Converging perspectives of providers and student users on extending a patient portal into a university-based mental health service: A qualitative study

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ABSTRACT

Background: Patient portals have the potential to increase access to mental health services. However, a lack of research is available to guide practices on extending patient portals into mental health services. This study explored stakeholder (student service users' and health providers') expectations and perceptions of extending patient portals into a New Zealand university-based mental health service.
Materials and methods: This qualitative study explored the perspectives of 17 students and staff members at a university-based health and counselling service on an Internet-based patient portal through a software demonstration, two focus groups and 13 interviews. Data were analyzed thematically.
Results: Staff and students perceived the patient portal as useful, easy to use and expected it to help make mental health care more accessible. Staff were most concerned with the portal's ability to support their triage processes and that it might enable students to 'counselor hop' (see multiple counselors). Staff recommended extension into services that do not require triage. Most students expected the portal to enhance patient-counselor contact and rapport, through continuity of care. Students were concerned with appointment waiting times, the stigmatization of poor mental health and their capacity to seek help. They considered the portal might assist with this. Students recommended extension into all services, including urgent appointments. After viewing findings from initial student and staff groups, staff concluded that extending a patient portal into their counseling services should be prioritized.
Conclusion: This research suggests that there is value in extending patient portals into mental health care, especially into low-risk services. Future research should explore opportunities to support triage and appointment-making processes for mental health services, via patient portals.

1. Introduction

The use of patient portals is becoming more pervasive globally, especially in the United States of America and New Zealand. In New Zealand, more than 472,894 service users were enrolled in patient portals across 509 general practices (primary care) in 2017 (Ministry of Health, 2018). Patient portals are a type of Internet-based personal health record that feature health information managed by the patient (Tang et al., 2006). This enables access to aspects of medical records kept about patients by their clinicians, which would otherwise be restricted to clinicians. Patient portals are increasingly being used to facilitate patient-provider correspondence and promote patient engagement in their own health care, by offering convenience in scheduling appointments, requesting repeat prescriptions, secure messaging and access to medical records and health information such as laboratory results (Ancker et al., 2011; Delbanco et al., 2012; Leveille et al., 2016; Nielsen et al., 2012). Consequently, a major benefit of patient portals is being available 24/7, outside of clinic opening hours. Upon opening of the clinic, administration staff can immediately respond to requests, including booking patients into their desired appointments. However, the timeliness of responding to requests and availability of functions depends on the goals and procedures of each practice and the patient portal software.

By leveraging preferred modes of health communication and

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information systems such as patient portals, providers may be able to make mental health services more accessible for young people. Currently, New Zealand presents the highest adolescent (15–19-year-olds) suicide rate in the Organization for Economic Co-operation and Development (UNICEF, 2017). Likewise, in a study with 5500 young New Zealanders aged 15 to 24 years, 17% reported feeling isolated (Kvalsvig, 2018). Research shows that distressed young people already seek help and support for their mental health problems online and using technologies (Utter et al., 2017). However, while many young people prefer to communicate with their providers through Internet-based technologies, the extension of patient portals into mental health and counseling services for young people has been limited (Deloitte, 2015; Salesforce, 2015). While reasons for this remain under-explored, the limited literature on patient portals in mental health care reinforces their potential benefit, including in routine monitoring (Myers, 2013; Turvey and Roberts, 2015).

More research is needed to fill gaps in the literature on patient portals in mental health care and to inform health practices on whether and how to extend patient portals into mental health and counseling services. This highlights a need for collaboration to determine whether and how portals could be extended appropriately, to maintain what Ho (2010) refers to as high tech, high touch—the balance between technology use and human interaction.

In this paper, we present a qualitative study that converges service user and health provider expectations on using patient portals in primary mental health contexts. Our objective is to explore stakeholder (student service users' and health providers') expectations and perceptions of extending patient portals into a New Zealand university-based mental health service. To our knowledge, this is the first study to examine extending patient portals in a primary mental healthcare service.

2. Materials and methods

2.1. Context

Staff members at the University Health and Counseling Service (UHCS) at the University of Auckland in New Zealand identified the potential of patient portals and were considering extending a patient portal into their mental health and counseling services. The UHCS is a campus-based service that provides subsidized general health and free counseling services, including counseling support, academic appointments such as for aegrotat (certificate excusing a student from sitting an exam due to illness), well-being groups, urgent appointments and self-help resources to students (University of Auckland, 2018). Although the UHCS provides both counseling and general health services, it is the service's policy that students must enroll in both services separately to be able to make appointments. Having purchased the Medtech (2018) ManageMyHealth patient portal for their health services, the UHCS was willing to lead other institutions in attempting to increase their student service users access to mental health and counseling services. They were uncertain, however, as to how to extend the portal, due to an absence of guidance in the literature on patient portals. The UHCS and Medtech gave the authors permission to name the organizations and ManageMyHealth portal.

The UHCS uses ManageMyHealth for booking general appointments with doctors and nurses, repeat prescriptions, filing and viewing diagnostic test results (including laboratory results and letters from specialists or hospitals) and messaging between patients and staff. This patient portal is one of the standard portals available to general practices in New Zealand. At the UHCS, staff typically respond to messages and prescription and appointments requests on the same working day or the following day, in the morning when the clinic is open. Students then receive email alerts that they have had their requests answered or information has been updated. Communications sent through the portal are more secure than regular emails, as they are encrypted and password-protected. Although the portal is not currently available for any

counseling services, some functions are used for mental health reasons, primarily obtaining repeat prescriptions for mental health medications. This portal offers many additional functions as students can also customize their profiles, view their health records, keep a journal and set and track goals. The open notes function is available on ManageMyHealth but was turned off by the UHCS. The portal is accessible via both desktop computer and mobile devices.

2.2. Methodology

We employed an Action Research (AR) approach, as we conducted this study in collaboration with the UHCS. AR is conducted collaboratively with stakeholders, rather than on them as participants (Reason and Rowan, 1981). Specifically, stakeholders work collaboratively with researchers in identifying the issue, co-designing the research, being involved in decision-making, owning the findings and deciding how to act on the findings (Carr and Kemmis, 1986; Meyer, 2000; Street, 2003; Zuber-Skerritt, 1982). AR was also deemed appropriate as findings are often more meaningful, relevant and have better real-life clinical applicability, as research aims to solve real-life issues and is orchestrated in partnership with key stakeholders (Meyer, 2000).

Apart from being participatory and collaborative, AR is issue and outcome-based and conducted in iterative cycles, until the issue has been resolved (Carr and Kemmis, 1986; Meyer, 2000; Street, 2003; Zuber-Skerritt, 1982). The cycles include identifying the issue, planning for action, taking action and evaluating action (Street, 2003). These cycles continue until the issue has been resolved.

In our study, the UHCS staff members had identified that there was little research and guidance on extending patient portals into counseling services and thus wanted the research to help them decide whether and how to extend the ManageMyHealth portal. Ultimately, the staff members decided upon the research topic with the researchers, helped write the interview schedule and worked with the researchers in facilitating the data collection, including recruiting participants (Carr and Kemmis, 1986; Meyer, 2000; Street, 2003; Zuber-Skerritt, 1982).

2.3. Sample, site and recruitment

In order to examine diverse perceptions and expectations of patient portal use in mental health services, it was critical that participants had some knowledge of the patient portal and mental health services. A maximum variation purposeful sampling technique was therefore used. Purposeful sampling is the act of recruiting participants based on their relevance to the research topic and also by common qualities they possess (Lewis and Ritchie, 2003). Maximum variation refers to the deliberate inclusion of a range of participants, regardless of whether their perceptions are positive or negative (Bryman, 2012; Creswell, 2013).

Student participants were recruited via posters that advertised the research. These were hung up in the UHCS practice waiting room and around three campuses at the University of Auckland. The UHCS practice manager who advertised the research via email recruited the staff participants.

The sample size for qualitative research depends on when saturation is met, and no new themes are evident in the data (Bryman, 2012). We met saturation at the 13th interview. Our sample consisted of 9 student service users and 8 UHCS staff members, with a total of 17 participants. At the time of the study, there were approximately 900 students enrolled in ManageMyHealth. The inclusion criteria for student participants were students who (1) were signed up to or familiar with the ManageMyHealth patient portal, and (2) had used any of the UHCS counseling services.

Restrictions were not placed on the inclusion criteria for UHCS staff members, which included administration staff, counselors, doctors and nurses. The inclusion of a range of staff members allowed for the exploration of diverse experiences and expectations for extension. This

was consistent with AR, as including a variety of stakeholders ensures that findings are clinically significant and allows for practical recommendations to be made (Carr and Kemmis, 1986; Meyer, 2000; Zuber-Skerritt, 1982).

Data were collected in quiet rooms at two campuses at the University of Auckland, including the university's clinical research center and the UHCS practice. These locations were convenient for participants, who did not incur travel time or related costs.

2.4. Data collection

Qualitative data were generated following a convergent data collection process, from focus groups, a software demonstration, and one-to-one in-person interviews. In convergent interviewing, data collection points such as interviews and focus groups are split into cycles. The first cycle begins with an unstructured interview schedule, which becomes increasingly focused and structured as cycles progress (Nair and Riege, 1995; Dick, 2017). This is because researchers analyze data upon the completion of cycles and add prompts or questions to the schedule (Nair and Riege, 1995; Dick, 2017). Subsequent prompts and questions are framed to challenge, refine or explore emerging concepts (Nair and Riege, 1995; Dick, 1990). The adjusted schedule is then employed in the following cycle (Dick, 2017). This cyclical and iterative process continues until convergence occurs on agreement/disagreement about concepts, problems or themes, at which point saturation is achieved (Bryman, 2012; Nair and Riege, 1995; Dick, 2017).

As agreed upon with the UHCS practice manager, we conducted interviews with staff and students, focus groups with staff and a software demonstration across five cycles. Cycle one consisted of a ManageMyHealth software demonstration with one staff member and a focus group with five staff members. The software was demonstrated through an interview format, whereby the staff member answered questions regarding the software's functionality and demonstrated the functions on a fictional patient. Cycle two consisted of four interviews with staff and students. Cycle three consisted of a further six interviews with staff and students. Lastly, cycle four consisted of three interviews with staff and students and cycle five of a final focus group with five staff members. In the last focus group, findings were presented to UHCS staff members and discussed. One of the researchers (NG) conducted the software demonstration, interviews and focus groups. The UHCS practice manager helped to facilitate the staff focus groups. Staff in the first focus group were also invited to participate in an interview in a later cycle, to provide more detailed information. The staff member who demonstrated the software also attended a focus group. In total, seven staff members participated in two data collection points, i.e. both focus groups or an interview and a focus group.

Participants in the first focus group answered two broad questions, which formed the foundation of the interview schedule (Box 1). More prompts and questions were added to this schedule in subsequent cycles. Topics included perspectives on the ManageMyHealth patient portal and experiences in using it, experiences in accessing the UHCS counseling services and expectations for using patient portals in mental health care. All data collection points ranged from 30 to 60 mins and were conducted by a researcher with experience in qualitative data collection. The software demonstration, interviews and focus groups were audio-recorded with the permission of participants and

transcribed verbatim.

2.5. Data analysis

Transcriptions were analyzed thematically, following the Braun and Clarke (2006) framework. We derived codes from the transcripts from each cycle of data collection. The codes were then collated and organized as potential themes, once data collection was complete. Discussion between the research team enabled for themes to be refined, defined and named. This ensured that findings are reliable and relatively objective, as a researcher's subjective interpretation may influence coding (Rao and Perry, 2003; Braun and Clarke, 2006; Lincoln and Guba, 1985). Lastly, themes were recorded in a chart, to demonstrate convergence and disagreement. Visually displaying data was essential for drawing and verifying conclusions (Braun and Clarke, 2006; Miles and Huberman, 1994).

3. Results

3.1. Participant demographics and patient portal use

Staff members were aged between 25 and 63 years and students 19–33 years. Undergraduate and postgraduate students were included. Fifteen participants identified as female and two as male. Students had used the ManageMyHealth patient portal from 4 days to 18 months, while administration staff, nurses and doctors had used the portal from 6 to 18 months. Of the 14 participants who used the portal, 92.9% (n = 13) accessed it through their computer, and only three students accessed it through a mobile device. Two students accessed it on both technologies (see Table 1).

3.2. Themes from thematic analysis

Fifteen themes emerged from the thematic analysis. These clustered in three main areas or categories: perceptions of the patient portal, considerations for successful extension into counseling services and opportunities regarding extension (Table 2).

3.3. Perceptions of the patient portal

3.3.1. Usefulness

Most participants described the portal as useful for general health reasons, including booking appointments more easily. Students also reported the portal as a convenient alternative to communicating with staff over the phone or in-person, as functions can be accessed anywhere, at any time. Participants expected the usefulness of the portal to transfer to the counseling services. Counselors suggested that it may be easier and more convenient for students to book counseling appointments through the portal.

> It would be useful for me because it's useful for the students…if the portal gives me one thing and that's for students to book real-time appointments, I'm willing to go for it. I think there's a lot of value in that.
>
> (Counselor)

Box 1

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Foundation interview questions

1. I am interested in any issues that might emerge when using patient portals in mental health or counseling services, such as booking appointments. Can you predict any issues?
2. What are the benefits, opportunities or advantages of using patient portals in mental health or counseling services?

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Table 1
Participant summary and patient portal use.

Participants	Gender (M/F)[a]	Time using the portal (months[b])	Device used to access the portal
Doctor	F	18	Computer
Administration	F	18	Computer
Counselor	M	p n/a	p n/a
Counselor	F	p n/a	p n/a
Counselor	F	p n/a	p n/a
Nurse	F	12	Computer
Nurse	F	8	Computer
Nurse	F	6	Computer
Student/patient	F	6	Mobile, computer
Student/patient	F	4 days	Computer
Student/patient	F	1 week	Computer
Student/patient	F	8	Computer
Student/patient	F	6	Mobile
Student/patient	F	10	Computer
Student/patient	F	5	Computer
Student/patient	F	18	Computer
Student/patient	M	6	Mobile, computer

Notes
ns = not specified.
p n/a = portal not available.
[a] M = male, F = female.
[b] Unless otherwise stated.

3.3.2. Ease-of-use

Staff were less likely than students to report ease-of-use, as the counseling team had no experience in using the portal. However, a counselor reported that 'it looks easy.' Nonetheless, participants described it as clear, easy to navigate, learn and remember to use, self-explanatory, effortless, simple and aesthetically pleasing:

> Everything's quite well laid out. When I was learning it, it was reasonably self-explanatory. I didn't need help to learn how to use it.
>
> (Student)

3.4. Considerations for successful extension into counseling services

3.4.1. Ability to triage

Although ManageMyHealth currently supports the health triage and appointment-booking system, staff, especially counselors, were concerned about the portal's ability to support triage of at-risk counseling students. Specific concerns included the portal not being able to triage urgent cases accurately, and therefore missing at-risk students. Likewise, students who were most organized or best at using the portal were expected to take up the appointments:

> We have a particular triage for identifying the most urgent and booking them in straight away, and if we opened up a portal to all, it might be that students who are the most organized or were the best at technology would get the appointments.
>
> (Counselor)

3.4.2. Software capabilities

Participants raised concerns about the software's capabilities. Staff wondered whether the software was capable of allowing for personalization and restrictions on which counseling appointments students could make because the criterion for booking appointments depends on the nature of the appointment.

Students reported minor frustrations regarding the software. These included not being able to upload defaults and preferences for their preferred campus and usual doctor and not having a personal identification number (PIN) to log in more quickly:

> It is a little bit of a pain to log into because every time you've got to put the full password in. Personally I'd find it easier if I'd had to do that the first time and after that just use like a pin.
>
> (Student)

3.4.3. Counselor hopping

Staff were concerned about counselor hopping, which may be enabled if students can book counseling appointments through the patient portal. Staff defined this as students making appointments with the next

Table 2
Topics raised during data collection.

Cycle	1					2				3						4			5				
Participants	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	4	16	17	7	2	3	11	5
Perceptions																							
1. Usefulness	X		X	X		X	X	X	X	X	X	X	X		X	X	X	X					
2. Ease-of-use						X		X	X	X	X	X	X	X	X	X	X	X					
Considerations																							
3. Ability to triage	X		X	X	X											X			X	X	X	X	X
4. Software capability/barriers			X	X		X				X		X	X				X	X	X	X	X	X	X
5. Counselor hopping	X		X	X	X											X			X	X	X		
6. Capacity to seek help							X			X		X		X	X	X	X	X					
7. Fragmented services							X		X			X	X				X		X	X			X
8. Waiting times						X	X		X	X	X	X	X				X						
9. The stigmatization of mental health							X	X				X	X			X	X	X					
Opportunities																							
10. Extension into low-risk services	X		X	X	X			X				X				X							
11. Extension into all services						X	X	X	X	X	X	X	X	X	X		X	X					
12. Patient-counselor contact	X		X	X		X	X		X	X	X	X	X	X	X	X	X	X					
13. Increased access and help seeking	X		X	X	X	X	X	X	X	X	X	X			X	X	X	X					
14. Aligns with students communication preferences			X	X		X	X	X	X	X					X	X	X	X					
15. Opening patient notes							X	X	X	X	X	X	X										

Notes:
X = indicates theme arose.
Half-shading indicates at least 50% of participants in round converged (agreed) on the issue.
Dark grey shading indicates full convergence within a cycle.
Participants: no shading = student service users/patients, grey = staff.

available counselor that is most convenient to them. The prospect of counselor hopping was concerning, as it could disrupt continuity of care and prevent rapport from being established.

> I think another issue is, on the medical side we call it "GP hopping" so they could counselor hop and book in to the next available counselor, instead of going to the same one.
>
> (Admin)

3.4.4. Capacity to seek help

Most students and some staff were concerned with students' capacity to seek help via the portal, due to a lack of awareness of the service and portal or distress. Students thought that a lack of awareness could particularly impact postgraduate, doctoral and international students. These students in particular may not know that they can access the UHCS and have to learn how to navigate the New Zealand healthcare system.

Participants agreed that students frequently struggle to make decisions as to when to see a counselor and may attribute mental health symptoms to physical health concerns, such as not being able to sleep. Students reported relying on help in identifying when to see a counselor, including referrals from a doctor or family, friends and partners encouraging them to book an appointment.

> Someone around me will notice. My boyfriend will be like "hey, you've been feeling really shit lately, or you seem unhappy at the moment." And I'll be like "hey, you're right—I should book an appointment."
>
> (Student)

3.4.5. Fragmented services

Participants reported fragmented services as the counseling and health services are kept separate. This concerned health staff as they could not make referrals to the counseling services or follow up their patients' care. Nurses especially expressed a desire for working more closely with counseling staff, so that they could provide more continuous care.

Students identified that the absence of the counseling services on the patient portal was further contributing to the fragmentation between the services.

> At the moment, there's two kinds of separate streams. There's the doctor, and then there's the counseling. Um, and considering like, they're in the same service, it would be helpful if they were linked better.
>
> (Student)

3.4.6. Waiting times

Participants reported that long waiting time perceptions might deter students from help-seeking via the patient portal. Students reported relying on other resources when waiting times exceeded one week. These included nurses, doctors, helplines and community mental health services.

Long waiting times were attributed to the current appointment-booking and triage system. According to staff, the first counseling appointment requires a more comprehensive triage process. Although the UHCS offers urgent-on-the-day appointments and appointments for non-urgent cases within two days, waiting times are longer if the appointment does not suit the student's schedule or if they are difficult to contact.

> Their aim is to get back to the person within two or three days. I think if you're anxious and stressed that would seem like a long time.
>
> (Nurse)

> Usually, they'll text me and try to find a time that works, which is

like three days of back and forth.

> (Student)

3.4.7. Stigmatization of poor mental health

Students and staff considered that the stigmatization of poor mental health in general might also create barriers to students seeking help through the portal. Participants identified that people do not like being emotional in public places and receiving help for poor mental health. Stigmatization was expected to affect students who had not previously experienced poor mental health, students who found it difficult to admit they were not perfect, and male students due to toxic masculinity.

> I've certainly noticed it in university students; people tend to be hyper-performers and certainly don't want to be seen falling flat or acquiring help … I also think that there is a lot of toxic masculinity related to men seeking help.
>
> (Student)

3.5. Opportunities regarding extension

3.5.1. Extension into low-risk counseling services, or extension into all counseling services

All participants saw potential in extending the portal into counseling services. Staff were more likely to suggest extending the patient portal into low-risk services. This includes collating mental health resources on the portal and allowing appointment-booking for students who do not require triage, such as well-being group registration or general therapy. Staff did not want to rely on the portal to triage at-risk or urgent students, as they thought in-person triage is more accurate.

> For counseling services, anything that is urgent or triaged, stick to the old service, because that's in-person and that's important when you're dealing with safety. Don't leave it to a machine. For general therapy or traditional counseling, the portal is necessary, with the feature of real-time booking.
>
> (Counselor)

All students and some staff reported an opportunity for extension into all counseling services, including for urgent appointments. Students believed the portal could support or automate the current triage process, which requires students to fill out a lengthy appointment request form. They envisioned a quick, survey-style form that would auto-populate sections such as demographic and contact details, based on the individual's profile on the portal. Students desired a form that is easy to fill out, as they found functioning difficult when they are distressed.

> I just think what level of ability you are to function at that moment, you know, when you are really highly anxious or stressed. Yea, I think I would create it almost like a Survey Monkey, to be honest. That kind of tick, tick, tick and moving on.
>
> (Student)

3.5.2. Patient-counselor contact

Contrary to the staff's belief that students would counselor hop, most students expected the portal to enable patient-counselor contact through continuity of care, including the ability to see the same counselor. Most participants thought it was important to see the same counselor with whom students had established rapport and who knows their history.

> I think that there was a lot of rapport, and interpersonal banter that went back and forth that carried between appointments and so a lot of trust was built up. Had I been handed over to someone else, I would have been in an awkward space from the outset again.
>
> (Student)

Staff identified the portal to be able to enhance contact as they could follow-up with their patients between appointments.

> When we get patients that you are very concerned about, we get in touch with them every couple of days or once a week, something like that, and keep in contact with them. And you can't always get hold of them over the phone, you can't always leave a message, and I think it'd be more straightforward to reach them over ManageMyHealth.
>
> (Nurse)

3.5.3. Increased access and help-seeking

Most participants considered that the patient portal might also increase earlier help-seeking behaviors and student engagement with counseling services. Counselors predicted an opportunity to disseminate information in a mass format through the portal, including information on the services available, contact numbers for helplines, and worksheets. Staff believed the portal could prevent adverse outcomes through easier appointment-booking processes.

> I think it'll improve access. Absolutely.
>
> (Nurse)

Students also expected the portal to increase access to the counseling services by normalizing mental health concerns. This is because being able to easily book appointments with counselors through the portal implies that seeing a counselor is the same as seeing a doctor or nurse.

> It'd just be a lot easier in general and feel less like, special circumstances…I think that would encourage more people to use the service and make it seem more of a health thing.
>
> (Student)

3.5.4. Aligns with students' communication preferences

Participants believed that the portal aligns with students' preferred mode of communication. Participants reported students to be ambivalent toward talking on the telephone and making appointments in-person due to inconvenience and feeling anxious. Instead, students prefer to communicate through emails, text messaging and patient portals. Staff recognized that accommodating students' preferences for communication over the portal was patient-driven and important for meeting their needs.

> People get quite anxious going on phones to get an appointment. I think it's really helpful to be able to fill it out online and definitely in-person is even harder. I think that people don't want to make themselves too vulnerable. They want to be able to do a step where they're comfortable in their own home, that first step.
>
> (Student)

3.5.5. Opening clinical notes

Some participants identified an opportunity to make health and counseling clinical consultation notes accessible on the portal. Nurses thought that open notes would help them triage, understand and care for their patients better. A nurse stated that they currently have to ask students about their mental health, which is not ideal:

> We don't have access to their notes so it's really difficult to know what's going on sometimes, without having to ask the patient and that's not ideal.
>
> (Nurse)

Students reported that accessing counseling notes could enhance their mental health self-management, similar to a care plan as the notes could remind them of the strategies they should work on. However, staff and students agreed that sensitive notes should be restricted to staff members and that counselors and students need to discuss the extent of the details released on counseling notes.

> Sometimes I come out of there [counseling appointment] and just forget what we've been trying to work on that week. So it'd be helpful just to have like notes written down so you can go back and check.
>
> (Student)

3.6. Outcome focus group summary

In the last focus group, findings were presented to staff to reflect upon. Staff concluded that four themes were most important—counselor hopping, software capability, the ability to triage, and fragmentation of services. While findings resolved staff concerns regarding counselor hopping, they identified the latter three as the most crucial considerations when extending patient portals into mental health services. Overall, staff concluded that the findings gave them some thoughtful information and, as there is a desire to extend patient portals into their counseling services, they would move extension up their priority list:

> I think this has given us some food for thought and what people's responses were and that it is something that people do want and would likely use. So it can move up our priority list.
>
> (Admin)

4. Discussion

This study found potential value in extending a patient portal into a mental health service. Participants perceived the portal as easy to use and useful, especially in managing their health needs. They expected these benefits to transfer to a mental health context. The main challenges described in this study included delivering patient-centered care, addressing complex barriers to mental health care and triage accuracy to maintain patient safety. While these findings are from a specific site and portal, they have implications for similar settings.

4.1. Patient-centered care

Participants expected various benefits when using the portal for mental health services, including increased access, enhanced patient-counselor contact and aligning with patients' communication preferences. This was identified by staff to be 'patient-driven' and is synonymous with a patient-centered model of care, including principles such as continuity of care, fast access to care, communication and clear information to support self-care (Institute of Medicine, 2001). Patient-centered care centralizes the patient by accommodating their preferences and removing the divide between services being accessed (Institute of Medicine, 2001).

Nurses and students identified another way to achieve a more patient-centered care model—opening clinical consultation notes. Making patient notes accessible to students and other healthcare staff not only promotes self-management but also improves the care received, as nurses can support mental healthcare staff (Delbanco et al., 2012; Zarcadoolas et al., 2013). The UHCS nurses believed that opening clinical notes would enable them to better care for distressed students, by following up with them and working more closely with the counselors to provide holistic care. This finding is supported by Mitchell's (2009) research on non-physicians already performing mental health-care roles and being willing to become even more involved. However, as between 1 and 8% of patients feel worried about seeing their health-related notes, the extent of the information released should be decided upon between patients and providers (Delbanco et al., 2012). This highlights that a one-size-fits-all approach is not always appropriate and further research is needed on whether open counseling notes may

cause distress or be beneficial in providing seamless care.

4.2. Complex barriers to mental health care

Participants identified a range of influential factors to successful extension of the patient portal into counseling services, which are reflected in the international literature on barriers to mental health care. These include the stigmatization of poor mental health, lack of awareness of services, inability to seek help and organizational issues, such as long waiting times and fragmented services (Boyd et al., 2007; Cummings and Kang, 2012; Kilian and Williamson, 2018; Leahy et al., 2015; McCann and Lubman, 2012; Salaheddin and Mason, 2016; Wilson and Deane, 2010). However, the expectation that distress could create barriers to portal use, in particular, was inconsistent with the literature on using technologies to seek help for mental health. According to Utter et al. (2017) young people accessing health information on the Internet was negatively associated with well-being and positively with depressive symptoms. Consequently, those who needed help more were indeed more likely to seek it. Our study did not examine actual behaviors, so it is unclear whether students could use the portal in times of distress.

Research also supports the comments made by the male student participant on toxic masculinity and traditional masculine ideals further creating barriers to help-seeking for men (Lynch et al., 2018; Möller-Leimkühler, 2002). O'Brien et al. (2005) explain that young men who are heavily influenced by hegemonic masculinity may be scared to expose their emotional vulnerabilities. Using language that minimizes distress, for example, may result in providers not being able to recognize that help is needed (McQueen and Henwood, 2002). This highlights the importance of considering a range of wider sociocultural barriers when implementing interventions that aim to improve access to mental health services. However, some students believed that extending the portal could shorten waiting times, increase their awareness of the services available to them and make accessing mental health care feel more '*normalized*.'

4.3. Triage accuracy and patient safety

Concerns by staff members regarding the portal's ability to triage at-risk students discouraged recommendations for extension into all mental health services. This is because health providers are held to a duty of safe care, which is dependent on accurate triage practices. According to the biomedical ethics principle of nonmaleficence, patient safety cannot be compromised, as no patient should be harmed (Beauchamp and Childress, 2009). Over-triage or the assignment of inaccurate urgency results in the patient being seen too quickly and delays wait times for other patients (Considine et al., 2004; Considine et al., 2000). In contrast, under-triage or the inaccurate assignment of lower levels of urgency leads to longer wait times for the patient (Considine et al., 2000). This raises safety concerns for under-triaged mental health patients with suicidal ideation or those at risk of self-harm (Clarke et al., 2006). Likewise, effects on triage accuracy, staff performance enhancement and patient outcomes are inconclusive in some decision support systems used to automate triage (Randell et al., 2007). Ultimately, it is crucial that health provider preferences are considered, as physicians' acceptance of patient portals may influence their uptake and use, as well as that of their patients (Ancker et al., 2011; Delbanco et al., 2012; Jung and Padman, 2014; Krist et al., 2014; Peacock et al., 2017; Vydra et al., 2015). Future research should explore opportunities to support safe triage and appointment making processes via patient portals.

4.4. Recommendations for extension

Consequently, some recommendations for extending the patient portal into counseling services can be made. Firstly, the patient portal should initially be extended into low-risk services that do not require patients to be triaged. This could include providing information and self-help resources on the portal, allowing well-being group registrations and appointment booking for aegrotat and routine counseling. Secondly, to increase awareness of the portal (and available services), practices should consider engaging in extensive marketing for the patient portal, including on relevant social media and in waiting rooms. Thirdly, upon extension, practices should provide training and technical support to staff. Lastly, patients' community and social support groups should be included in facilitating patient portal use. Friends, family and academic staff can help identify struggling individuals and assist them in seeking appropriate care. For specific university-based health services, academic, well-being and other support staff could refer students to information on the portal.

4.5. Strengths and limitations

Although participants were assured both verbally and in writing that their data would be anonymous, self-report and social desirability bias may have been present. For example, while students said they would not counselor hop, we cannot verify this, as our research did not examine actual behaviors regarding use of the patient portal. A second limitation is the context-specific nature of this exploratory study, which had mostly female participants and explored only one patient portal.

Nevertheless, the research findings may be clinically applicable as the study sought to solve a real-life issue, in a clinical context with a range of stakeholders who could be impacted by the study's outcome (Meyer, 2000; Street, 2003; Zuber-Skerritt, 1982). Examining diverse perceptions and opinions of various stakeholders was crucial because successful technology implementation depends on the efforts, acceptance and enthusiasm of providers and users with differing experiences and preferences (Meyer, 2000; Ochoa et al., 2017). The Manage-MyHealth patient portal is also available in India and the United States of America, so findings may be transferable beyond New Zealand.

5. Conclusion

To our knowledge, this is the first study that examines patient portals in university-based mental health and counseling services. It has highlighted that there is likely to be value in extending the patient portal into mental health and counseling services at the UHCS, with extension into low-risk services first recommended. The patient portal explored in our research has potential to increase access to primary mental health services by young people but warrants further investigation regarding actual use, including usability during times of distress (within ethical constraints). It is clear that further research and development are required to fully explore the potential of patient portals in mental health and counseling contexts. Research is required to explore the relevance of these findings for other sites, with differing patient portal software. As patient safety cannot be compromised, future research and development are needed to explore opportunities to support triage and appointment making processes for mental health and counseling services, via patient portals.

Contributors

NG, TF and KD contributed to designing the study, data analysis, and writing the paper. NG also collected the data and wrote the first draft of this paper.

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Ethics approval

The University of Auckland Human Participants Ethics Committee approved this study on the 3rd of May 2018 (Reference 021020).

Declaration of competing interest

None.

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