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ORIGINAL STUDY

Video telehealth to manage menopausal symptoms after cancer: a prospective study of clinicians and patient satisfaction

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Abstract

Objective: The aim of the study is to evaluate clinician and patient satisfaction with a novel video conferencing telehealth (VCT) service and barriers to use.

Methods: A prospective observational study (2018-2020) of a statewide VCT service using *healthdirect* was performed. Participants were clinicians and patients from the Menopausal Symptoms After Cancer service. Patients were cancer survivors aged 20 to 70 years referred to the Menopausal Symptoms After Cancer service to manage early menopause/menopausal symptoms or women at high inherited risk of cancer due to pathogenic gene variants, such as BRCA1/2 between September 2018 and May 2020. Data were analyzed descriptively. The main outcome measures for clinicians were clinician satisfaction and ease of use, duration of consultation, patient rapport and standard of care, and future intention to use VCT. Outcome measures for patients were reasons for choosing telehealth, preferred devices, ease of use, perceived benefits and standard of care, and future intention to use VCT.

Results: Data were available from 109 complete clinician surveys. Overall satisfaction was high (93%), but 32% reported technical difficulties and 42% found VCT distracting. Most reported that standard of care (91%), consultation duration (93%), and patient rapport (73%) were unaffected and 97% would use VCT again for patients not requiring examination. From 35 complete patient surveys, saving travel time and cost were the main reasons for choosing VCT (57%) and for convenience (31%). Most found the platform easy to use (83%) and were comfortable with the technology (83%) without technical difficulties (89%). All found the platform easier and less time consuming than in-person appointments. Most believed that the standard of care received was equivalent to an in-person consultation (94%), were satisfied with the consultation (97%), and would choose VCT again (97%).

Conclusions: Clinician and patient satisfaction with VCT was high and clinical standards were maintained. However, technical difficulties and distractions were common for clinicians despite training.

Key Words: Menopausal symptoms – Menopause – Telehealth (VCT) – Video conferencing.

Menopausal symptoms are one of the most common and troublesome consequences of cancer treatment in women.¹ The statewide Menopausal Symptoms After Cancer (MSAC) service was established in Victoria in 2010 to manage the growing population of women cancer survivors with troublesome hot flushes and night sweats, sexual dysfunction, mood, and sleep disturbance.^{2,3} Together with MSAC services

in Western Australia, this multidisciplinary model of care has promoted evidence-based practice, led the development of international guidelines, and advanced research in the safe and effective management of common symptoms in survivors of breast, gynecological, hematological, and colorectal cancer.^{1,3-11} Menopausal symptoms commonly cluster.¹² Therefore, to avoid patients visiting multiple specialists for common symptoms, the MSAC aims to manage these symptoms in one place. As symptoms may affect survivors of breast, gynecological, hematological, and colorectal cancer, the service provides care to symptomatic women across cancer types.¹¹

The service also cares for women at high risk of ovarian cancer considering risk-reducing bilateral salpingo-oophorectomy. These are services to discuss the noncancer consequences of risk-reducing bilateral salpingo-oophorectomy and make a plan for the management of menopausal symptoms after risk-reducing bilateral salpingo-oophorectomy.¹³⁻¹⁵

Clinical outcomes for rural and remote cancer patients are inferior across a range of outcome measures.¹⁶ Recognizing the

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TABLE 1. Clinician survey and results

Questions	Options, n (%)				
	Strongly agree	Agree	Disagree	Strongly disagree	Unsure
Overall, I am Satisfied with the quality of consultation provided via video call	50 (45.9)	51 (46.8)	7 (6.4)	0	1 (0.9)
I found the video call application easy to use	59 (54.1)	45 (41.3)	4 (3.7)	0	1 (0.9)
The technology distracted me from the consultation	10 (9.1)	36 (32.8)	18 (16.4)	41 (37.9)	4
The doctor-patient rapport was impaired by use of video call	4 (3.7)	7 (6.4)	34 (31.2)	46 (42.2)	18 (16.5)
I felt I delivered the same standard of care as I would have from a face-to-face consultation	53 (48.6)	46 (42.2)	6 (5.5)	1 (0.9)	3 (2.7)
I would choose to use video call again for patients that do not require examination	62 (57.3)	44 (40)	1 (0.9)	0	2 (1.8)

Table of results (including survey questions).

challenges in providing high-quality health care to rural and remote cancer patients, the SMARRT (Symptom Management, Rural and Remote with Telehealth) project was launched in 2018, funded by the Department of Health and Human Services, Victoria, to improve access to MSAC services for rural and remote cancer patients through videoconferencing telehealth (VCT). The intention was to codesign and develop the service with clinicians and patients with ongoing evaluation, clinician and administrator training in VCT, implementation of the service into clinical practice, and transitioning the service into routine clinical practice beyond the funding period.

The COVID-19 pandemic has required healthcare systems to rapidly rethink delivery of health care. Expanded use of telehealth has been one of the most rapid and dramatic of these changes.¹⁷ While VCT is offered in Australia across a range of clinical settings for many years, COVID-19 and changes to the Medical Benefits Schedule have resulted in a sharp increase in VCT consultations, a trend expected to continue in the future.¹⁷ Compared with other methods of telehealth (such as telephone), delivery of telehealth via video conferencing (VCT) is associated with greater patient satisfaction.¹⁸ The MSAC service was established and evaluated before COVID-19 and was the first VCT service for patients at this tertiary hospital. To evaluate patient and clinicians' satisfaction, a survey was developed and embedded in each consultation. The aim of this study was to report the survey responses from patients and clinicians to inform service improvement and the future design and implementation of VCT. Please find a condensed version of the survey included as part of the tables of results with both questions and responses added as a separate document.

METHODS

Survey questions were developed in consultation with patients and clinicians and from a literature review of studies reporting outcomes from telehealth. The Steering Committee of the Victorian Telehealth Specialist Initiative provided expert input and the survey also included mandatory questions required by the Department of Health and Human Services (DHHS). Video conferencing telehealth (VCT) was delivered via the *healthdirect* platform, a secure and comprehensive video consulting service freely available for tertiary health services in Australia (<https://www.healthdirect.gov.au/>). This platform was recommended by the DHHS as the preferred VCT application and was already in use across Victorian hospitals. The surveys were hosted on SurveyMonkey (Survey Monkey, Inc, Seattle, WA), using a web link generated at the end of each VCT consultation. Survey mon-

key was used because it was free, easy to use and one of the most widely used tools to collect online survey data internationally. Clinicians and patients were invited to complete the survey at the end of each VCT appointment. Patient consent was implied from their voluntary participation in the survey. The written information in the survey explained that their data may be used for publication. This project and survey met the National Health and Medical Research Council requirements for quality assurance and audit projects. It was endorsed by the research committee and the Human Research Ethics Committee of the institution. The clinician survey addressed satisfaction with the telehealth platform, whether the clinician found the application easy to use, technical difficulties encountered, rating of the technical quality of the service, whether they were distracted by the technology, whether the duration of the consultation differed from face-to-face consults, the perceived impact on doctor-patient rapport and standard of care delivered compared to a face-to-face consult, and whether they would choose to use telehealth again when clinical examination was not needed. The patient survey asked about patient choice of location and device for the consultation, reasons for choosing telehealth, ease of use of the platform and any technical difficulties encountered, perceived benefits of telehealth in comparison to in person appointments and their comfort communicating via VCT. Patients were also asked to evaluate the standard of care delivered by VCT, their overall satisfaction with the service and whether they would choose telehealth in the future.

Participants and setting

The setting was a statewide tertiary service in Victoria, Australia managing common symptoms in women cancer survivors include menopausal symptoms, mood and sleep disturbance and sexual dysfunction.^{3,11}

Participants were cancer survivors aged 20 to 70 years referred to the MSAC service to manage early menopause or menopausal symptoms or women at high inherited risk of cancer due to pathogenic gene variants such as BRCA1/2 between September 2018 and May 2020. Eligible patients were English speaking and met triage criteria for a telehealth consultation based on guidelines

TABLE 2. Clinician survey and results

Questions	Options, n (%)		
	Agree	Disagree	Unsure
Using video call takes longer than a face to face consult	6 (5.5)	101 (92.7)	2 (1.8)

TABLE 3. Clinician survey and results

Questions	Options, n (%)	
	Yes	No
Did you have any technical difficulties while providing a video consult?	35 (32.1)	74 (67.9)

developed by the lead clinician and project manager. The primary exclusion criteria were patients who declined telehealth and those requiring physical examination. The service is statewide, and the study included patients from rural and metropolitan areas in Victoria. The lead clinician for the SMARRT Project was a gynecologist based in MSAC clinic. Additional clinicians included gynecologists, endocrinologists and general practitioners working in MSAC who were trained in providing VCT using the *healthdirect* platform.

Analysis

All data from surveys completed by clinicians and patients after each VCT appointment over the study period were analyzed. Data from these responses were extracted from survey monkey and calculated as percentages to provide a descriptive analysis. All authors had access to the study results.

RESULTS

Complete survey responses were received from 144 of 316 consultations between October 2018 and May 2020, which was approximately 46% of the total number of consultations. The surveys were voluntary and were offered at the end of all consultations. Thus, no reasons were given by participants when they opted not to complete it. These included both first-use telemedicine visits and repeat consultations. Of these 144, 109 (76%) were from clinicians and 35 (24%) were from patients. The survey responses were anonymous, and therefore, issues were not specifically tailored to each specialty among the clinician responses.

Clinician survey results

(Refer to Tables 1 to 3 for survey questions and results in numbers and percentages)

Overall, clinicians were highly satisfied with the VCT program. All of the clinicians who participated in the survey were female. This was solely because all of the practitioners who were involved in this clinic were females. There was no selection bias for the practitioner's sex and if there were male practitioners, they too would have had the opportunity to participate in the survey. More than 90% agreed (46% strongly agreed) that they were satisfied with the quality of the consultation and almost all (95%) agreed (54% strongly agreed) that the VCT platform was easy to use. Technical

difficulties occurred in approximately one third of consultations (32%). This question in the survey asked to specify reasons where yes was answered which included patient problems with Internet access, calls dropping out, difficulties with audio and/or visual signals, system updates, and password problems. Approximately 54% of clinicians did not find the VCT technology distracting. There was no mention of the reasons as to why it was distracting as reasons were not asked to be specified in this and all other survey questions. In almost all cases (93%), clinicians reported that the duration of the VCT consultation was comparable with that of an in-person appointment and 73% disagreed (42% strongly disagreed) that the doctor-patient rapport was impaired by telehealth. On almost all occasions (91%), clinicians reported that they delivered the same standard of care compared with in-person consultations. In almost all cases (97%), clinicians agreed (57% strongly agreed) that they would choose VCT again for patients who did not require a physical examination. Most patients (78%) were rescheduled for VCT.

Patient survey results

(Refer to Tables 4 to 8 for survey questions and results in numbers and percentages)

Of the 35 patient responses, 24 lived in rural areas and 11 were from metropolitan Melbourne. Twenty seven of them (77%) were at home during the consultation with a small proportion at work (17%) or in their car (6%). The main reason for patients choosing VCT was to reduce travel time and cost (57%) and for convenience (31%). Patients used a range of devices to access VCT including 14 patients using a desktop or laptop computer (40%), 9 using an iPad (26%), and 12 using smart phones (34%). All but one found it easy to join the video call, and only 4 patients experienced technical difficulties during the consultation. Similar to the clinician survey question for technical difficulties, reasons were asked to be specified when answered yes, which was mainly poor Internet signal leading to calls dropping out. The 35 responses showed that all patients agreed or strongly agreed that VCT was easier and more convenient than in-person consultations. All patients also agreed or strongly agreed that they were comfortable communicating with their doctor through VCT and 33 of the 35 agreed or strongly agreed that their standard of care was unchanged compared with in person appointments. Overall patient satisfaction was high (34 of the 35 and almost all [97%] agreed or strongly agreed that they would choose a VCT appointment again).

DISCUSSION

There was an estimated 2,255% increase in the use of telehealth by tertiary hospitals in Victoria over a 6-week period at the

TABLE 4. Patient survey and results

Questions	Options, n (%)				
	Strongly agree	Agree	Disagree	Strongly disagree	Unsure
Joining the video call was easy for me	29 (82.9)	5 (14.3)	1 (2.9)	0	0
Video consultation made it easier for me to have a consultation compared with going to hospital	33 (94.3)	2 (5.7)	0	0	0
I felt my appointment by video call saved me travel time and was easier to fit in	34 (97.1)	1 (2.9)	0	0	0
I felt comfortable communicating with the doctor using telehealth	29 (82.9)	6 (17.1)	0	0	0
I felt I received the same standard of care as I would have from a face-to-face consultation	28 (80)	5 (14.3)	2 (5.7)	0	0
Overall, I am satisfied with the quality of the consultation provided via video	29 (82.9)	5 (14.3)	0	0	1 (2.9)
I will use video call again	32 (91.4)	2 (5.7)	0	0	1 (2.9)

TABLE 5. Patient survey and results

Questions	Options, <i>n</i> (%)	
	Yes	No
I had technical difficulties with my call	4 (11.4)	31 (88.6)

start of the COVID-19 pandemic.¹⁹ This evaluation of a statewide VCT service developed and implemented before COVID-19 provides clinical insight to the benefits and difficulties of VCT for both clinicians and patients and the impact on clinical care. Overall, most clinicians were satisfied with VCT and found the *healthdirect* platform easy to use. However, almost one third experienced technical difficulties despite a period of in-person training over several months during the implementation phase of the SMARRT program and provision of information resources to support VCT delivery. This contrasts with the rapid implementation of telehealth during the COVID-19 pandemic in Australia, which has required clinicians and patients to quickly adapt to new systems.¹⁹ The relatively high rates of technical difficulties reported in our study suggest that ongoing training and technical support are needed to facilitate effective implementation of novel VCT programs in tertiary care.²⁰ In addition, approximately 40% of clinician reported that new technology required for VCT distracted them during the consultation. This could potentially affect clinical rapport, although most clinicians did not consider that patient rapport was affected. Our findings are consistent with recent publications from newly expanded telehealth services in Australia¹⁹ that most clinicians believed they can deliver the same standard of care with telehealth. However, technical difficulties and distractions due to new technology indicate that VCT may impose additional stressors for clinicians, particularly those who are unfamiliar with this medium who have not had adequate opportunity for preparation and training.^{19,21} However, Medicare data demonstrate that the largest increase in telehealth consultations since the start of the pandemic has been in telephone consultations (96.2% of GP consults and 81.6% of specialist consults).²⁰ These are likely to require less new skills and training for clinicians but may be less popular with patients compared with VCT telehealth.¹⁸ Given the popularity with VCT, adequate time should be spent in training all new clinicians to familiarize themselves with the medium/VCT program. This can help with the reasonably high distractibility rates identified from this survey. Furthermore, another potential solution could be using “superusers” or trainers onsite who will be familiar with the program during the rollout of this new technology to assist clinicians who are unfamiliar with this medium.

Access and patient satisfaction are of growing concern in all aspects of health care.¹⁸ Reduced travel time and cost were the main reasons for patients choosing VCT consistent with previously

TABLE 6. Patient survey and results

Questions	Options, <i>n</i> (%)			
	Home	Work	Car	GP/local health service
Today I am Video calling from?	27 (77.1)	6 (17.1)	2 (5.7)	0

TABLE 7. Patient survey and results

Questions	Options, <i>n</i> (%)			
	Desktop/laptop	IPad	iPhone	Android Phone
What did you use to make the video call today?	14 (40)	9 (25.7)	5 (14.3)	7 (20)

published data.¹⁸ Most patients chose to use desktop/laptop computers or tablets for the consult, but approximately one third attended via smart phones. Our findings add to burgeoning evidence that new technologies, such as smart phones, provide greater flexibility and access to tertiary health services.²²

Our findings are consistent with previous surveys of VCT indicating that patients are highly satisfied with this approach to clinical care.^{18,23} Although the sample size was limited, patients reported lower rates of technical difficulties than clinicians in this study. This may reflect specific characteristics of patients who chose VCT in this study and may not be representative of other patient groups who are less familiar with this technology and have not specifically chosen to use telehealth.^{24,25} During the implementation phase for SMARRT, common reasons for eligible patients declining VCT included wishing to see the doctor in person and concerns about using the technology required (data not shown).

Almost all patients who completed the survey reported that VCT consultations had saved them travel time and was more convenient than in-person attendance. These findings are consistent with published data.^{18,23} Similarly, most patients were comfortable communicating via VCT and believed that their care was not compromised. Long-term management symptoms after cancer treatment is particularly well suited to telehealth since management focuses on optimizing quality of life with relatively few patients requiring physical examination. While we did not conduct a formal health economic evaluation, patients in this study reported an average cost saving of \$230 per telehealth appointment. In addition to financial cost savings, many patients commented that telehealth saved them the physical and mental burden of traveling to the hospital, a particular benefit for cancer patients who often have multiple appointments. This reported convenience and time saving reported by all women in this study using VCT compared with hospital visits has positive implications for health care access, adherence, and economic productivity.²⁶ Attending a hospital outpatient appointment generally takes several hours, and patients often need to take time off work and/or arrange childcare. Approximately one fifth of patients attended the VCT appointment from work and did not require specific time away from work to attend, likely translating into direct economic benefits for patients and employers. Although a formal mental health review was not conducted, anecdotally our patients reported

TABLE 8. Patient survey and results

Questions	Options, <i>n</i> (%)		
	Travel time reduction/cost	Convenience	Other
Why did you choose to have the video consultation?	20 (57)	11 (31)	4 (12)

that VCT mitigated anxiety associated with attending hospital outpatient appointments, consistent with recent evidence that telehealth can improve mental health and quality of life in women cancer survivors.²⁷ The SMARRT program has now been successfully implemented in the statewide MSAC service, but VCT continues to bring challenges and we do not yet have an effective approach to gynecological examination using telehealth.

Strengths of this study include the prospective design with data collected from both patients and clinicians before COVID-19. Relatively few previous studies have measured clinician satisfaction with telehealth, with most focusing exclusively on the patient experience.¹⁸ The patients were surveyed from rural and metropolitan areas and included a range of cancer diagnoses. Weaknesses include the relatively small sample size, particularly the patient group as well as the likely bias of those who elected to use telehealth and who completed the survey. It also would have been ideal to measure pre- and post-COVID data given the time frame; however, given the small sample size, this analysis was not performed. The survey was optional, and similarly, responses were anonymous, and therefore, the same clinicians and patients may have completed the survey more than once. In addition, given its anonymity, specific satisfaction levels or concerns across different specialists were not able to be measured. Furthermore, other than reasons for technical difficulties, which was a specific question within the survey, other reasons were not explored as to why clinicians found the technology distracting. Recent evidence suggests that telehealth reduces the proportion of patients who fail to attend hospital outpatients²⁸ but we did not specifically measure the effects of SMAART on failure to attend. Our survey questions were specifically developed for this project and have not been validated in clinician or patient populations.

Potential clinical value

“The known”

COVID-19 has increased the need for telehealth services. Several studies have measured patient satisfaction with telehealth, but few have also measured clinician satisfaction and barriers to use.

“The new”

Although clinician satisfaction with telehealth was high, almost one third experienced technical difficulties and more than 40% found the technology distracting.

“The implications”

There is a growing imperative to deliver health care remotely. Prospective data on the benefits and challenges of VCT are needed to inform future practice. Our findings suggest that although clinicians may welcome this innovation, they may also experience technical difficulties, which may impact the clinician patient relationship. However, both clinicians and patients reported high rates of satisfaction with this VCT service.

CONCLUSIONS

Most survey responses from clinicians and patients indicated high rates of satisfaction with VCT. Patients valued the convenience of this service and believed that their clinical care was not compromised. However, clinicians commonly reported technical

difficulties despite training, and some found the VCT technology distracting. Rapidly developing telehealth services should include ongoing evaluation to ensure that services address the needs of patients and provider, not just in Australia but also globally. The US hospitals currently have a high uptake (76%) of telehealth with either video or other technology, and therefore, the use of these evaluation services can ensure individual needs are met for both, patients and practitioners.

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