Mental health care for university students: A way forward?

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Authors' contributions

All authors have contributed to the writing of this manuscript and reviewed and approved the final submitted version. There were no professional writers involved in this submission. The submission is original and has not been submitted or reviewed elsewhere.

Conflict of interest statements

There is no conflict of interest for any author involved in this manuscript. Potential conflicts outside of the scope of this manuscript are reflected in each author's COI Form.

Role of funding source

Andrea Cipriani is supported by the National Institute for Health Research (NIHR) Oxford Cognitive Health Clinical Research Facility and by an NIHR Research Professorship (grant RP-2017-08-ST2-006) and by the NIHR Oxford Health Biomedical Research Centre (grant BRC-1215-20005). The views expressed are those of the authors and not necessarily those of the UK National Health Service, the NIHR, or the UK Department of Health.

Ethics committee approval n/a

Introduction

The transition to university coincides with a critical developmental period characterized by individuation and separation from family, development of new social connections, and increased autonomy and responsibility.[1] At the same time, the brain is undergoing accelerated development and is at heightened sensitivity to risk exposures commonly encountered by university students including psychosocial stressors, recreational drugs, alcohol binging, and sleep disruption.[2] Moreover, most mental disorders emerge by early adulthood and are associated with a substantial delay in treatment.[3] Untreated or inadequately treated mental illness is associated with progression to more complex disorders, school drop-out, addiction, and self-harm.[4,5] Taken together, the transition to university coincides with a high-risk period for maladaptive coping, onset of psychopathology, and academic failure; a corollary is that it also represents an important window of opportunity for prevention and timely intervention. Thus, universities need to take a lead role in the development of an integrated system of student mental health care.

Scope of need

Globally, enrolment and diversity of the university student population is increasing. A recent cross-national study estimated the 12-month prevalence of mental disorders in students aged 18-22 years at about one-fifth (20%) with anxiety being the most common, followed by mood and substance use disorders.[6] A recent systematic review focusing on medical students reported a summary prevalence of 27.2% for depression or depressive symptoms and 11% for suicidal ideation.[7] However, less than 20% of students screening positive or meeting diagnostic criteria for a mental disorder sought or received minimally adequate treatment.[6,7]

Concurrently, universities are experiencing a significant increase in student demand for mental health services, far in excess of enrolment increases. Focus on initiatives to raise awareness and decrease stigma may be contributing factors. Additionally, university students experience a number of stressors related to social relationships, loneliness, academic demands, and finances. Graduate students and those in professional schools such as medicine face additional challenges related to the intensive curriculum, heightened competition, and having to support a family whilst studying.[8]

The disparity between demand and current student mental health resources has reached a tipping point. Dissatisfaction with the status quo has been expressed, highlighting a lack of student consultation in service development, inequities between programs and institutions, access barriers and gaps in services, and a need for a more complete range of responsive and evidence-informed mental health services.[9] Community-based care is not designed to meet the needs of the university students; typically a transient population who experience unique stressors during a contracted period of intensive study and often struggle with symptoms that fall short of inclusion criteria for specialty programs.

The status quo

Several authoritative reports detailing the current state of student mental health services have made common observations: (i) academic success depends upon mental health, (ii) demand for mental health services is exceeding capacity, (iii) complexity of student

mental health need is increasing, (iv) current mental health care resources are fragmented, and (iv) models of service delivery vary between institutions and none have been systematically evaluated.[8,10] Notwithstanding, there is debate about the role the university should play in ensuring that accessible and effective student mental health services are in place to support the spectrum of mental health need.

The way forward

Effective reform will likely mean re-organizing and strengthening existing services and developing new campus-based resources and facilitated pathways to community-based care. Rationalizing services along the lines of a modified stepped care approach tailored to the university environment and student population has immediate appeal. This would reduce the risk of delay in accessing specialty treatment for the smaller but substantial number of students with emerging mental illness, while appropriately directing the larger number of help-seeking students with transient situational problems and uncomplicated symptoms to appropriate campus-based resources. Such a model (Figure 1) could be modified to suit local environments. The success of this approach is predicated on an accessible clinical triage framework at point of first contact staffed by experienced mental health clinicians, effectiveness of the interventions provided, and actively facilitated transitions to different levels of care when clinically indicated (i.e. stepping up or down as appropriate).

While there are important roles and obligations that rest with multiple stakeholders and agencies, we argue that the university must take the lead in developing an integrated and coordinated system of student mental health services linked to academic supervision. The following principles should guide this development:

(i) accessible, proactive, evidence-based, culturally competent, and developmentally appropriate services
(i) effective and engaging clinical triage at point of first contact
(ii) facilitated transitions between campus and community-based services
(iii) outcome and quality indicators embedded in routine care
(iv) development of standards of care and fitness to study guidelines
(v) integrated research to inform the development of services moving forward

Summary Remarks

Higher educational attainment is a major social determinant of individual and societal prosperity and is predicated on mental health and well-being.[1] It is our collective view that universities have an obligation and major incentives to lead engagement with providers and commissioners to ensure that appropriate resources are in place to effectively support the sizeable number of students in need – from developing resiliency and academic support resources to crisis intervention to timely and effective care for students with emergent mental illness.

Figure 1

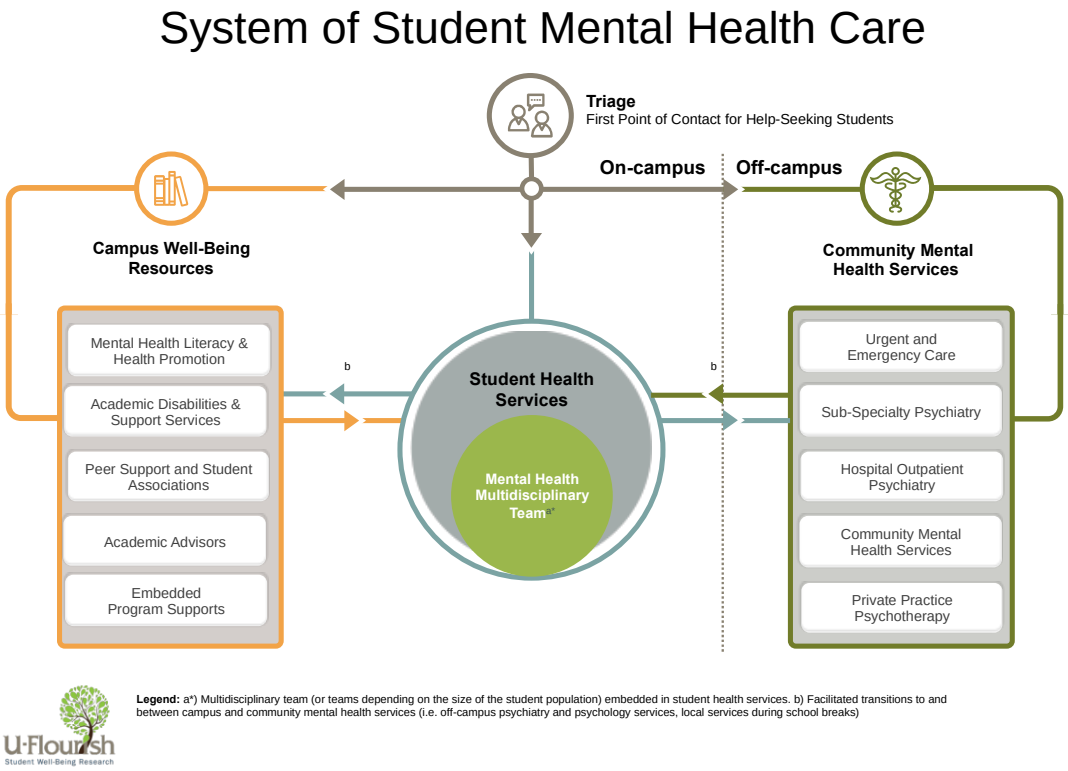

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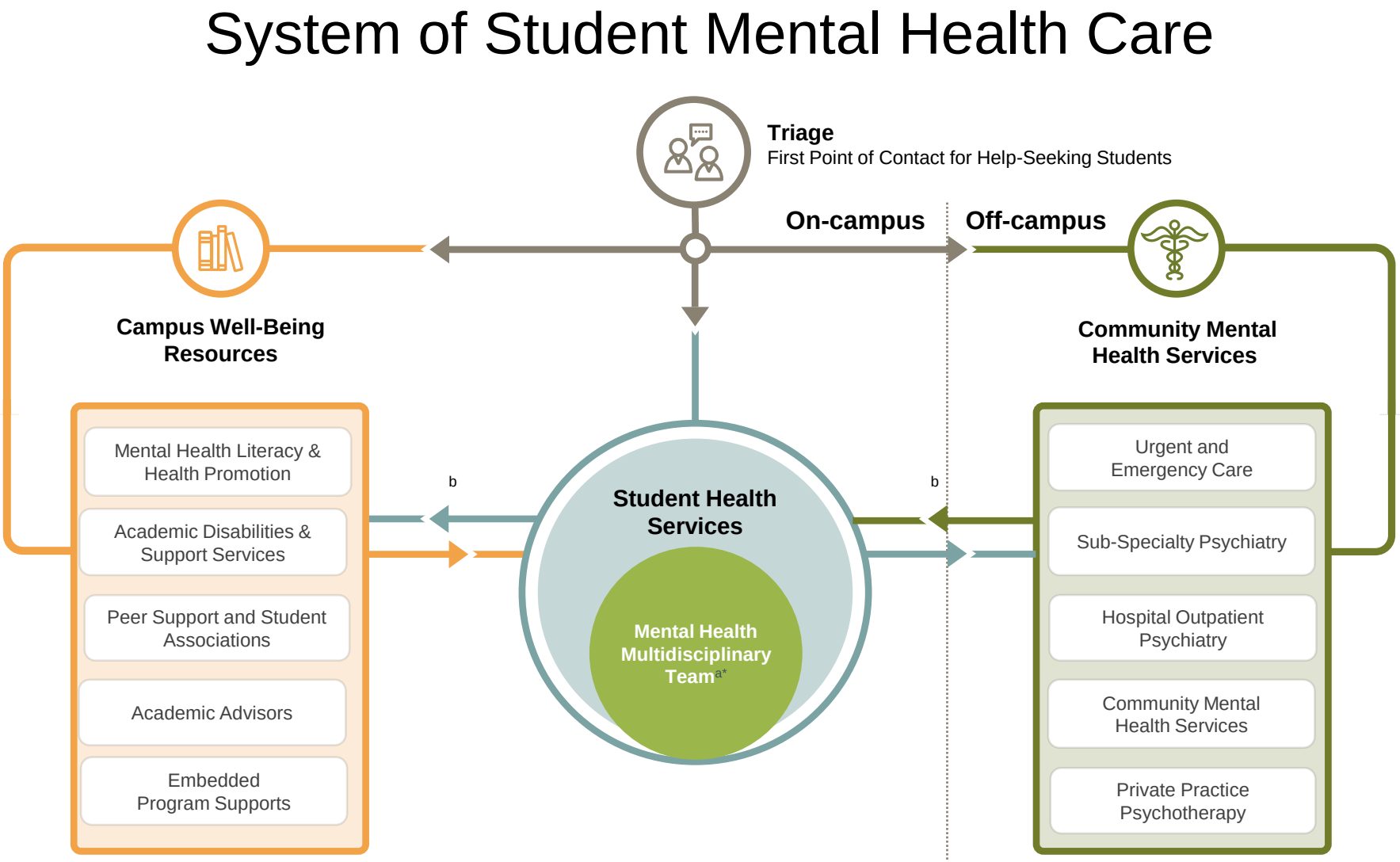
Figure



Legend: a*) Multidisciplinary team (or teams depending on the size of the student population) embedded in student health services. b) Facilitated transitions to and between campus and community mental health services (i.e. off-campus psychiatry and psychology services, local services during school breaks)

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Reply to Reviewer Comments (Personal View)

In regard to our prior submitted *Personal View*, several reviewers noted the importance of the topic and the current high level of interest in university student mental health. While some discussed a need for a systematic review, others noted the lack of available evidence and large gray literature rendering a systematic review premature.

In western countries such as the UK and Canada, there is current debate about the role of the university has to play in developing responsive and effective mental health resources and care pathways for students in need. In this revised manuscript now submitted as an invited *Comment*, we outline the background and scope of the problem and justify our collective view on the importance of the university taking up a lead role in the development of coordinated and rationalized student mental health services moving forward. As pointed out by reviewers we stress this model is adaptable to local realities and addresses all levels of support needed - from mental health literacy and academic counseling to crisis intervention to emergent mental illness.

Thank you for considering what we feel to be a timely Comment on an evolving situation.

yt anne duffy

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Authors' contributions
All authors have contributed to the writing of this manuscript. All authors have reviewed and approved the final submitted version. There were no professional writers involved in this submission. The submission is original and had not been submitted or reviewed elsewhere.

Conflict of interest statements

There is no conflict of interest for any author involved in this manuscript. Potential conflicts outside of the scope of this manuscript are reflected in each author's COI Form submitted.

Role of funding source

The U-Fourish student well-being research project cited in this manuscript was funded through a competitive operating grant from the Canadian Institutes of Health Research (CIHR) with matching funds from the Rossy Family Foundation. The Flourish Canadian high-risk offspring study cited was funded by a competitive operating grant from CIHR.

Ethics committee approval

The U-Flourish student well-being study was approved by the Queen's University Health Sciences Research Ethics Board (HSREB) and the Flourish high-risk study was approved by both the HSREB and by the local Ottawa Independent Research Ethics Board.

Abstract

Background

The university student population represents a significant proportion of the emergent adult population. The transition to university coincides with the peak period of risk for onset of mental illness and university students are exposed to a number of major risk factors. At the same time, higher education depends upon mental health and is a major determinant of individual and societal growth and development.

Methods

In this Personal View as a multinational, multidisciplinary, collaborative group comprised of university students, clinicians, university administrators and researchers, we outline the scope of need and the current state of student mental health care globally.

Outcome

The prevalence of mental illness in university students is high, while treatment rates are exceedingly low. At the same time, student demand for support for a broad spectrum of mental health problems is threatening to overwhelm resources. Mental health literacy and anti-stigma efforts will fail if not supported by an effective system of care. Community-based services are not organized to respond to the unique needs of university students, which require services to be proactive, expeditious and preventive in nature.

Interpretation

Universities have an obligation and incentives to ensure that appropriate resources are in place to engage and effectively support the sizeable number of students in need of mental health care. We propose a model for a rationale and integrated system of student mental health care to guide development of services moving forward.

Funding

Funding for the U-Flourish university student well-being research cited was provided by a competitive operating grant from the Canadian Institutes of Health Research with

matching funds from the Rossy Family Foundation (15703). The Flourish Canadian longitudinal high-risk research cited was funded by a competitive operating grant from the Canadian Institutes of Health Research (PJT 152976).

Introduction

The transition to university coincides with a critical period in biological, psychological and social development.[1] Young people during this time are tasked with individuating, developing new social relationships, and taking on increased responsibility for lifestyle choices and self-regulation.[2,3] At the same time, the brain having undergone accelerated growth is consolidating functionally, and is heightened in sensitivity to risk exposures commonly encountered by university students such as stress, recreational drugs, alcohol, and sleep problems.[2,4,5] Further cross-sectional and prospective studies have shown that serious and persistent mental illness typically emerges during childhood and adolescence.[6-9] It is estimated that 75% of all mental disorders onset by the mid-twenties[10] and there is a substantial delay between illness onset and first treatment contact.[10-15] This delay is critical because untreated or inadequately treated mental illness is associated with progression to more complex disorders school drop-out,[16,17] addiction, treatment refractoriness, and self-harm.[1,7,18,19] Globally, mental illness accounts for significant morbidity and mortality in individuals aged 15-24 years;[6,18,20] with suicide being second leading cause of death in this age group.[21,22] Taken together, the transition to university life coincides with a high-risk period for maladaptive coping with stress, academic failure and onset of enduring mental illness, but at the same time represents an important window of opportunity for prevention and targeted intervention.[23,24] This article highlights the need for universities to take the lead in developing an integrated system of evidence-based student mental health care.

In high-income countries, approximately 50% of high school graduates attend tertiary education, with universities showing a trend toward increasing enrolment, younger age at entry and increasing admittance of international students.[25-28] Therefore, the university population no longer represents an elite homogeneous and privileged demographic, but rather resembles a diverse emergent adult population.[26,27,29] Mental illness in university students is associated with failure to complete studies and underemployment.[16,30,31] While estimates vary, findings from a meta-analysis,[32] recent WHO World Mental Health (WHM) Survey[17] and the International College Student (WHM-ICS) Survey[33] report lifetime and 12-month prevalence rates of psychiatric disorders in university students comparable or greater to that of the age-matched general population.[6,8] The WHO WMH Survey study reported a 20.3% 12-month prevalence rate of psychiatric illness in postsecondary students across 21 countries,[17] with anxiety disorders the most common class of disorder followed by mood and substance use disorders. The majority of mental disorders had a pre-matriculation onset with the exception of alcohol abuse or dependence, which tended to onset after entry to tertiary education. A recent systematic review focused on psychopathology in medical students reported a summary prevalence of 27.2% for depression and depressive symptoms and 11% for suicidal ideation.[34] These findings align with self-report cross-sectional data from the UK[29] and Canada,[35,36] and are consistent with the nationally representative Canadian Health Behaviour in School-Aged

Children Study showing that the majority of mental health problems emerge in adolescence and have a substantial negative impact in early adulthood.[37]

Globally, despite relatively stable rates of mental illness over time,[8,10] universities have experienced a significant increase in demand for student mental health services that far exceeds the moderate annual increase in enrolment.[38,39] A number of factors appear to be contributing to this trend. Firstly, universities have invested in multiple initiatives to increase awareness of mental health "problems" and "issues" and to decrease stigma.[38-40] However, there has been no systematic development of an evidence-informed mental health literacy program to help students and university staff differentiate between normative stress, transient or situational distress, and the symptoms of emerging mental illness.[41,42]

University students experience multiple stressors at a vulnerable time of life that can negatively affect their well-being and quality of life such as problems with social relationships, loneliness, academic demands and financial worries.[43-45] Yet a substantial proportion of students have vulnerable or underdeveloped coping strategies with which to manage stress,[46] regulate sleep and behavior, and make healthy choices.[2,3] Graduate students and those in professional schools such as medicine may experience unique stressors including those related to the curriculum, heightened competition and academic expectations, and different developmental challenges such as supporting a family.[29,34,47] Students with demographic characteristics that differentiate them from the mainstream may also be at higher risk of feeling that they do not belong (i.e. international or indigenous students, social economic disadvantage or from rural communities).[42,43]

Yet, while the number of students seeking help for a wide variety of mental health related problems has risen dramatically, the majority of students meeting criteria for a mental illness do not appear to be accessing treatment.[17,48] On average only 16.4% of undergraduate students with a 12-month mental disorder received minimally adequate treatment[17] and only 15.7% of medical students who screened positive for depression reported seeking treatment.[34]

The disparity between demand for and currently available student mental health resources has reached a tipping point.[39,40,42] Students and faculty have expressed dissatisfaction with the status quo, highlighting a lack of student consultation in service development, inequities between programs and colleges, barriers to access and gaps in care, and calling for improved access to a more complete range of student friendly and evidence-informed mental health care services.[41,49-51] This call for student mental health care reform coincides with a major shift in focus in the community from chronic care to prevention and intervening earlier.[23,24,52] The shift is based on evidence that serious and enduring psychiatric illness typically manifests as sub-threshold but clinically significant (impairing and/or distressing) symptoms that progresses to syndrome level psychopathology[53] which recurs or persists lifelong, and if left untreated can progress to more complicated and refractory disorders.[24,54,55] However, community-based care resources are not designed to meet the needs of the university student population, who typically live in a micro-community on or near campus, experience unique stressors

during a contracted period of intensive study, and often manifest clinically significant symptoms that fall short of inclusion criteria for specialty community-based programs. Further, university students are a transient population with learning exchanges and study breaks spent in different locations. Therefore to achieve effective and prompt treatment for university students manifesting emergent mental illness, a new system of mental health care responsive to the unique needs of this sizeable population must be developed.

The current state of university mental health care services

Models of university mental health services have developed over the past 50 years, beginning as short-term academic and mental health counseling services often from various theoretical rather than evidence-based approaches and independent from other campus and community-based health and mental health services. Over the past decade there has been a shift towards integration of academic, health and mental health student support services.[38,40] However, student mental health care varies significantly across institutions in organization, level of integration and resourcing, in part reflecting the absence of an evidence-based model guiding the development and a lack of universal benchmarks for informing standards of care. Furthermore, there is no publicly available information about the outcomes of current student mental health services and most do not have quality indicators embedded in routine care. Therefore, it is currently not possible to evaluate treatment outcomes adequately, assess barriers and gaps, compare between institutions or rely upon evidence to inform service development. There is a lack of consistency around approaches to determine and monitor the mental fitness of students to continue or return to studies having taken medical leave.[56] Several regional and national reports detailing the current state of student mental health services have made common observations including: (i) the demand for student mental health care is exceeding capacity, (ii) the complexity of student mental health need appears to be increasing, (iii) current mental health care resources are fragmented with major gaps and barriers to access, and that (iv) institutions vary as to the model of mental health delivery and have not been systematically evaluated or compared.[38,39,42,57]

In many higher education institutions, investment in student mental health has focused on fostering a wellness culture on campus through a number of often short-term mental health awareness, prevention and stigma reduction initiatives.[39,40,58,59] However, many of these interventions have not been rigorously studied or adequately designed to test the outcome of interest, and have largely ignored organizational sources of stress.[47,59] Moreover, a university mental health literacy program, a foundation for mental health promotion, prevention and health decision-making[60,61] encompassing aspects of recognition, appraisal and knowledge,[62] has not been developed. Evidence suggests that students are able to recognize clinically significant symptoms of mental illness but not more subtle indicators, and tend to be reactive rather than proactive in help-seeking.[63] Furthermore, a lack of knowledge about what resources are available and how to access these are identified as barriers to care, while friends and family are important facilitators to care access.[63] However, mental health literacy and stigma reduction efforts can fail if there is no responsive effective system of care in place. If resources are already overwhelmed and poorly targeted at those in need, these initiatives may not change and could worsen outcomes for students.

The pressing issue facing universities is how best to respond to the substantial demand for an accessible, effective and engaging system of mental health care for help-seeking students with variable needs. Based on the evidence, it is likely that effective reform will mean not only re-organizing and strengthening existing services but also developing new services and facilitated pathways to care including stepped care models. While the responsibility for provision of student mental health care has usually been placed with local community services and responsible government agencies,[64] *we argue that the university itself must take the lead in developing a cohesive and evidence informed model of student mental health care with facilitated transitions to, and through, a well-defined system of campus and community-based services that are clearly linked to academic supervision*.

What is the evidence that can inform the development of student mental health care?
Multiple reports addressing current and future directions in student mental health care reference the importance of implementing a plan of rationalized and coordinated care.[29,38-40] At present, in many places help-seeking students are not systematically triaged at point of first contact for a mental health concern. The "stepped care" model (Supplemental Figure 1S) of service has been successfully implemented broadly across the UK and Australia with the aim to appropriately match the intensity of treatment to the clinical need.[65,66] Success of the stepped care approach relies on the assumption that: (i) the level of care an individual receives is based on an accurate assessment of need, (ii) professionals delivering care at any given step have the requisite level of training and expertise, (iii) the steps or levels of care are proven or evidence-informed, and (iv) there is facilitated transition between levels of care as indicated by clinical need.[65]

The Improving Access to Psychological Therapies (IAPT) program in the UK has demonstrated the effectiveness of implementing these principles by providing a national standard of evidence-based psychological treatment for anxiety and depressive disorders aligned with the stepped-care guidelines issued by the National Institute for Health and Care Excellence (NICE).[67,68] Not only has this initiative provided data to gauge the effectiveness of this care program in real world community settings, but also evidence that the way in which psychological services are implemented has important effects on outcomes.[67] Services that were better able to define the problem they were treating, more treatment oriented and provided a higher number of treatment sessions had better clinical outcomes. Whereas, wait times from referral to start of treatment and percentage of missed appointments were negatively associated with clinical outcomes.

Implementing and evaluating a modified stepped care approach tailored to the university environment and student population has immediate appeal. This approach would improve access from the very first contact to an appropriate level of intervention, addressing the observed increase in variety and complexity of presentations of help-seeking students. The model would reduce the risk of delay in accessing specialty treatment for the smaller but substantial number of students with serious emerging mental illness, while appropriately directing the larger number of help-seeking students with transient situational problems and uncomplicated psychopathology to an appropriate campus-based

resource or service. Further, the model could be operationalized to suit local environments and available resources. The effectiveness of this approach is predicated on an accurate and timely triage assessment at the first point of contact, effectiveness of the interventions provided, and actively facilitated transitions to different levels of care when clinically indicated (i.e. stepping up or down as appropriate).

Effective triage is a crucial aspect of a stepped care approach. Triage requires experience in assessing risk, severity and trajectory of psychopathology based on a standardized assessment and supervised by a qualified clinician. Unlike mass screening, triage can be sensitive enough to detect clinically significant sub-threshold symptoms and identify those at high-risk of developing serious and persistent mental illness. Triage has been successful in emergency medicine and more recently adapted and implemented for mental health care in both Australia and the UK.[69,70] Reported benefits of mental health triage include improved access, reduced wait-times, reduction in inappropriate service use, and improved targeting of high-intensity services for those in need. The United Kingdom Mental Health Triage Guidelines[71] define several roles of triage clinicians which include (i) screening and referral; (ii) linking those not requiring mental health care to other appropriate resources and services (i.e. academic advisors, learning accessibility services, health services); providing general support and advice after hours; and (iii) managing demand for mental health resources through effective prioritizing of resources. It is likely that a form of mental health triage could be adapted for the tertiary student population and implemented successfully in the university setting.

Proposed model of student mental health

Given the evidence, the following core principles should guide the development of a coordinated system of university student mental health care:

(i) an effective system of student mental health care will optimize educational and longer-term occupational achievement
(ii) mental health considerations should be integrated at the system level including in the curriculum in higher education institutions
(iii) mental health resources and services need to be accessible, engaging, evidence-based, culturally competent and developmentally appropriate
(i) a university mental health literacy program encompassing mental health awareness, appraisal of symptoms and knowledge of resources is needed
(ii) an expert, effective and responsive triage system at point of first contact should be implemented to match clinical need with appropriate level of care
(iii) universal and targeted mental health initiatives should be evidence-based and delivered by appropriately educated and adequately trained staff
(iv) an integrated system of mental health care requires facilitated/expedited transitions to, through and between campus and community-based services
(v) outcome and quality of care indicators should be embedded in routine clinical care across all levels and regularly monitored
(vi) evidence-based guidelines should be developed to assist with standard of care benchmarks and fitness to study guidelines

(vii) research should be an integrated component of the care system to inform and evaluate the development of resources and services moving forward

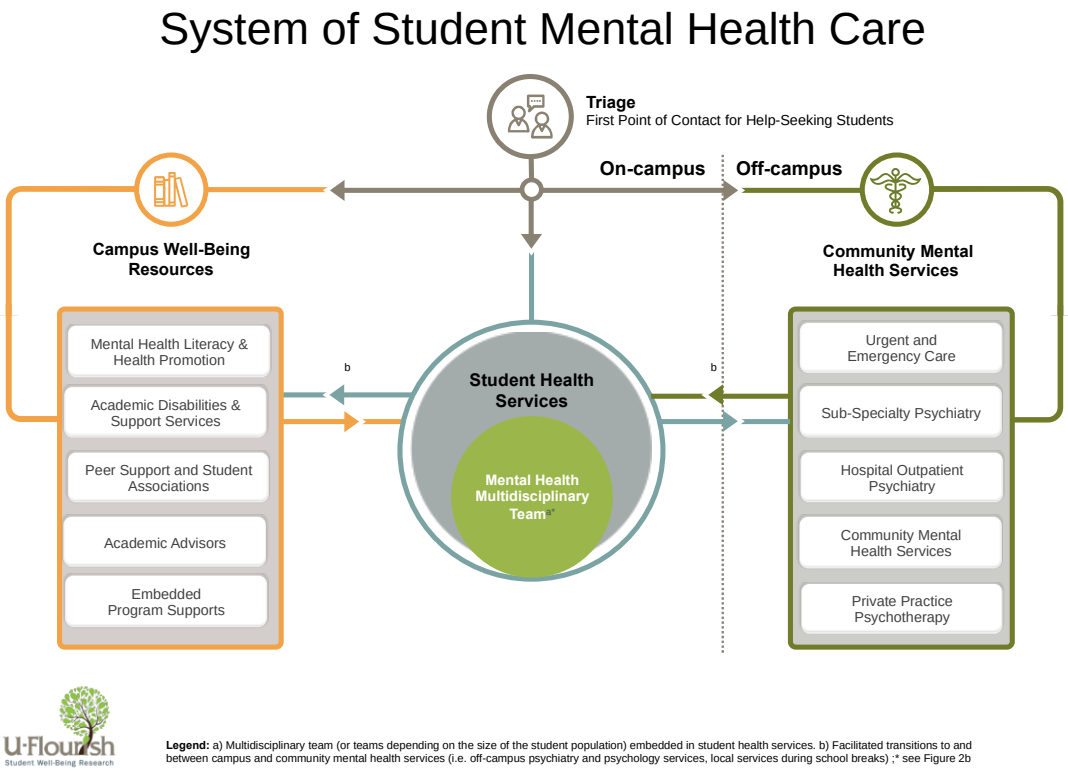
Help seeking students will inevitably vary significantly with respect to the nature and severity of their presenting mental health problems - ranging from difficulties with healthy coping, situational and transient distress (e.g. social isolation, relationship discord, academic challenges, self-regulation and time management issues) to sub-threshold clinically significant symptoms (e.g. anxiety, mood, sleep, substance misuse) and relatively uncomplicated clinical syndromes (e.g. anxiety disorders, major depression, alcohol abuse) through to more serious and urgent clinical presentations (i.e. suicidal/self-harm behaviour, first episode psychosis, mania, addiction).

Some problems can be addressed using low-intensity short-term supportive and educational interventions provided by wellness counselors, occupational therapists and academic advisors, while other clinical presentations may require treatment in an enhanced primary care setting on campus – the community where students live and study. More serious, complicated presentations will likely require facilitated transition to subspecialty community-based psychiatric services. Partnerships and service agreements with local mental health and subspecialty programs are essential to a comprehensive and integrated system of student mental health care because access is a substantial barrier for students. Learning is concentrated into relatively short academic terms, putting ill students at high risk of academic failure and attrition. In addition, there is a well-recognized lack of coordination between adolescent and adult community mental health services that negatively affects university students who fall into this age-based service gap.[72,73] Moreover, students have to navigate unfamiliar services whilst studying away from home[73] and coordinate care while at home during school breaks.[29,38]

A proposed system of expedient and preventative student mental health care based on the above principles is illustrated in Figure 1, which could be adapted to fit the realities of different institutions and local communities. Central to the model is a youth friendly and engaging first contact interface, which would trigger an expert triage assessment accessible through a variety of means including on-campus health services walk-in, online through the health services website and via direct phone line. The model aligns with a stepped care approach in which students would be assessed by experienced mental health professionals (i.e. psychiatric nurse supported by a psychiatrist) and matched to evidence-informed levels of support or care ranging from low to high intensity. Low intensity or entry-level mental health resources might include online supported psychoeducational resources and short-term supportive counseling (individual or group). Students manifesting clinically significant symptoms and uncomplicated psychiatric syndromes would be triaged directly to a campus-based multidisciplinary integrated mental health care team (Supplementary Figure 2S) providing students with appropriate targeted interventions including psychotherapy (individual or group), and when appropriate medication. Students assessed to be at high-risk and/or manifesting serious or urgent psychiatric presentations would be immediately triaged or have a facilitated transfer to the appropriate community-based specialty or urgent care service. In some settings, it may be possible to organize partial integration with community specialty

programs (i.e. eating disorders, refractory anxiety and mood disorders, personality disorders, substance use disorders). That is, community-based specialists could provide consultation on campus to the student mental health care team on a regular basis. Such an arrangement would facilitate timely transfers to specialty care when needed and avoid gaps in care for those students with emergent mental illness who fall short of meeting inclusion criteria to a specialty service.

Figure 1



An actively supported research component integrated into the system of student mental health care is essential to inform the development of resources and services moving forward which also takes into account the local context. Evaluating transitions to care, mental health and academic outcomes and identifying barriers and gaps in care are critical to ensuring that the system is working. The effectiveness of universal mental illness prevention initiatives targeting university students and/or university organization at a system level requires more rigorous study in order to ensure the designs are robust and the intervention is having the desired effect.[47] The identification of high-risk student populations and the effectiveness of targeted early intervention and prevention efforts is a completely understudied area.[74] Moreover, there is a knowledge gap and unmet need to better understand the determinants of emotional well-being and academic success in the

diverse university student population both at the individual and at the organizational (systems) level.

Summary Remarks

Adolescence into early adulthood marks a critical period in psychosocial and biological development and sets the stage for one's life trajectory, while simultaneously creating a period of heightened risk for the onset of serious mental illness. Higher education is a major social determinant of not only individual health and prosperity, but the cultural and economic growth of society. The university student population is an important and substantive component of the emergent adult population and successful completion of academic goals for students relies upon health and emotional well-being. Unrecognized and untreated mental illness compromises academic achievement and is associated with development of persistent and more complex disorders, functional decline and suicide. Mental illness in university students is common, while treatment rates are extremely low. At the same time, the demand for support for a broad spectrum of mental health problems and needs is at an all time high, threatening to overwhelm resources. Mental health literacy and anti-stigma efforts will fail if not supported by an effective system of care. Community-based services are not adequately organized or resourced to respond to the unique needs of the university student population. Services geared to effectively help university students need to be more proactive, expeditious and preventive in nature. It is our collective view that universities have an obligation and incentives to ensure that appropriate resources are in place to engage and effectively support the sizeable number of students in need of mental health care.

Currently, there is limited reliable evidence to inform universities about how best to design, implement and evaluate a system of student mental health care. While we outline core principles important to guide the development of such a comprehensive plan, we also acknowledge that it is not the sole responsibility of universities to provide all levels of indicated mental health care for the increasingly complex student population. Health care providers, commissioners, professional bodies and other stakeholders will need to be involved. However, universities must take a leading role in developing a coordinated system of student mental health care.

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