of the winter 2013 semester before committing to a full launch.(49) The Student Wellness Centre also offers programs through Student Success Leaders who deliver workshops and support wellness education events on campus.(50) Additionally, there are a number of student-run mental health clubs that work towards eliminating stigma, and/or provide support to students struggling with stress, anxiety, and other mental health concerns. Lastly, the Residence Life staff and Society of Off-Campus Students are frequently in direct contact with first-year students who are struggling to cope with their transition to university.

However, current delivery arrangements also contribute to the lack of a comprehensive mental health delivery system to address student mental health needs at McMaster University. Due to high volume of student demand for the Student Wellness Centre services and resource constraints, students with lower priority needs may have to wait for weeks for subsequent appointments. Moreover, the Student Wellness Centre is more a primary care facility (able to offer a range of front-line, non-time-intensive services to students in need) than a secondary care facility (able to offer regular, frequent or long appointments with psychiatrists and other specialists).

Studies have noted a communication gap between university mental health counselling and disability services and the academic staff.(18) If academic faculty and staff members lack the skills needed to address emotional problems, they are more likely to label these as behavioural problems, such as being withdrawn and not engaging. Academic faculty and staff are most likely to refer students with disabling emotional problems to University counselling services. Healthcare providers are obligated to protect the students' right to confidentiality, which may lead to poor communication between healthcare and academic service providers. This results in a fragmented system that is difficult to navigate for the students. In addition to fear of disclosure and stigma, students have also noted lack of knowledge about available services as a barrier to seeking disability services.(23)

While the multiple access points to mental healthcare support and services is beneficial, lack of coordination between these different resources can create a fragmented system. Fragmentation of services can make the system inefficient and difficult to navigate for those in need.(51) Most students (aged 16-25) are in a critical stage of transition between child- and youth-serving and adult-serving mental health agencies. Inability to integrate these services and provide continuity of care can jeopardize their successful transition.(52)

### *Financial arrangements*

Current financial arrangements also contribute to the challenge of addressing mental health needs among McMaster University students. The Student Wellness Centre receives funding for its counselling services from student fees, funding for its wellness education initiatives from student fees and the University, and funding for its medical services from physician billings to the Ontario Health Insurance Plan. However, the Student Wellness Centre faces various space and budget constraints, making it difficult to keep up with the high volume of student demand. In addition, these services are not available to all students. For example, a number of student groups, such as Master of Business Administration (MBA) students, McMaster Divinity College students, and postgraduate medical trainees, do not have access to these University-run health and wellness services either because of opting-out, which occurred at some point in their

organizational history, or because other arrangements have been established. This can lead to further confusion when seeking care if students from the aforementioned groups are not adequately informed about the inconsistencies in access to University-run health and wellness services and provided with alternatives.

Student-run mental health groups rely on student volunteers and have limited funding (allocated by the MSU on an annual basis or collected through fundraising initiatives) for their campaigns and services, which may limit their capacity to launch or actively participate in initiatives that require significant financial or human resource investments (such as mandatory mental health training).

### *Governance arrangements*

There are a number of mental health groups and services at McMaster University (University-run and student-run) that oversee or deliver a variety of mental health services and awareness campaigns. However, there is a lack of an overarching governance framework (or at least a formalized collaborative framework) for mental health programming at the University. There is also a lack of a collaborative framework with community mental health service providers, both in primary care and in specialty (e.g., psychiatry) clinics. The lack of appropriate avenues for communication, such as forums, channels, spaces, etc., further impedes collaboration. This limits the scope for a comprehensive student-focused mental health delivery system on campus and in the broader community. An inability to support student mental health needs and a lack of a mental health framework can pose a risk to the health and well-being of the University community, and in more extreme cases, may contribute to crisis.(2)

### **Additional equity-related observations about the problem**

An important element of the problem that requires further discussion is how the problem may disproportionately affect certain groups. Although several groups can be affected by mental health concerns, we have focused our attention here on the experiences of two broad groups for illustrative purposes: 1) international students; and 2) refugee, immigrant and second-generation Canadians.

International students are often at greater risk of developing mental health problems due to additional stressors such as language and cultural barriers, social isolation, financial hardships, anticipated difficulties finding jobs following graduation, and unfamiliar social and academic support systems.(53-55) The academic environment can be particularly stressful for minority students.(56;57) Levels of perceived stigma may also vary based on gender, age, ethnicity, nationality and socioeconomic status.(44) The multisite Healthy Minds Study reported higher personal stigma (how one views others who seek mental health services) and lower help-seeking behaviour among men, people of Asian origin, and students who reported growing up in a poor family.(36) Moreover, international students are believed to under-utilize mental health services available on campuses.(29;58;59) This has been attributed to their lower knowledge of on-campus mental health services compared to their domestic counterparts.(48)

Refugee, immigrant and second-generation Canadian students have also been identified as being more vulnerable to developing mental health problems.(56;57) This is due to their exposure to additional stressors associated with immigration and cultural changes, such as perceived discrimination and language difficulties.(56;57) Furthermore, these student groups are also less likely to seek out mental health services and resources than their domestic counterparts. In addition to stigma, lack of awareness and understanding of mental illnesses and available resources have been identified as common barriers to accessing appropriate services among immigrant, refugee and ethno-racialized (IRER) populations.(58;60;61) Studies have identified the importance of peer groups as key socialization agents, especially for adolescents concerned about fitting in and obtaining peer approval.(62;63) These friendship networks can promote feelings of acceptance and security, and lower the risk for mental health concerns.(63) Race/ethnicity is particularly important at this stage as individuals begin defining their personal and social identities, often using their peer groups as reference points.(63;64) Lastly, refugee, immigrant and second-generation Canadians may seek care

for symptoms that are only peripherally related to their mental disorder (e.g., headaches and stomach aches), and may not encounter culturally competent healthcare providers.(65)

At McMaster University, Student Affairs also offers mental health support to international students through the Student Wellness Centre and International Student Services. Additionally, the Student Wellness Centre also provides peer-run mental health programs to all students through Student Success Leaders in Wellness Outreach, who are responsible for engaging and educating the campus community to promote an increased sense of overall well-being. (66) The Student Wellness Centre frequently conducts surveys, focus groups, etc., to assess student needs and to monitor whether these needs are being appropriately addressed. Despite all these efforts, there is room for further developing culturally sensitive mental health services to meet the varied needs of the diverse groups in the University community.

### **THREE OPTIONS FOR ADDRESSING THE PROBLEM**

Many approaches could be selected as a starting point for deliberations about addressing student mental health needs at McMaster University. To promote discussion about the pros and cons of different ways forward, we have selected three options that could collectively contribute to a more comprehensive approach to improving student mental health. These options are:

- 1) create and support the use of a one-stop access portal for information about available mental health resources and how to access them;
- 2) reduce stigma associated with mental illness and promote early detection of mental illness through strategic advertising; and
- 3) coordinate available mental health resources on campus and support greater accessibility and continuity of care and support for those in need.

These three options were identified and selected through a process of consultation with the Steering Committee and with key informants. The options were not designed to be mutually exclusive. They could be pursued simultaneously or sequentially, or components could be drawn from each element to create a new (fourth) option. They are presented separately to foster deliberations about their respective components, the relative importance or priority of each, their interconnectedness and potential of (or need for) sequencing, and their feasibility.

#### **Box 4: Mobilizing research evidence about options for addressing the problem**

The available research evidence about options for addressing the problem was sought primarily from Health Systems Evidence ([www.healthsystemsevidence.org](http://www.healthsystemsevidence.org)), which is a continuously updated database containing more than 2,900 systematic reviews of delivery, financial and governance arrangements within health systems. The reviews were identified by searching the database for reviews containing “mental health” AND “students” in the title and/or abstract. Additional reviews were identified by searching the database for reviews addressing features of the options that were not identified using the keyword search. We also assessed all of the reviews in the mental health and post-secondary school categories in Health-Evidence.ca.

The authors’ conclusions were extracted from the reviews whenever possible. Some reviews contained no studies despite an exhaustive search (i.e., they were “empty” reviews), while others concluded that there was substantial uncertainty about the option based on the identified studies. Where relevant, caveats were introduced about these authors’ conclusions based on assessments of the reviews’ quality, the local applicability of the reviews’ findings, equity considerations, and relevance to the issue. (See the appendices for a complete description of these assessments.)

Being aware of what is not known can be as important as being aware of what is known. When faced with an empty review, substantial uncertainty or concerns about quality and local applicability, or a lack of attention to equity considerations, primary research could be commissioned, or an option could be pursued and a monitoring and evaluation plan designed, as part of its implementation. When faced with a review that was published many years ago, an updating of the review could be commissioned if time allows.

No additional research evidence was sought beyond what was included in the systematic review. Those interested in pursuing a particular option may want to search for a more detailed description of the option or for additional research evidence about the option.



The focus in this section is on what is known about these options based on findings from systematic reviews. We present the findings from systematic reviews along with an appraisal of whether their methodological quality (using the AMSTAR tool) is high (scores of 8 or higher out of a possible 11), medium (scores of 4-7) or low (scores less than 4) (see the appendix for more details about the quality appraisal process).(67;68) We also highlight whether the reviews were conducted recently, which we define as the search being conducted within the last five years. In the next section, the focus turns to the barriers to adopting and implementing these options and to possible implementation strategies to address the barriers.

### **Option 1 – Create and support the use of a one-stop access portal for information about available mental health resources and how to access them**

This option involves creating and supporting the use of a one-stop access portal for information about available mental health resources and how to access them. Such a portal would allow for the sharing of mental health resources, help avoid duplication of work, and give mental health service providers and organizations an opportunity to learn from each other. The sub-elements of this option might include:

- 1) compiling a comprehensive guide to the mental health services and resources available for McMaster University students;
- 2) creating a web-based portal that brings together information about all mental health groups and services at McMaster University, provides links to the relevant resources, and keeps students informed about upcoming events, workshops and awareness campaigns;
- 3) creating an online interface that links to a ‘warm line’ in order to allow the students to interact with a human being, and reduce the time between the decision to seek help and moving forward with it; and
- 4) launching a collaborative venture to promote the variety of mental health services and other resources available on campus through social media outlets, such as Facebook and Twitter.

We found several systematic reviews outlining benefits for all but the first of the four sub-elements, namely compiling a comprehensive guide to the mental health services and resources available. For the second sub-element – **creating a web-based portal** – one recent and medium-quality review found that online peer and counsellor support, email/phone prompts to encourage re-visits, and regular website updates contribute to better exposure to internet-delivered, healthy lifestyle-promotion interventions, and, more specifically, result in longer visits and more log-ins on the websites.(69)

For the third sub-element – **creating an online interface that links up to a ‘warm line’** – several reviews identified expected benefits of online interfaces to deliver health interventions, including increased convenience for users, overcoming isolation, and providing timely information.(70) Several reviews found benefits for certain types of online interventions, such as brief motivational interventions and personalized normative interventions,(71) educational websites, online mental health screening tools as well as active interventions (such as online therapy and support groups),(72) and tele-mental health.(73) However, other reviews found limited evidence about the benefits on patient outcomes of networked communication technologies (e.g., social networking sites, mobile/smart phone, video- and teleconferencing, Voice over Internet Protocol systems, forums, email, short messaging services, and multi-media messaging services) used by healthcare professionals for the treatment of adolescent/young adults with mental health disorders;(74) virtual communities and peer-to-peer online support;(75) and online life-style advisors.(76) Multi-faceted communication channels integrating verbal, written and other non-verbal methods appeared promising with both patients and healthcare providers expressing satisfaction with these technologies.(74) However, certain new technologies raised concerns over privacy and security,(74) as well as concerns that online interventions may have unintended effects such as reinforcing the problems that the intervention was designed to help.(70)

Lastly, we found two recent and medium-quality systematic reviews that have relevance to the fourth sub-element, namely **launching a collaborative venture to promote the variety of mental health services and other resources available through social media outlets**. Social media and web 2.0 applications have



been described as powerful, interactive and low-cost tools to support health promotion activities, with the capacity for both wide mass media campaigns and more personal and tailored communications.(77) One review found a small beneficial impact for online campaigns, such as those employed by social marketers, that seek to encourage voluntary health behaviour change.(78) While the review found no significant difference when compared with sophisticated print interventions, online interventions offered a small effect, with the advantage of lower costs and larger reach. Of note, shorter interventions generally achieved larger impacts and greater adherence. The second review found limited evidence to support the effectiveness of web 2.0 media on health promotion, or to support such media’s capacity in reaching underserved and marginalized populations.(77) Moreover, this review highlighted concerns about the quality of user-generated content on social media, which can be inconsistent with clinical guidelines or scientific evidence more generally.

The key findings from the available synthesized research evidence are provided in Table 1 for those who want additional detail about the research evidence from which the above points were drawn. For those who want to know even more about the systematic reviews contained in Table 1 (or obtain citations for the reviews), a fuller description of the systematic reviews is provided in Appendix 1.

**Table 1: Summary of key findings from systematic reviews relevant to Option 1 - Create and support the use of a one-stop access portal for information about available mental health resources and how to access them**

Category of finding	Summary of key findings
Benefits	<ul style="list-style-type: none"> <li>• <b>Creating a web-based portal that brings together information about all mental health groups and services at McMaster University, provides links to the relevant resources, and keeps students informed about upcoming events, workshops and awareness campaigns</b> <ul style="list-style-type: none"> <li>○ A recent and medium-quality review found that peer support, counsellor support, email/phone prompts to encourage revisits, and regular updates of the intervention website contribute to better exposure to internet-delivered, healthy lifestyle-promotion interventions (i.e., longer visits and more log-ins on the websites).(69)</li> </ul> </li> <li>• <b>Creating an online interface that links up to a warm line in order to allow the students to interact with a human being, and reduce the time between the decision to seek help and moving forward with it</b> <ul style="list-style-type: none"> <li>○ Several reviews found benefits for certain types of online interventions:                             <ul style="list-style-type: none"> <li>▪ brief motivational interventions;(71)</li> <li>▪ educational websites;(72)</li> <li>▪ online mental health screening tools;(72)</li> <li>▪ active interventions such as online therapy and support groups;(72) and</li> <li>▪ tele-mental health.(73)</li> </ul> </li> </ul> </li> <li>• <b>Launching a collaborative venture to promote the variety of mental health services and resources available on campus through social media outlets, such as Facebook and Twitter</b> <ul style="list-style-type: none"> <li>○ A recent and medium-quality review found small beneficial impact for online campaigns, such as those employed by social marketers that seek to encourage voluntary health behaviour change. While the review found no significant difference when compared with sophisticated print interventions, online interventions offered a small effect with the advantage of lower costs and larger reach. Shorter interventions generally achieved larger impacts and greater adherence.(78)</li> </ul> </li> </ul>
Potential harms	<ul style="list-style-type: none"> <li>• <b>Launching a collaborative venture to promote the variety of mental health services and resources available on campus through social media outlets, such as Facebook and Twitter</b> <ul style="list-style-type: none"> <li>○ A recent and medium-quality review highlighted concerns about user generated content on social media and web 2.0 applications, which can be inconsistent with clinical guidelines or scientific evidence.(77)</li> </ul> </li> <li>• <b>Creating an online interface that links up to a warm line in order to allow the students to interact with a human being, and reduce the time between the decision to seek help and moving forward with it</b> <ul style="list-style-type: none"> <li>○ Reviews identified concerns over privacy and security of new technologies,(74) as well as concerns about the unintended effects of internet delivery of health interventions due to their potential for reinforcing the problems that the intervention was designed to help.(70)</li> </ul> </li> </ul>

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<p>Costs and/or cost-effectiveness in relation to the status quo</p>	<ul style="list-style-type: none"> <li>• No reviews evaluated costs and/or cost-effectiveness in relation to the status quo</li> </ul>
<p>Uncertainty regarding benefits and potential harms (so monitoring and evaluation could be warranted if the option were pursued)</p>	<ul style="list-style-type: none"> <li>• Uncertainty because no systematic reviews were identified             <ul style="list-style-type: none"> <li>○ <b>Compiling a comprehensive guide to the mental health services and resources available for McMaster students</b></li> </ul> </li> <li>• Uncertainty because no studies were identified despite an exhaustive search as part of a systematic review             <ul style="list-style-type: none"> <li>○ Not applicable (no ‘empty’ reviews were found)</li> </ul> </li> <li>• No clear message from studies included in a systematic review             <ul style="list-style-type: none"> <li>○ <b>Creating an online interface that links up to a warm line in order to allow the students to interact with a human being, and reduce the time between the decision to seek help and moving forward with it</b> <ul style="list-style-type: none"> <li>▪ Several reviews found limited evidence about the benefits of certain interventions on patient outcomes:                 <ul style="list-style-type: none"> <li>• networked communication technologies (e.g., social networking sites; mobile/smart phone; video- and teleconferencing; Voice over Internet Protocol systems; forums; email; short messaging service, and multi-media messaging services) used by healthcare professionals for the treatment of adolescent/young adults with mental health disorders(74)</li> <li>• virtual communities and peer-to-peer online support;(75) and</li> <li>• online lifestyle advisors(76)</li> </ul> </li> </ul> </li> <li>○ <b>Launching a collaborative venture to promote the variety of mental health services and resources available on campus through social media outlets, such as Facebook and Twitter</b> <ul style="list-style-type: none"> <li>▪ A recent and medium-quality review found limited evidence to support the effectiveness of web 2.0 media on health promotion, or to support such media’s capacity in reaching underserved and marginalized populations(77)</li> </ul> </li> </ul> </li> </ul>
<p>Key elements of the policy option if it was tried elsewhere</p>	<ul style="list-style-type: none"> <li>• None of the identified reviews provided information about key sub-elements</li> </ul>
<p>Stakeholders’ views and experience</p>	<ul style="list-style-type: none"> <li>• <b>Creating an online interface that links up to a warm line in order to allow the students to interact with a human being, and reduce the time between the decision to seek help and moving forward with it</b> <ul style="list-style-type: none"> <li>○ A recent and medium quality review found that multi-modal communication integrating verbal, written and other non-verbal methods appeared promising, and that both patients and healthcare providers expressed a certain degree of satisfaction with these technologies.(74)</li> </ul> </li> </ul>

## **Option 2 – Reduce stigma associated with mental illness and promote early detection of mental illness through strategic advertising**

This option highlights the need to address and reduce the stigma associated with seeking mental health services, to promote greater campus-wide awareness of mental illnesses and urge individuals to seek help before their condition worsens, and make existing services more visible and accessible for the student body through strategic advertising. The sub-elements of this option might include:

- 1) continuing ongoing programs and events, such as COPE's 'Elephant in the Room' campaign and McMaster's Mental Health Awareness Week;
- 2) collaborating with the Residence Life staff and Society of Off-Campus Students to reach out to a key demographic, namely first-year students struggling to cope with their transition to university;
- 3) promoting events and services through confidential emails sent through faculties or McMaster Student Union mailing lists;
- 4) providing resources, education and training to the staff, faculty members, and undergraduate and graduate teaching assistants to ensure that they are adequately equipped to create a stigma-free space for their students, and proactively identify and address student mental health concerns;
- 5) encouraging faculty members to clarify at the beginning of their courses that students are free to approach them or other suitable contacts on campus to discuss any mental health issues (e.g. stress, anxiety, etc.) they are facing and how the course can accommodate their situation;
- 6) supplementing the dissemination of the orange folder and optional 'Mental Health 101' and 'Question, Persuade, and Respond (QPR)' training with mandatory standardized training (through online modules or in-person sessions), to ensure that faculty members are comfortable addressing mental health concerns in their class and can refer students to appropriate services if needed; and
- 7) improving access to culturally sensitive mental health services for the populations that are at a higher risk of facing mental health concerns.

An extension of (or some would argue an alternative framing to) this option could include taking a strengths-based approach to promoting social inclusion. However, we have kept the focus on stigma reduction as a likely key first step in promoting social inclusion.

We found several systematic reviews addressing all but two of the seven sub-elements, namely sub-element 5 (encouraging faculty members to clarify at the beginning of their courses that students are free to approach them or other suitable contacts on campus to discuss any mental health issues they are facing and how the course can accommodate their situation) and sub-element 6 (supplementing the dissemination of the orange folder and optional 'Mental Health 101' and 'Question, Persuade, and Respond (QPR)' training with mandatory standardized training).

For sub-element 1 – **continuing ongoing programs and events, such as COPE's 'Elephant in the Room' campaign and McMaster's Mental Health Awareness Week** – two reviews found that mental health literacy interventions (e.g., personalized emails containing links to health information on websites, videos, depression websites, and classroom-based psycho-educational interventions) (79) and public awareness campaigns for suicide and depression (80) are effective in improving knowledge and help-seeking attitudes, but had no effect on help-seeking behaviours. Campaigns supporting direct contact with people who are affected by mental illnesses seemed to be key in reducing stigmatization,(81) but there was limited evidence about the durability of such effect.(82)

For sub-element 2 – **collaborating with the Residence Life staff and Society of Off-Campus Students to reach out to a key demographic, namely first-year students struggling to cope with their transition to university** – one old and high-quality review found limited evidence about the effectiveness and appropriateness of peer-delivered health promotion interventions for young people.(83)

For sub-element 3 – **promoting events and services through confidential emails sent through faculties or MSU mailing lists** – one review found limited evidence about the effects of email for the provision of information on disease prevention and health promotion.(84)

For sub-element 4 – **providing resources, education and training to the staff, faculty members, and undergraduate and graduate teaching assistants** – one review found that training gatekeepers for suicide prevention appears to have positive effects on the skills, attitudes and knowledge of those who undertake the training. Nevertheless, evidence is limited for the effects of gatekeeper training on suicide rates and ideation of at-risk individuals.(85) We could also draw inferences from several reviews examining educational interventions targeting health professionals. Such reviews could spur reflection about promising approaches to provide resources, education and training to staff, faculty members and teaching assistants. These reviews found benefits for various interventions including educational outreach,(86) printed materials (e.g., manuals, bulletins, guidelines, quick reference guides, newsletters and consensus statements),(86;87) and other continuing medical education activities (e.g., conferences, workshops and rounds).(88-90) In general, didactic teaching methods appear less effective in educating health professionals (88;90) than educational interventions offering the opportunity to practice skills,(88;89) to discuss in small groups or to be coached.(90)

Lastly, several reviews have relevance to **improving access to culturally sensitive mental health services for the populations that are at a higher risk of facing mental health concerns** (sub-element 7). The reviews found evidence supporting the use of interventions aimed at providers of racial/ethnic minority patients for improving the quality of care provided (e.g., provider reminder system for provision of standardized services, bypassing the physician to offer preventive services directly to patients, and structured questionnaires to assess adolescent health behaviors);(91) and interventions to improve cross-cultural communication.(92) Outreach interventions targeting religious groups (e.g., educational booklets on causes and treatment of various mental health conditions, a telephone hotline service to provide information on crisis intervention services and monthly group meetings, and speaker presentations from psychiatrists, family members and individuals with mental health conditions) were found to have positive effects on knowledge about mental illness and the mental health system, as well as group satisfaction, but there was no evidence about their direct effect on people with mental illness, including their likelihood of using mental health services, caregiver burden, and impact on clergy's knowledge, skills and attitudes.(93) Other reviews also found limited evidence about interventions to improve cultural competencies in health systems (i.e., programs to recruit and retain staff members who reflect the cultural diversity of the community served; use of interpreter services or bilingual providers for clients with limited English proficiency; use of linguistically and culturally appropriate health education materials; culturally specific healthcare settings,(94) as well as cultural competency training for healthcare providers).(94;95)

The key findings from the available synthesized research evidence are provided in Table 2 for those who want additional detail about the research evidence from which the above points were drawn. For those who want to know even more about the systematic reviews contained in Table 2 (or obtain citations for the reviews), a fuller description of the systematic reviews is provided in Appendix 2.

**Table 2: Summary of key findings from systematic reviews relevant to Option 2 - Reduce stigma associated with mental illness and promote early detection of mental illness through strategic advertising**

Category of finding	Summary of key findings
Benefits	<ul style="list-style-type: none"> <li>• <b>Continuing ongoing programs and events, such as COPE’s ‘Elephant in the Room’ campaign, and McMaster’s Mental Health Awareness Week</b> <ul style="list-style-type: none"> <li>○ A recent and high-quality review found that mental health literacy interventions were effective in improving help-seeking attitudes, but had no effect on help-seeking behaviours.(79)</li> <li>○ An older and low-quality review found that public awareness programs contributed to a modest improvement in public knowledge of and attitudes towards depression or suicide.(80)</li> <li>○ A recent and low-quality review found that direct contact with people with mental illness seemed to be key in reducing stigmatization.(81)</li> </ul> </li> <li>• <b>Providing resources, education and training to the staff, faculty members, and undergraduate and graduate teaching assistants to ensure that they are adequately equipped to create a stigma-free space for their students, and proactively identify and address student mental health concerns</b> <ul style="list-style-type: none"> <li>○ One recent and low-quality review found that training gatekeepers for suicide prevention appears to have positive effects on the skills, attitudes and knowledge of those who undertake the training.(85)</li> </ul> </li> <li>• <b>Improving access to culturally sensitive mental health services for the populations that are at a higher risk of facing mental health concerns</b> <ul style="list-style-type: none"> <li>○ Two medium-quality reviews (one recent and one older) found evidence supporting the use of interventions aimed at providers of mental health services to racial/ethnic minority patients for improving the quality of care provided;(91) and interventions to improve cross-cultural communication.(92)</li> <li>○ A recent and low-quality review found that outreach interventions targeting religious groups had positive effects on knowledge about mental illness and the mental health system, as well as group satisfaction.(93)</li> </ul> </li> </ul>
Potential harms	<ul style="list-style-type: none"> <li>• None of the identified reviews provided information about potential harms of the sub-elements</li> </ul>
Costs and/or cost-effectiveness in relation to the status quo	<ul style="list-style-type: none"> <li>• None of the identified reviews provided information about costs of the sub-elements and no economic evaluations were identified</li> </ul>
Uncertainty regarding benefits and potential harms (so monitoring and evaluation could be warranted if the option were pursued)	<ul style="list-style-type: none"> <li>• Uncertainty because no systematic reviews were identified <ul style="list-style-type: none"> <li>○ <b>Supplementing the dissemination of the orange folder and optional ‘Mental Health 101’ and ‘Question, Persuade, and Respond (QPR)’ training with mandatory standardized training (through online modules or in-person sessions) to ensure that faculty members are comfortable addressing mental health concerns in their class and can refer the students to the appropriate services if needed</b></li> <li>○ Encouraging faculty members to clarify at the beginning of their courses that students are free to approach them or other suitable contacts on campus to discuss any mental health issues (e.g. stress, anxiety, etc.) they are facing and how the course can accommodate their situation</li> </ul> </li> <li>• Uncertainty because no studies were identified despite an exhaustive search as part of a systematic review <ul style="list-style-type: none"> <li>○ Not applicable (no ‘empty’ reviews were found)</li> </ul> </li> <li>• No clear message from studies included in a systematic review <ul style="list-style-type: none"> <li>○ <b>Continuing ongoing programs and events, such as COPE’s ‘Elephant in the Room’ campaign, and McMaster’s Mental Health Awareness Week</b> <ul style="list-style-type: none"> <li>▪ A recent and high-quality review found limited evidence for other intervention types such as efforts to de-stigmatize or provide help-seeking source information.(79)</li> <li>▪ An older and low-quality review did not clearly demonstrate the durability of the positive effects of public awareness campaigns, nor any increase in care-seeking or decrease in suicidal behaviours.(80)</li> <li>▪ A recent and low-quality review found limited evidence about the durability of the effects of educational interventions to reduce stigmatization and raise awareness about mental health problems.(82)</li> </ul> </li> <li>○ <b>Collaborating with the Residence Life staff to reach out to a key demographic, first-year students struggling to cope with their transition to university</b> <ul style="list-style-type: none"> <li>▪ An older and high-quality review found limited evidence about the effectiveness and</li> </ul> </li> </ul> </li> </ul>

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	<p style="text-align: center;">appropriateness of peer-delivered health promotion interventions for young people.(83)</p> <ul style="list-style-type: none"> <li>○ <b>Promoting events and services through confidential emails sent through faculties or MSU mailing lists</b> <ul style="list-style-type: none"> <li>▪ A recent and high-quality review found limited evidence about the effects of email for the provision of information on disease prevention and health promotion.(84)</li> </ul> </li> <li>○ <b>Providing resources, education and training to the staff, faculty members, and undergraduate and graduate teaching assistants to ensure that they are adequately equipped to create a stigma-free space for their students, and proactively identify and address student mental health concerns</b> <ul style="list-style-type: none"> <li>▪ A recent and low-quality review found limited evidence for the effects of gatekeeper training on suicide rates and ideation of at-risk individuals.(85)</li> </ul> </li> <li>○ <b>Improving access to culturally sensitive mental health services to the populations that are at a higher risk of facing mental health concerns</b> <ul style="list-style-type: none"> <li>▪ A recent and low-quality review found no evidence about the direct effect of outreach interventions to religious settings on people with mental illness, including their likelihood of using mental health services, caregiver burden, and impact on clergy's knowledge, skills and attitudes.(93)</li> <li>▪ Two reviews, including one recent and of high-quality, found limited evidence for cultural competency training for healthcare providers.(94;95)</li> <li>▪ An older and low-quality review (94) found limited evidence about interventions to improve cultural competence in healthcare systems: <ul style="list-style-type: none"> <li>• programs to recruit and retain staff members who reflect the cultural diversity of the community served;</li> <li>• interpreter services or bilingual providers for clients with limited English proficiency;</li> <li>• linguistically and culturally appropriate health education materials; and</li> <li>• culturally-specific healthcare settings.</li> </ul> </li> </ul> </li> </ul>
Key elements of the policy option if it was tried elsewhere	<ul style="list-style-type: none"> <li>• None of the identified reviews provided information about key sub-elements</li> </ul>
Stakeholders' views and experience	<ul style="list-style-type: none"> <li>• None of the identified reviews provided information about stakeholders' views and experiences</li> </ul>

### **Option 3 – Coordinate available mental health resources on campus and support greater accessibility and continuity of care and support for those in need**

This option involves coordinating available mental health resources on campus and supporting accessibility and continuity of mental healthcare services for those in need. To achieve this, there is a need to address the fragmentation of current services by supporting better communication between the mental health groups on campus (University-run and student-run) in order to build a strong network of mental health services, to help students navigating the system and accessing professional or peer-mediated mental health services that suit their unique needs, and to ensure continuity of care for students with mental health concerns to achieve and maintain desired health outcomes. The sub-elements of this option might include:

- 1) promoting open communication between student-run and University-run mental health organizations and helping students seek out groups and/or services that are best equipped to address their unique concerns;
- 2) building a collaborative network of mental health services offered on-campus and off-campus through cross-promotional partnerships;
- 3) developing well-defined care pathways, packages of care and continuity of care that link on- and off-campus services;
- 4) considering strategies to introduce students to the appropriate off-campus mental health services in order to support continuity of care and build on available community resources;
- 5) ensuring that the students are able to effectively navigate the mental health system and access the appropriate services and supports regardless of the entry point used to approach the system (e.g., appointing a system navigator to help students navigate the complex mental health system and direct them to the right services); and
- 6) supporting capacity building to ensure that the mental health delivery system is well-equipped to provide students with timely and sufficient access to appropriate mental health services.

We found several systematic reviews addressing all but sub-element 4 (i.e., considering strategies to introduce students to the appropriate off-campus mental health services in order to support continuity of care and build on available community resources).

For sub-element 1 – **promoting open communication between student-run and University-run mental health organizations and helping students seek out groups and/or services that are best equipped to address their unique concerns** – one review found benefit for computer-generated summaries and standardized formats that could facilitate communication and more timely transfer of pertinent patient information to primary care physicians, and make discharge summaries more consistently available during follow-up care.<sup>(96)</sup> Another review examined silos that are often created within and across healthcare organizations, and identified characteristics of successful activities to bridge such silos: running concerted campaigns to improve one group's utility to another; drawing up an extended narrative of what each group is offering; explicitly appreciating the other group's point of view, and relating to their needs; communicating with other groups verbally through personalized messages; and recognizing that identities and values shared by an organization or profession are usually deeply rooted and not likely to be negotiable.<sup>(97)</sup>

For sub-element 2 – **building a collaborative network of mental health services offered on-campus and off-campus through cross-promotional partnerships** – two reviews found limited evidence that inter-agency collaboration and partnerships leads to health improvement.<sup>(98;99)</sup> Moreover, one review identified a number of factors influencing the effectiveness of collaborative networks such as commonly agreed goals, methods of working, monitoring and evaluation.<sup>(98)</sup>

For sub-element 3 – **developing well-defined care pathways, packages of care and continuity of care that link on- and off-campus services** – several reviews outlined benefits for interventions that could contribute to developing well-defined care pathways and packages of care, and establishing continuity of care,

which included discharge planning and follow-up,(100) crisis interventions,(101;102) integrated care pathways,(103;104) and collaborative or shared care models.(105-107) One review examined patients' perceptions about key features for achieving continuity of care: being attended to regularly and over time by one physician (although in some degree of contrast, convenient access was identified as a key feature by young patients); communication and information transfer across care settings; gathering holistic information about patients; accessibility between care levels; individualized care; a smooth and supported discharge process; and patient involvement.(108)

For the fifth sub-element – **ensuring that the students are able to effectively navigate the mental health system and access the appropriate services and supports** – two reviews found some benefits for interventions facilitating patient navigation, one supporting workers with common mental health conditions to navigate disability management systems,(109) and another supporting patients navigating cancer care services.(110)

For the sixth sub-element – **supporting capacity building to ensure that the mental health delivery system is well-equipped to provide students with timely and sufficient access to appropriate mental health services** – one review found benefit for advanced scheduling programs (i.e., patient-driven scheduling in lieu of pre-arranged appointments) in primary care settings to improving wait time and no-show rate.(111) Other reviews examined the local and contextual factors of successful waiting time management (112) and the experiences of vulnerable groups in accessing health services.(113;114)

The key findings from the available synthesized research evidence are provided in Table 3 for those who want additional detail about the research evidence from which the above points were drawn. For those who want to know even more about the systematic reviews contained in Table 3 (or obtain citations for the reviews), a fuller description of the systematic reviews is provided in Appendix 3.

**Table 3: Summary of key findings from systematic reviews relevant to Option 3** - Coordinate available mental health resources on campus and support greater accessibility and continuity of care and support for those in need

Category of finding	Summary of key findings
Benefits	<ul style="list-style-type: none"> <li>• <b>Promoting open communication between student-run and University-run mental health organizations, and helping students seek out groups and/or services that are best equipped to address their unique concerns</b> <ul style="list-style-type: none"> <li>○ An older and medium-quality review found benefit for computer-generated summaries and standardized formats that could facilitate communication and more timely transfer of pertinent patient information to primary care physicians, and make discharge summaries more consistently available during follow-up care.(96)</li> </ul> </li> <li>• <b>Developing well-defined care pathways, packages of care and continuity of care that link on- and off-campus services</b> <ul style="list-style-type: none"> <li>○ Several high and medium-quality reviews outlined benefits for various interventions such as discharge planning and follow-up,(100) crisis interventions,(101;102) integrated care pathways,(103;104) and collaborative or shared care models.(105-107)</li> </ul> </li> <li>• <b>Ensuring that the students are able to effectively navigate the mental health system and access the appropriate services and supports regardless of the entry point used to approach the system (e.g., appointing a system navigator to help students navigate the complex mental health system and direct them to the right services)</b> <ul style="list-style-type: none"> <li>○ Two reviews (one of high-quality and one of low-quality) found some benefits for interventions facilitating patient navigation, one supporting workers with common mental health conditions to navigate disability management systems (109) and another supporting patients navigating cancer care services.(110)</li> </ul> </li> <li>• <b>Supporting capacity building to ensure that the mental health delivery system is well-equipped to provide students with timely and sufficient access to appropriate mental health services</b> <ul style="list-style-type: none"> <li>○ A recent and medium-quality review found benefit for advanced scheduling programs (i.e., patient-driven scheduling in lieu of prearranged appointments) in primary care settings to</li> </ul> </li> </ul>



	improving wait time and no-show rate.(111)
Potential harms	<ul style="list-style-type: none"> <li>• None of the identified reviews provided information about potential harms of the sub-elements</li> </ul>
Costs and/or cost-effectiveness in relation to the status quo	<ul style="list-style-type: none"> <li>• None of the identified reviews provided information about costs of the sub-elements and no economic evaluations were identified</li> </ul>
Uncertainty regarding benefits and potential harms (so monitoring and evaluation could be warranted if the option were pursued)	<ul style="list-style-type: none"> <li>• Uncertainty because no systematic reviews were identified <ul style="list-style-type: none"> <li>○ <b>Considering strategies to introduce students to the appropriate off-campus mental health services in order to support the continuity of care and build on available community resources</b></li> </ul> </li> <li>• Uncertainty because no studies were identified despite an exhaustive search as part of a systematic review <ul style="list-style-type: none"> <li>○ Not applicable (no 'empty' reviews were found)</li> </ul> </li> <li>• No clear message from studies included in a systematic review <ul style="list-style-type: none"> <li>○ <b>Building a collaborative network of mental health services offered on-campus and off-campus through cross-promotional partnerships</b> <ul style="list-style-type: none"> <li>▪ Two recent reviews of medium and high-quality found limited evidence of the effectiveness of inter-agency collaboration and partnership in improving health.(98;99)</li> </ul> </li> </ul> </li> </ul>
Key elements of the policy option if it was tried elsewhere	<ul style="list-style-type: none"> <li>• <b>Promoting open communication between student-run and University-run mental health organizations and helping students seek out groups and/or services that are best equipped to address their unique concerns</b> <ul style="list-style-type: none"> <li>○ A recent and low-quality review (97) identified characteristics of successful activities to bridge silos within and across healthcare organizations: <ul style="list-style-type: none"> <li>▪ running concerted campaigns to improve one group's utility to another;</li> <li>▪ drawing up an extended narrative of what each group is offering;</li> <li>▪ explicitly appreciating the other group's point of view, and relating to their needs;</li> <li>▪ communicating with other groups verbally through personalized messages; and</li> <li>▪ recognizing that identities and values shared by an organization or profession are usually deeply rooted and not likely to be negotiable.</li> </ul> </li> </ul> </li> <li>• <b>Building a collaborative network of mental health services offered on-campus and off-campus through cross-promotional partnerships</b> <ul style="list-style-type: none"> <li>○ A recent and high-quality review identified a number of factors influencing the effectiveness of collaborative networks such as commonly agreed goals, methods of working, monitoring and evaluation.(98)</li> </ul> </li> <li>• <b>Supporting capacity building to ensure that the mental health delivery system is well-equipped to provide students with timely and sufficient access to appropriate mental health services</b> <ul style="list-style-type: none"> <li>○ An older and low-quality review examined the local and contextual factors of successful waiting time management.(112)</li> </ul> </li> </ul>
Stakeholders' views and experience	<ul style="list-style-type: none"> <li>• <b>Developing well-defined care pathways, packages of care and continuity of care that link on- and off-campus services</b> <ul style="list-style-type: none"> <li>○ A recent and medium-quality review (108) identified some key features for achieving continuity of care from the patients' perspectives: <ul style="list-style-type: none"> <li>▪ being attended to regularly and over time by one physician favoured relational continuity for some, while convenient access appeared to be appreciated by young patients;</li> <li>▪ communication and information transfer across care settings;</li> <li>▪ gathering holistic information about the patients;</li> <li>▪ accessibility between care levels;</li> <li>▪ individualized care;</li> <li>▪ a smooth and supported discharge process; and</li> <li>▪ patient involvement.</li> </ul> </li> </ul> </li> <li>• <b>Supporting capacity building to ensure that the mental health delivery system is well-equipped to provide students with timely and sufficient access to appropriate mental health services</b> <ul style="list-style-type: none"> <li>○ Two medium-quality reviews explored the experiences of vulnerable groups in accessing health services (113;114)</li> </ul> </li> </ul>

### **Additional equity-related observations about the three options**

While most systematic reviews we identified focused on mental health, none dealt explicitly with international students, and students that are immigrants, refugees or second-generation Canadians. For the first element, findings from one review showed limited evidence to support the effectiveness of web 2.0 media in reaching underserved and marginalized populations about health promotion initiatives.(77) In addition, a few reviews that addressed components for the second option focused on improving access to culturally sensitive mental health services. While two reviews found evidence supporting the use of interventions aimed at providers of racial/ethnic minority patients for improving the quality of care (91) and cross-cultural communication,(92) others found limited evidence about the effectiveness of outreach interventions to religious settings, (93) cultural competency training for healthcare providers,(94;95) or broader health system interventions to improve cultural competencies.(94) Lastly, two reviews addressed components for the third option focused on supporting capacity building to ensure that the mental health delivery system is well-equipped to provide students with timely and sufficient access to appropriate mental health services. More specifically, two reviews explored the views and experiences of vulnerable groups in accessing health services. One review highlighted the need to understand the material, psychological and social costs of engaging hard-to-reach patients, and how these costs could influence their decision to seek help and health professionals' decision to offer help.(113) The second review found that cultural expectations and perceptions can affect help-seeking behaviours. The review also concluded that navigating the healthcare system requires particular sets of competencies and resources that are influenced by age, gender, social class or ethnicity.(114)

## **IMPLEMENTATION CONSIDERATIONS**

Potential barriers to addressing student mental health needs at McMaster University can be identified at the level of students and parents (e.g., students may not be aware of the available resources and hence may under-utilize them), providers (e.g., providers may have to compete with more than 300 McMaster Student Union (MSU) clubs and several other University services to get the attention of the student population), organizations (e.g., organizations with high staff turnover may be unable to take responsibility for the launch and upkeep of a portal), and systems (e.g., the University and key stakeholders may have difficulties in developing a shared vision, resulting in fragmented advertising efforts). A detailed list of potential barriers to implementing the three options is provided in Table 4 as a way to spur reflection about some of the considerations that may influence choices about an optimal way forward. We found few empirical studies that helped to identify or establish the importance of these barriers, so we have listed those that were identified in a range of sources (not just empirical studies) and we have not rank ordered them in any way.

**Table 4: Potential barriers to implementing the options**

<b>Levels</b>	<b>Option 1 – Create and support the use of a one-stop access portal for information about available mental health resources and how to access them</b>	<b>Option 2 - Reduce stigma associated with mental illness and promote early detection of mental illness through strategic advertising</b>	<b>Option 3 – Coordinate available mental health resources on campus and support greater accessibility and continuity of care and support for those in need</b>
<b>Student/parent</b>	Students/parents may have difficulty accessing the information	The few students who do not have access to online resources or social media outlets may miss out on events and activities promoted solely through online marketing vehicles	Students may not be aware of the available resources and hence may under-utilize them  Students may not be able to afford the off-campus programs and services to which they're referred if these programs and services are not covered by the Ontario Health Insurance Plan
<b>Service provider</b>	Providers may lack the staff and funds to ensure that all documented resources are made widely available to students	Providers may have to compete with more than 300 MSU clubs and several other University services to get the attention of the student population  Providers may not be able to accommodate an increase in demand for their services	Some providers may have difficulty reaching out to the student body in order to promote these collaborative efforts  The Student Wellness Centre services are limited by lack of space, insufficient staff, and financial constraints, while its services remain in high demand
<b>Organization</b>	Some organizations may lack the staff and funds needed to compile and update information  Organizations with high staff turnover (e.g., MSU) may be unable to take responsibility for the launch and upkeep of the portal	Organizations providing student mental health services may lack the staff and funds needed to successfully implement advertising campaigns  Organizations providing student mental health services may lack appropriate training and supports to ensure that University staff and faculty members are better equipped and more comfortable identifying and addressing student mental health concerns  Organizations may only be able to	Organizations providing student mental health services may lack the appropriate channels to clearly communicate the scope of (and limits to) their services to other stakeholders, resulting in inadequate collaborative efforts and communication barriers  The MSU does not intervene with the day-to-day business of its student clubs and therefore, may have difficulty ensuring that all the mental health groups are adequately trained and have an established scope for the services

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		attract to optional mental health training sessions the few faculty members with a personal interest or prior experience in the field	they offer
<b>System</b>	The University and key stakeholders may face difficulties in ensuring that the information is updated on a regular basis	<p>The University and key stakeholders may encounter difficulty in developing a shared vision, resulting in fragmented advertising efforts by several mental health groups and a feeling among students of being over-exposed to the topic</p> <p>The University and key stakeholders (e.g., on-campus mental health service providers and managers) may lack the governance and planning structures necessary to design, implement, and/or mandate an online training module or in-person training session</p>	<p>The University may encounter difficulty in convening key stakeholders at regular intervals to ensure ongoing coordination</p> <p>Hamilton community-based mental health programs and services may not have the resources to keep up with increased demands on them</p>

The implementation of the three options to address the problem can be influenced by stakeholders' capacity to take advantage of potential windows of opportunity. These windows of opportunity could facilitate or trigger positive change. For instance, efforts are already underway to compile mental health resources available to students on- and off-campus (e.g., MSU peer support line, mental health awareness campaigns on campus and in the Hamilton community, Student Wellness Centre services, etc.). In addition, there has been increased focus on mental illness and related services in the media and at McMaster University and other post-secondary institutions across Canada in recent months, which has already drawn a significant amount of student attention to this pressing health challenge. A number of mental health groups and services have also started collaborating with the MSU and other related services at McMaster University and in Hamilton, in order to provide a more comprehensive mental health system for students. Furthermore, it is also possible to draw lessons from other universities in Canada and abroad that faced similar barriers in successfully developing and implementing comprehensive mental health strategies. Lastly, there have been attempts to address this pressing health challenge on a provincial level through system-wide initiatives that focus on de-stigmatizing mental illness and centralizing mental health services.

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## APPENDICES

The following tables provide detailed information about the systematic reviews identified for each option. Each row in a table corresponds to a particular systematic review and the reviews are organized by option element (first column). The focus of the review is described in the second column. Key findings from the review that relate to the option are listed in the third column, while the fourth column records the last year the literature was searched as part of the review.

The fifth column presents a rating of the overall quality of the review. The quality of each review has been assessed using AMSTAR (A MeaSurement Tool to Assess Reviews), which rates overall quality on a scale of 0 to 11, where 11/11 represents a review of the highest quality. It is important to note that the AMSTAR tool was developed to assess reviews focused on clinical interventions, so not all criteria apply to systematic reviews pertaining to delivery, financial, or governance arrangements within health systems. Where the denominator is not 11, an aspect of the tool was considered not relevant by the raters. In comparing ratings, it is therefore important to keep both parts of the score (i.e., the numerator and denominator) in mind. For example, a review that scores 8/8 is generally of comparable quality to a review scoring 11/11; both ratings are considered “high scores.” A high score signals that readers of the review can have a high level of confidence in its findings. A low score, on the other hand, does not mean that the review should be discarded, merely that less confidence can be placed in its findings and that the review needs to be examined closely to identify its limitations. (Lewin S, Oxman AD, Lavis JN, Fretheim A. SUPPORT Tools for evidence-informed health Policymaking (STP): 8. Deciding how much confidence to place in a systematic review. *Health Research Policy and Systems* 2009; 7 (Suppl1):S8.

The last three columns convey information about the utility of the review in terms of local applicability, applicability concerning prioritized groups, and issue applicability. The third-from-last column notes the proportion of studies that were conducted in Canada, while the second-from-last column comments on the proportion of studies included in the review that deal explicitly with one of the prioritized groups. The last column indicates the review’s issue applicability in terms of the proportion of studies focused on supporting student mental health needs.

All of the information provided in the appendix tables was taken into account by the issue brief’s authors in compiling Tables 1-3 in the main text of the brief.

**Appendix 1: Systematic reviews relevant to Option 1 - Create and support the use of a one-stop access portal for information about available mental health resources and how to access them**

Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on student mental health needs
Compiling a comprehensive guide to the mental health services and resources available for McMaster students	No reviews identified.						
Creating a web-based portal that brings together information about all mental health groups and services at McMaster University, provides links to the relevant resources, and keeps students informed about upcoming events, workshops and awareness campaigns	Review to identify the potentially exposure-promoting methods and strategies used in existing internet interventions; the objective outcome measures that are used to measure exposure to internet interventions; and the exposure-promoting methods and strategies that are associated with better exposure to internet interventions.(69)	Of all intervention characteristics that could potentially enhance exposure, only peer support, counsellor support, email/phone contact with visitors, and updates of the intervention website were related to better exposure. The diversity of intervention methods used and the inconsistency in the report of exposure measures prevented drawing firmer conclusions. More research is needed to identify whether other characteristics of internet interventions are associated with greater exposure.	2009	4/9 (AMSTAR rating from the McMaster Health Forum)	2/64	Not reported	Not reported
Creating an online interface that links to a warm line in order to allow the students to interact with a human being, and reduce the time between the decision to seek help and moving forward with it	Review of the effectiveness of prevention and early intervention in mental health problems in higher education students. Interventions were limited to those targeting anxiety, depression and alcohol misuse.(71)	For interventions to prevent or intervene early for alcohol misuse, evidence of effectiveness is strongest for brief motivational interventions and for personalized normative interventions delivered using computers or in individual face-to-face sessions. Few interventions to prevent or intervene early with depression or anxiety were identified. These were mostly face-to-face, cognitive-	NR	1/10 (AMSTAR rating from the McMaster Health Forum)	Not reported	Not reported	Not reported

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on student mental health needs
		behavioural/skill-based interventions. One social marketing intervention to raise awareness of depression and treatments showed some evidence of effectiveness. Overall, there is very limited evidence that interventions are effective in preventing or intervening early with depression and anxiety disorders in higher education students.					
	Review to identify current strides in internet-based interventions, which include passive interventions (such as educational websites and online mental health screening tools) as well as active interventions (such as online therapy and support groups).(72)	Although relatively new, many internet mental health interventions have reported early results that are promising. Both therapist-led and self-directed online therapies indicate significant improvements in disorder-related symptoms. The number of studies addressing child disorders lags behind those of adults. Although the internet holds promising innovative possibilities, internet-based mental health intervention guidelines need to be developed.	2003	2/10 (AMSTAR rating from the McMaster Health Forum)	Not reported	Not reported	Not reported
	Review of the effectiveness and impacts of the networked communication technologies used by healthcare professionals for the treatment of adolescent/young adults with mental health disorders.(74)	Networked communication technologies can increase the opportunity of communication between patients and healthcare professionals. However, the review reported limited improvements in quality of life and continuity of care. Both patients and healthcare providers expressed a certain degree of satisfaction with the technologies. However, further exploration of concerns over privacy and security is needed.	2009	6/10 (AMSTAR rating from the McMaster Health Forum)	1/13	Not reported	Not reported

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on student mental health needs
		Thus, although networked communication technologies have the potential to be a useful tool in mental health services delivery, the impact and effectiveness of these technologies is still inconclusive.					
	Review of the evidence of benefit from use of tele-mental health (TMH) in studies that reported clinical or administrative outcomes.(73)	There was evidence of success with TMH in the areas of child psychiatry, depression, dementia, schizophrenia, suicide prevention, post-traumatic stress, panic disorders, substance abuse, eating disorders and smoking prevention. Evidence of the benefit of TMH programs in managing obsessive-compulsive disorder is less convincing. For TMH to be effective, it needs to satisfy some general criteria: it must be technically reliable and robust, well accepted by both clients and healthcare providers, and able to produce equivalent quality services compared to face-to-face consultations.	2006	6/10 (AMSTAR rating from the McMaster Health Forum)	Not reported	Not reported	Not reported
	Review of the effects (on health and social outcomes) of computer-based peer-to-peer communities and electronic self-support groups used by people to discuss health-related issues remotely.(75)	No robust evidence exists on the health benefits of virtual communities and peer-to-peer online support. There was no evidence to support concerns that virtual communities harm people. However, it does not mean such harm does not exist, as most studies had high dropout rates. Researchers must focus their efforts not only on building professionally-led systems, but also shift their attention to consumer-	2003	6/10 (AMSTAR rating from the McMaster Health Forum)	Not reported	Not reported	Not reported

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on student mental health needs
		led, self-help venues.					
	Review to identify the component intervention techniques of lifestyle advisors (LAs) in the U.K. and similar contexts, and the outcomes of health-related lifestyle advice (HRLA) interventions.(76)	The evidence was insufficient to support or refute the use of LAs to promote health and improve quality of life. Results have shown that LA interventions in chronic care and smoking cessation are cost-effective. However, the cost-effectiveness of LA interventions for breastfeeding and mental health is inconclusive. Furthermore, LA interventions for screening uptake and for diet and physical activity were not cost-effective. LA interventions were cost-effective for HIV prevention, but not in a U.K. context. LAs were found to act as translational agents, and they sometimes removed barriers to prescribed behaviour or helped to create facilitative social environments.	2008	10/11 (AMSTAR rating from the McMaster Health Forum)	1/26	3/26	1/26
	Review of the reasons why health interventions have been delivered over the internet, and to reflect on the work of the pioneers in this field in order to inform future research.(70)	Reasons for internet delivery included low cost and resource implications due to the nature of the technology; reduced cost and increased convenience for users; reduction of health service costs; overcoming isolation of users; the need for timely information; stigma reduction; and increased user and supplier control of the intervention. Although internet	2003	3/9 (AMSTAR rating from the McMaster Health Forum)	Not reported	Not reported	Not reported



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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on student mental health needs
		delivery overcomes isolation of time, mobility and geography, it may not be a substitute for face-to-face contact. Future evaluations need to incorporate the evaluation of cost, not only to the health service, but also to the users and their social networks.					
Launching a collaborative venture to promote the variety of mental health resources and services available on campus through social media outlets, such as Facebook and Twitter	Review of the evidence on the impact and utility of web 2.0 and social media on health promotion.(77)	The scarcity of empirical evidence points to the need for more interventions with participatory and user-generated features. Innovative study designs and measurement methods are needed to understand the communication landscape and to critically assess intervention effectiveness. To address health disparities, interventions must consider accessibility for vulnerable populations.	2012	4/10 (AMSTAR rating from the McMaster Health Forum)	Not reported	Not reported	Not reported
	A meta-analysis assessing online intervention design features to inform the development of online campaigns (such as those employed by social marketers) that seek to encourage voluntary health behaviour change. A further objective was to increase understanding of the relationships between intervention adherence, study adherence, and behavioural outcomes.(78)	The overall impact of online interventions across all studies was small but statistically significant. The largest impact for online interventions was found when compared with waitlists and placebos, followed by comparison with lower-tech online interventions. No significant difference was found when compared with sophisticated print interventions. However, online interventions offer a small effect with the advantage of lower costs and larger reach. Shorter interventions generally achieved larger impacts and greater adherence.	2008	6/11 (AMSTAR rating from Program in Policy Decision-making)	Not reported	Not reported	11/30

**Appendix 2: Systematic reviews relevant to Option 2 - Reduce stigma associated with mental illness and promote early detection of mental illness through strategic advertising**

Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on student mental health needs
Continuing ongoing programs and events, such as COPE's 'Elephant in the Room' campaign, and McMaster's Mental Health Awareness Week	Review of the effectiveness of educational interventions to reduce stigmatization and improve awareness of mental health problems among young people.(82)	There were three types of educational interventions (Educational condition, Video-based Contact condition, and Contact condition). Eighteen of 23 studies reported significant improvements in knowledge, 27 of 34 studies yielded significant changes in attitudes towards people with mental illness, and 16 of 20 studies reported significant effects in social distance. Two of five studies reported significant improvements in young people's awareness of mental illness, although six studies reported difficulties in maintaining improved knowledge, attitudes and social distance in young people. From comparing the three types of educational interventions, direct contact with people with mental illness (Contact condition) seemed to be key in reducing stigmatization, while components of Education and Video-based contact conditions are still arguable. Despite the positive effects of each educational intervention, their long-term effects are still unclear.	2009	2/9 (AMSTAR rating from the McMaster Health Forum)	Not reported	Not reported	40/40

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on student mental health needs
	Review of interventions targeting help-seeking attitudes, intentions or behaviours for depression, anxiety and general psychological distress.(79)	Mental health literacy content was effective in improving help-seeking attitudes in the majority of studies at post-intervention, but had no effect on help-seeking behaviour. There was less evidence for other intervention types such as efforts to de-stigmatize or provide help-seeking source information. Thus, although mental health literacy interventions are a promising method for promoting positive help-seeking attitudes, there is no evidence that it leads to help-seeking behaviour.	2011	8/10 (AMSTAR rating from the McMaster Health Forum)	0/6	0/6	4/6
	Review of the effectiveness of various stigma reduction interventions related to mental health illnesses.(81)	The results emphasize that experimental clinical trials hold promise for providing evidence-based data that can be used in mental health practice. Educational and contact-based strategies used in various stigma reduction programs resulted in the most durable gains in knowledge as well as positive attitudinal and behavioural changes needed to decrease the stigma associated with mental illness. Special stigma reduction programs are to be planned for adolescent and elderly targets.	2008	3/10 (AMSTAR rating from the McMaster Health Forum)	0/14	1/14	10/14
	Review of the effectiveness of education campaigns targeted at the general public to improve awareness of suicidal crises and depression. Public awareness campaigns were divided into four main categories: short media campaigns, gatekeeper training,	The evidence suggests the public awareness programs contributed to a modest improvement in public knowledge of and attitudes towards depression or suicide, although most program evaluations did not assess the durability of the attitude changes. No study clearly	2007	3/9 (AMSTAR rating from the McMaster Health Forum)	2/15	NR	0/14

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on student mental health needs
	long national programs, and long local or community programs.(80)	showed that the awareness campaigns helped to increase care-seeking or decrease suicidal behaviour.					
Collaborating with the Residence Life staff to reach out to a key demographic, first-year students struggling to cope with their transition to university	Review to examine critically the claim that the peer-delivered approach is a more appropriate and effective method of promoting young people's health than more traditional approaches.(83)	Overall, the review found some evidence to support the effectiveness of peer-delivered health promotion for young people. There were more sound outcome evaluations which demonstrated peer-delivered health promotion to be effective than ineffective. More than half of the sound studies showed a positive effect on at least one behavioural outcome. The studies reviewed are not encouraging on the issue of peer-delivered health promotion reaching young people at enhanced risk of adverse health behaviours. The current evidence base for peer-delivered health promotion is therefore limited. The intuitive appeal of the idea is not matched by much hard evidence.	1998	8/9 (AMSTAR rating from the McMaster Health Forum)	21/271	Not reported	46/271
Promoting events and services through confidential emails sent through faculties or MSU mailing lists	Review of the effects of email for the provision of information on disease prevention and health promotion, compared to standard mail or usual care, on outcomes for health professionals, patients and caregivers, and health services (including harms).(84)	The evidence on the use of email for the provision of information on disease prevention and health promotion was weak, and therefore inadequate to inform clinical practice. The available trials mostly provide inconclusive or no evidence for the outcomes of interest in this review. Further research needs to use high-quality study designs that take advantage of the most recent developments in information technology, with consideration of the complexity of	2010	11/11 (AMSTAR rating from the McMaster Health Forum)	0/6	0/6	0/6

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on student mental health needs
		email as an intervention.					
Providing resources, education and training to the staff, faculty members, and undergraduate and graduate teaching assistants to ensure that they are adequately equipped to create a stigma-free space for their students, and proactively identify and address student mental health concerns	Review of the effectiveness of training gatekeepers for suicide prevention. Gatekeepers are defined as people who have primary contact with those at risk of suicide, and who can identify them by recognizing suicidal risk factors. Gatekeepers are classified as designated (e.g. those who work in medicine, social work, nursing and psychology) or emergent (e.g. community members – clergy, police, teachers, counsellors – without formal training to intervene with someone at risk of suicide, but who are recognized by such at-risk individuals as potential gatekeepers).(85)	Gatekeeper training is a promising strategy to combat suicide, as it has been shown to positively affect the skills, attitudes and knowledge of those who undertake the training. Nevertheless, evidence is limited for the effects of gatekeeper training on suicide rates and ideation of at-risk individuals.	2009	2/9 (AMSTAR rating from Program in Policy Decision-making)	1/13	2/13	2/13
	Examining the effectiveness of different quality improvement strategies for optimizing healthcare (90)	Clinician-/patient-driven QIS were associated with greater effectiveness than manager-/policymaker-driven QIS. The most effective strategies included clinician-directed audit and feedback cycles, clinical decision support systems, specialty outreach programs, chronic disease management programs, continuing professional education based on interactive small-group case discussions, and patient-mediated clinician reminders.  Formal teaching in evidence-based medicine, integrated with clinical coaching, can modestly improve knowledge, skills, attitudes and behaviour of clinicians compared	2008	2/11 (AMSTAR rating from Program in Policy Decision-making)	12/97	0/97	0/97

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on student mental health needs
		with traditional medical training.  Small group case-based workshops provided moderately large changes in professional practice compared to little change seen in didactic teaching methods.					
	Examining the effectiveness of formal continuing medical education (CME) (e.g., conferences, workshops, rounds and other traditional continuing education activities) on physician behaviour or healthcare outcomes (88)	There is some evidence that interactive CME sessions that enhance participant activity and provide the opportunity to practice skills can effect change in professional practice and, on occasion, healthcare outcomes.  Didactic sessions do not appear to be effective in changing physician performance.	1999	5/11 (AMSTAR rating from Program in Policy Decision-making)	3/14	0/14	0/14
	Examining the effectiveness of continuing medical education (CME) strategies in changing physician performance (89)	Effective change strategies included reminders, patient-mediated interventions, outreach visits, opinion leaders and multifaceted activities. Audit with feedback and educational materials were less effective, and formal CME conferences or activities, without enabling or practice-reinforcing strategies, had relatively little impact.  More effective methods, such as systematic practice-based interventions and outreach visits, are seldom used by CME providers.	1994	2/10 (AMSTAR rating from Program in Policy Decision-making)	Not reported	0/99	0/99
	Examining the effectiveness of different types of educational	When used alone and compared to no intervention, printed	2011	10/11 (AMSTAR	12/45	0/45	0/45

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on student mental health needs
	materials (e.g., manuals, bulletins, guidelines, quick reference guides, newsletters, consensus statements), distribution audiences (e.g., targeted or general audiences), format (e.g., colourful vs. black and white) and frequency of distribution (87)	educational materials may have a small beneficial effect on professional practice outcomes. There is little evidence to reliably estimate the effect of printed materials on patient outcomes or its effect in comparison to other educational interventions.		rating from Program in Policy Decision-making)			
	Examining the effectiveness of educational outreach visits on professional practice and healthcare outcomes (86)	<p>Multifaceted interventions that included educational outreach and distribution of educational materials and/or other intervention compared to a control group, compared to audit and feedback, and compared to educational materials, were all found to be generally effective for improving appropriate care.</p> <p>Educational outreach interventions used alone compared to a control group, and compared to educational materials, were found to be generally effective.</p> <p>There was insufficient evidence for comparisons of multifaceted versus educational meetings, educational outreach visits versus continuity of care, and multifaceted versus reminders.</p>	2007	8/11 (AMSTAR rating from www.rxforchange.ca)	1/69	0/69	0/69
Encouraging faculty members to clarify at the beginning of their courses that students are free to approach them or other suitable contacts on campus to discuss any mental health issues (e.g. stress, anxiety,	No reviews identified						

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on student mental health needs
etc.) they are facing and how the course can accommodate their situation							
Supplementing the dissemination of the orange folder with practical training (through online modules or in-person sessions) to ensure that faculty members are comfortable addressing mental health concerns in their class and can refer the students to the appropriate services if needed	No reviews identified.						
Providing access to culturally sensitive mental health services to the populations that are at a higher risk of facing mental health concerns	Review of interventions to improve cultural competence in healthcare systems. These interventions included: programs to recruit and retain staff members who reflect the cultural diversity of the community served; use of interpreter services or bilingual providers for clients with limited English proficiency; cultural competency training for healthcare providers; use of linguistically and culturally appropriate health education materials; and culturally-specific healthcare settings.(94)	The authors were unable to determine the effectiveness of any of the five interventions, because there were either too few comparative studies or studies did not examine the outcome measures evaluated in the review (client satisfaction with care, improvements in health status, and inappropriate racial or ethnic differences in use of health services or in received and recommended treatment).	2001	2/10 (AMSTAR rating from the McMaster Health Forum)	Not reported	Not reported	Not reported
	Effects of cultural competency training on patient-centred outcomes.(95)	The review found limited research showing a positive relationship between cultural competency training and improved patient outcomes. None of the research evidence identified was deemed to be of high quality	2010	8/10 (AMSTAR rating from Program in Policy Decision-making)	Not reported	5/7	1/7
	Effect of interventions to improve healthcare services for ethnic	Four of the included studies evaluated interventions to improve	2009	4/9 (AMSTAR	0/19	19/19	Not reported



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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on student mental health needs
	minorities.(92)	cross-cultural communication and reduce communication barriers. Two of the studies evaluated educational interventions and reported significant benefits with educational interventions aimed at training healthcare personnel. Two of these four studies (one of which was focused on improving care of depressive patients) evaluated complex interventions and an educational program and reported significant benefits.		rating from Program in Policy Decision-making)			
	Interventions targeted at healthcare providers to improve healthcare quality or reduce disparities in care for racial/ethnic minorities.(91)	Two of the 27 studies included in the review assessed educational interventions of which one was focused on adult general prevention and one in prevention of injuries in children. Both studies found improvements in provider counselling behaviours and the review concluded that overall, there is fair evidence to support the use of provider education aimed at providers of racial/ethnic minority patients. The review found that overall, there is fair evidence supporting the use of multifaceted interventions aimed at providers of racial/ethnic minority patients for improving the quality of care provided.	2003	5/11 (AMSTAR rating from www.rxforchange.ca)	0/27	2/27	0/27
	Review of the literature to (1) identify the efficacy of outreach programs to clergy or religious leaders or to their parishioners by psychology or psychiatry professional groups, (2) learn about	Although many programs identified from the literature search had exhibited an impressive degree of integration and coordination between mental health and religious groups, only one had	2011	1/9 (AMSTAR rating from the McMaster Health Forum)	Not reported	Not reported	Not reported

McMaster Health Forum

Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on student mental health needs
	<p>the strengths and weaknesses of evaluating those programs, and (3) identify priorities for further development and evaluation of mental health outreach programs. The overall goal is to ascertain the utility of published mental health outreach programs in terms of educating clergy or religious organizations, or in terms of addressing the unmet mental health needs of participants or congregants.(93)</p>	<p>incorporated outcome measures. This study focused on the collaboration between church-based support groups and African American families of people with mental illness. Outreach efforts included (1) educational booklets on causes and treatment of various mental health conditions, (2) establishment of a telephone hotline service to provide information on crisis intervention services and monthly group meetings, and (3) presentation on mental illness and family support by various speakers (including psychiatrist, family members and individuals with mental health conditions). Overall, study respondents reported their knowledge of mental illness and of the mental health system had increased and group satisfaction scores were high. However, there was no assessment of the direct impact on people with mental illness, including their likelihood of using mental health services, caregiver burden, and impact on clergy's knowledge, skills and attitudes.</p>					

**Appendix 3: Systematic reviews relevant to option 3 - Coordinate available mental health resources on campus and support greater accessibility and continuity of care and support for those in need**

Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on student mental health needs
Promoting open communication between student-run and University-run mental health organizations and helping students seek out groups and/or services that are best equipped to address their unique concerns	Review of empirical and theoretical work on the phenomenon of structural gaps, gaps between social clusters, and weak or absent ties in networks. It aims to analyze a specific exemplar of this phenomenon, which are structures of silos within healthcare organizations.(97)	Gaps offer insights into social structures, and how real world behaviours of participants in workplaces, organizations and institutions are fragile. The paper highlights the circumstances in which network disjunctures and group divides manifest. Knowledge of these phenomena provides opportunities for working out ways to improve health sector organizational communications, knowledge transmission and relationships.	2009	3/9 (AMSTAR rating from the McMaster Health Forum)	Not reported	Not reported	Not reported
	Review to characterize the prevalence of deficits in communication and information transfer at hospital discharge, and to identify interventions to improve this process.(96)	Deficits in communication and intervention transfer at hospital discharge are common and may adversely affect patient care. Interventions such as computer-generated summaries and standardized formats may facilitate more timely transfer of pertinent patient information to primary care physicians and make discharge summaries more consistently available during follow-up care.	2006	5/10 (AMSTAR rating from the McMaster Health Forum)	Not reported	Not reported	Not reported
Building a collaborative network of mental health services offered on-campus and off-campus through cross-promotional partnerships	Review of the effects of inter-agency collaboration between local health and local government agencies on health outcomes in any population or age group.(98)	Collaboration between local health and local government is commonly considered best practice. However, the review did not identify any reliable evidence that inter-agency collaboration, compared to standard services, necessarily leads to health improvement. A few	2008	9/9 (AMSTAR rating from the McMaster Health Forum)	0/11	0/11	2/11

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		<p>studies identified component benefits but these were not reflected in overall outcome scores, and could have resulted from the use of significant additional resources. Although agencies appear enthusiastic about collaboration, difficulties in the primary studies and incomplete implementation of initiatives have prevented the development of a strong evidence base. It is possible that local collaborative partnerships delivering environmental interventions may result in health gain, but the evidence base for this is very limited. Evaluations of inter-agency collaborative arrangements face many challenges. The results demonstrate that collaborative community partnerships can be established to deliver interventions, but it is important to agree on goals, methods of working, monitoring and evaluation before implementation to protect program fidelity and increase the potential for effectiveness.</p>					
	<p>Review the available evidence on the impact of organizational partnerships on public health outcomes (health improvement and/or a reduction in health inequalities) in England between 1997-2008 (99)</p>	<p>There is limited evidence about the impacts of partnerships on health outcomes. Findings suggest that some partnerships may increase the profile of health inequalities on local policy agendas. However, the review was unable to identify whether successes and failures were attributable to the partnerships.</p>	2008	6/9 (AMSTAR rating from Program in Policy Decision-making)	0/15	0/15	0/15

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Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on student mental health needs
Developing well-defined care pathways, packages of care and continuity of care that link on- and off-campus services	Review of the effectiveness of collaborative care models on improving depression outcomes. Collaborative care is a multi-component, healthcare system-level intervention that uses case managers to link primary care providers, patients, and mental health specialists. In addition to case management support, primary care providers receive consultation and decision support from mental health specialists (i.e., psychiatrists and psychologists).(105)	The results from the meta-analyses suggest robust evidence for effectiveness of collaborative care in improving depression symptoms, adherence to treatment, response to treatment, remission of symptoms, recovery from symptoms, quality of life/functional status, and satisfaction with care for patients diagnosed with depression. Collaborative care models were therefore effective in achieving clinically meaningful improvements in depression outcomes and public health benefits in a wide range of populations, settings and organizations. Collaborative care interventions provide a supportive network of professionals and peers for patients with depression, especially at the primary care level.	2004	7/11 (AMSTAR rating from the McMaster Health Forum)	Not reported	Not reported	Not reported
	Review of the effectiveness of collaborative care for patients with depression or anxiety.(106)	Collaborative care is associated with significant improvement in depression and anxiety outcomes compared with usual care, and represents a useful addition to clinical pathways for adult patients with depression and anxiety.	2012	11/11 (AMSTAR rating from the McMaster Health Forum)	2/79	Not reported	Not reported
	Review of the evidence on “shared care” models of ambulatory mental health services, focusing on critical factors in the implementation of these models in clinical practice with a view to providing policy direction. The review excluded evidence about dementia, substance use and personality disorders.(107)	“Shared care” trials report improved mental and physical health outcomes in some clinical settings, with improved social function, self-management skills, service acceptability and reduced hospitalizations. Other benefits included improved access to specialist care, and better engagement with and acceptability	2010	5/10 (AMSTAR rating from the McMaster Health Forum)	Not reported	Not reported	Not reported

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		of mental health services. Effective models incorporated linkages across various service levels, clinical monitoring within agreed treatment protocols, improved continuity and comprehensiveness of services.					
	Review of the effectiveness of shared-care health service interventions designed to improve the management of chronic disease across the primary-specialty care interface. Shared care across the primary-specialty interface is defined as the joint participation of primary care physicians and specialty care physicians in the planned delivery of care, informed by enhanced information exchange, over and above routine discharge and referral notices.(115)	The majority of studies included examined complex multifaceted interventions and were of relatively short duration. Shared care had a clear effect on improving prescribing, but the pattern of results was mixed for all other outcomes. Overall, there were no consistent improvements in outcomes such as physical, mental health or psychosocial outcomes. There is a need for improvement in design and quality of studies examining such interventions.	2006	8/11 (AMSTAR rating from www.rxforchange.ca)	0/20	0/20	0/20
	Review of the effectiveness of successful integrated care pathways (ICPs) in children and adults over the full range of health settings, focusing on the circumstances and populations in which they were most effective.(104)	ICPs were most effective in context where the patient's progress was predictable, and where pathways were more variable. However, their value was less clear. They were most effective in bringing about behavioural changes where deficiencies in services were identified, and where interprofessional working was well established. However, their value was less certain. Some changes in professional behaviour did not benefit patients.	2008	7/10 (AMSTAR rating from Program in Policy Decision-making)	0/9	0/9	0/9

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	Review of the effectiveness of discharge planning interventions in mental healthcare from inpatient to out-patient treatment on improving patient outcome, ensuring community tenure, and saving costs.(100)	The discharge planning strategies evaluated in the included studies varied widely; most were limited to preparation of discharge during inpatient treatment. Discharge planning was effective in reducing readmission to hospital and improving adherence to aftercare among people with mental disorders. Findings from this review cautiously support implementation of discharge planning interventions in mental healthcare.	2008	5/11 (AMSTAR rating from Program in Policy Decision-making)	1/11	Not reported	Not reported
	Review of the effectiveness of crisis intervention models for those with serious mental illness experiencing an acute episode, compared with 'standard care'.(102)	Crisis care (where support is provided during crisis for service users in the home or community setting) was found to provide a package of support that was worthwhile, acceptable, and less expensive than standard care. Crisis care also avoided repeat hospital admissions, improved the mental state of service users more than standard care, was more acceptable and satisfactory, reduced burden on service users and their families and carers, and reduced the stigma of hospitalization. More evaluative studies are needed on crisis interventions, due to the poor methodology of included studies.	2006	9/11 (AMSTAR rating from Program in Policy Decision-making)	2/8	Not reported	Not reported
	Review of the effectiveness of crisis interventions for adults with borderline personality disorder (BPD) in any setting. Crisis intervention was defined as “an	A comprehensive search of the literature found two ongoing RCTs, whose results were not included in the review due to the ongoing nature of the study. Thus	2011	8/9 (AMSTAR rating from Program in Policy Decision-	0/2	Not reported	Not reported

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	immediate response by one or more individuals to the acute distress experienced by another individual, which is designed to ensure safety and recovery and lasts no longer than one month".(101)	there currently is no RCT-based evidence for the management of acute crises in people with BPD, and therefore no conclusions could be reached about the effectiveness of any single crisis intervention. High-quality, large-scale, adequately powered RCTs in this area are urgently needed.		making)			
	To describe models of integrated care used in the United States; assess how integration of mental health services into primary care settings or primary healthcare into specialty outpatient settings impacts patient outcomes; and describe barriers to sustainable programs, use of health information technology (IT), and reimbursement structures of integrated care programs within the United States.(103)	Most integrated care programs in either primary care or specialty care settings are effective, although there is no discernible effect of integration level, processes of care, or combination on patient outcomes for mental health services in primary care settings. Organizational and financial barriers persist for the successful implementation of sustainable integrated care programs. Health IT remains a mostly undocumented but promising tool. No evidence exists as to which reimbursement system may most effectively support integrated care.	2007	9/10 (AMSTAR rating from Program in Policy Decision-making)	0/61	Not reported	Not reported
	Review to improve knowledge on patients' perceptions of relational (RC), informational (IC) and management continuity (MC) across care levels.(108)	The studies most frequently investigated RC. Being attended to regularly and over time by one physician (RC) was valued by chronically ill patients, but balanced with convenient access by young patients (MC). Communication and information transfer across care settings as well as the gathering of holistic information about the patient were perceived to foster IC. Critical	2009	4/9 (AMSTAR rating from the McMaster Health Forum)	4/25	Not reported	0/25



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		features for achieving MC were accessibility between care levels, individualized care and a smooth discharge process including the receipt of support. Patients further considered that their personal involvement was one facilitating element of continuity of care.					
Consider strategies to introduce students to the appropriate off-campus mental health services in order to support the continuity of care and build on available community resources	No reviews identified.						
Ensuring that the students are able to effectively navigate the mental health system and access the appropriate services and supports regardless of the entry point used to approach the system. This can include appointing a system navigator to help students navigate the complex mental health system and direct them to the right services	Review of the evidence on workplace-based work disability prevention (WDP) interventions in workers with common mental health conditions (CMHCs).(109)	Three main intervention elements were identified: (1) facilitation of access to clinical treatment, (2) workplace-based high-intensity psychological intervention, and (3) facilitation of navigation through the disability management system. There was moderate evidence for all three intervention elements in terms of improving work functioning, quality of life and economic outcomes, and work absence duration. Overall, workplace-based interventions could improve work disability outcomes for workers with CMHCs. Facilitation of access to clinical treatment, and workplace-based high-intensity psychological intervention, were most effective in improving work functioning and quality of life, and in reducing costs.	2009	9/10 (AMSTAR rating from the McMaster Health Forum)	1/7	0/7	0/7

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	Review to identify and summarize both descriptive and efficacy literature on patient navigation services for patients with cancer.(110)	Overall, there was evidence of some degree of efficacy for patient navigation in increasing participation in cancer screening and adherence to diagnostic follow-up care after the detection of an abnormality. There was less evidence regarding the efficacy of patient navigation in reducing either late-stage cancer diagnosis or delays in the initiation of cancer treatment or improving outcomes during cancer survivorship. There were methodological limitations in most studies, and further research will be necessary to evaluate the efficacy and cost-effectiveness of patient navigation services in improving cancer care.	2007	2/9 (AMSTAR rating from the McMaster Health Forum)	1/16	2/16	0/16
Supporting capacity building to ensure that the mental health delivery system is well-equipped to provide students with timely and sufficient access to appropriate mental health services	Review to describe patient and physician and/or practice outcomes resulting from implementation of advanced access scheduling in the primary care setting. Advanced access scheduling promotes patient-driven scheduling in lieu of prearranged appointments, and has been proposed as a more patient-centred appointment method.(111)	Studies of advanced access support benefits to wait time and no-show rate. However, effects on patient satisfaction were mixed, and data about clinical outcomes and loss to follow-up were lacking.	2010	6/9 (AMSTAR rating from the McMaster Health Forum)	0/28	Not reported	Not reported
	Review of existing intelligence regarding the management of waiting times for specialized and diagnostic services in an effort to identify the key local and contextual factors of successful waiting time management.(112)	Few articles explicitly addressed factors that could enhance or inhibit the implementation of a wait time reduction strategy at the local level, and few were empirical studies. Some of the local factors most frequently cited were physicians' involvement to bring resistant physicians on board	2005	3/9 (AMSTAR rating from the McMaster Health Forum)	1/31	0/31	0/31

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		<p>(culture), appropriate levels of dedicated staffing to ensure continuity (resources), and information management systems to collect and analyze data (tools). At the contextual level, funding levels and earmarked resources recurred most often in the literature review, but interviewees emphasized financial incentives and the need for them to be aligned between the contextual and local levels. Leadership was an additional important governance factor at both the local level (where it surfaced as strong clinical leadership), and at the contextual level (where it appeared as the need for vision and direction within a structure that ensured coordination, reporting and monitoring). Many other factors were identified under the four dimensions and further explained in the report.</p>					
	<p>A critical interpretive review of access to healthcare by vulnerable groups, to produce theory: a logical, plausible and useful explanation, grounded in a comprehensive but not exhaustive body of evidence, about access to healthcare.(114)</p>	<p>Studies of utilization and receipt of healthcare show evidence of distinctive patterning according to age, gender, socioeconomic advantage and ethnicity, although the data remain difficult to interpret and are inconclusive. Cultural expectations affect people’s help-seeking. For example, expectations of what is gender-appropriate may deter men from seeking help, while those living in conditions of socio-economic disadvantage or older</p>	<p>Not reported</p>	<p>5/9 (AMSTAR rating from the McMaster Health Forum)</p>	<p>Not reported</p>	<p>Not reported</p>	<p>Not reported</p>

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		<p>people may ‘normalize’ symptoms with reference to those around them. People need to be able to identify and evaluate their symptoms and to negotiate routes to healthcare, tasks that may require competencies and resources patterned by age, gender, social class or ethnicity. Cultural dissonance – discord between cultural norms of healthcare organizations and their imagined ideal user – creates low permeability (i.e., require more work to gain a point of entry and sustain engagement with the service). People of minority ethnicity may become alienated from organizations that appear to stereotype them or treat them with a lack of sensitivity, although direct evidence of interactions between minority users and providers is lacking. Health professionals may make adjudications (based on their judgments of health needs) that disadvantage people of minority ethnicity, different genders, older people, and socio-economically disadvantaged people.</p> <p>It may be useful to measure utilization of health services by the synthetic construct of candidacy. Candidacy describes how people’s eligibility for healthcare is determined between themselves and health services. It is a continually negotiated property of individuals, subject to multiple</p>					

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		<p>influences arising both from people and their social contexts, and from macro-level influences on allocation of resources and configuration of services. Health services are continually constituting and seeking to define the appropriate objects of medical attention and intervention, while at the same time people are engaged in constituting and defining what they understand to be the appropriate objects of medical attention and intervention. Access represents a dynamic interplay between these simultaneous, iterative and mutually reinforcing processes. By attending to how vulnerabilities arise in relation to candidacy, the phenomenon of access can be better understood, and more appropriate recommendations can be made for policy, practice and future research.</p>					
	<p>Review of articles focusing on the experiences of eight exemplar groups with exceptional problems in access to interventions for depression and anxiety (the homeless, long-term unemployed, adolescents with eating disorders, depressed elderly people, advanced cancer sufferers, patients with medically unexplained symptoms, asylum seekers, and people from black and minority ethnic groups).(113)</p>	<p>The articles suggested a range of mechanisms accounting for poor access among these groups. Many regarded their mental health problems as rooted in social problems and employed a variety of self-management strategies to maintain function. These strategies could involve social withdrawal, focusing available resources on close family relationships and work roles. Over-investment in these roles could result in a sense of insecurity as wider networks were neglected. Material disadvantage</p>	<p>Not reported</p>	<p>4/9 (AMSTAR rating from the McMaster Health Forum)</p>	<p>0/20</p>	<p>4/20</p>	<p>0/20</p>

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		<p>both affected the resources people could bring to performing social roles, and influenced help-seeking. A tacit understanding of the material, psychological and social 'costs' of engagement by patients and health professionals could influence decisions to seek and offer help. These costs were felt to be proportionally higher in deprived, marginalized and minority communities where individual resources are limited and the stigma attached to mental illness is high.</p>					