

Perception of Telehealth During the COVID-19 Pandemic Among Survivors of Gynecologic Cancer

Nicholas Quam¹, Ashley E. Stenzel^{1,2}, Katherine Brown¹, Patricia Jewett^{1,3}, Helen M. Parsons⁴, Jane Hui⁵, Rahel G. Ghebre¹, Anne Blaes³, Deanna Teoh¹, Rachel I. Vogel^{1,*}

¹Department of Obstetrics, Gynecology and Women's Health, Division of Gynecologic Oncology, University of Minnesota, Minneapolis, MN, USA

²Program in Health Disparities Research, Department of Family Medicine and Community Health, University of Minnesota, Minneapolis, MN, USA

³Division of Hematology, Oncology, and Transplantation, University of Minnesota, Minneapolis, MN, USA

⁴Division of Health Policy and Management, School of Public Health, University of Minnesota, Minneapolis, MN, USA

⁵Department of Surgery, University of Minnesota, Minneapolis, MN, USA

*Corresponding author: Rachel I. Vogel, PhD. Department of Obstetrics, Gynecology & Women's Health University of Minnesota 420 Delaware Street SE, MMC 395 Minneapolis, MN 55455, USA. Tel: +1 612 624 6928; Email: isak0023@umn.edu

Abstract

Our objective was to assess gynecologic cancer survivor preferences for telehealth cancer care. Gynecologic cancer survivors participating in a prospective cohort study were invited to complete a cross-sectional survey regarding their experience with and preferences for telehealth. Of 188 participants, 48.9% had undergone a telehealth visit since March 2020, and 53.7% reported a preference for exclusively in-person visits for their cancer care and surveillance. Furthermore, 80.5% of participants were satisfied with the telehealth care they received and 54.8% would recommend telehealth services to patients with similar conditions. Most participants thought a physical examination was critical to detecting recurrence, and concern that their provider may miss something during telehealth visits was greater among those who preferred in-person visits. With many gynecologic cancer survivors preferring in-person care, building a future care model that includes telehealth elements will require adaptations, careful evaluation of patient concerns, as well as patient education on telehealth.

Key words: gynecologic cancer; telehealth; cancer survivorship; cancer care delivery.

Introduction

Several studies have highlighted benefits of telehealth including convenience, decreased costs, and reduced perceived distress.^{1,2} However, telehealth was not widely adopted until the SARS-CoV-2 pandemic when organizations such as the Centers for Disease Control and Prevention and Society of Gynecologic Oncology recommended remote visits to minimize risk of infection for patients and providers.³ Some telehealth elements will likely be integrated into cancer care long term; but preferences of patients with cancer with regard to telehealth are unknown and may differ depending on individual clinical circumstances and change as social distancing becomes less urgent.⁴ We assessed patient perspectives on telehealth among gynecologic cancer survivors and explored factors associated with interest in continuation of telehealth in order to inform post-pandemic gynecologic cancer care. We hypothesized that patients with greater concerns about the pandemic or with a primary cancer with reliable tumor markers for progression/recurrence would have greater preference for telehealth whereas older patients, those without access to technology, and patients who view a physical exam as critical would prefer in-person visits.

Materials and Methods

This study recruited from the ongoing Gynecologic Oncology—Life after Diagnosis (GOLD) prospective cohort study which has been described elsewhere.⁵ Briefly, the GOLD study recruited individuals between 2017 and 2020 with gynecologic cancer treated at the University of Minnesota, aged 18 years or older, and able to read and write in English. Participant recruitment was closed in spring 2020 and the cohort was transitioned from longitudinal surveys to a cross-sectional design, with approximately biannual 1-time surveys on specific research questions. Of 457 total original GOLD participants, 316 were alive and invited in May 2021 to complete a cross-sectional survey (paper or online per participant preference) regarding telehealth use during the SARS-CoV-2 pandemic and preferences for gynecologic cancer care going forward. The telehealth-specific survey questions were adopted from the validated Service User Technology Acceptability Questionnaire,⁶ with additional items particular to gynecologic oncology care ([Supplementary Table S1](#)). A total of 199 (63.0%) participants completed the survey, with 188 providing sufficient data for this analysis.

The University of Minnesota Gynecologic Oncology clinics converted almost all survivorship visits to telehealth

Table 1. Participant characteristics.

Characteristic	n (%)*
Age at survey, years, median (range)	64.1 (32.7-91.4)
Time since gynecologic cancer diagnosis, years, median (range)	4.4 (1.4-23.8)
Race	
Non-Hispanic white	184 (98.4%)
Asian	2 (1.1%)
Black	1 (0.5%)
Partner status	
In a relationship	110 (62.2%)
Not in a relationship	67 (37.8%)
Education	
Less than college degree	100 (55.6%)
At least college degree	80 (44.4%)
Household annual income	
<\$50 000 per year	57 (32.0%)
\$50 000-99,999 per year	63 (35.4%)
≥\$100 000 per year	44 (24.7%)
Prefer not to say	14 (7.9%)
Primary cancer disease site	
Cervical	21 (11.2%)
Endometrial	84 (44.7%)
Ovarian	70 (37.2%)
Vaginal/vulvar	13 (6.9%)
Current treatment status	
Not currently receiving treatment	151 (80.8%)
Receiving initial treatment	2 (1.1%)
Receiving treatment for disease progression/recurrence	34 (18.2%)
Disease stage	
I	97 (52.4%)
II	24 (13.0%)
III	55 (29.7%)
IV	9 (4.9%)
Reliable transportation to clinic	
Yes	182 (96.8%)
No	6 (3.2%)
Access to telehealth via phone	
Somewhat or strongly agree	172 (93.0%)
Neutral	4 (2.2%)
Somewhat or strongly disagree	9 (4.9%)
Access to telehealth via video	
Somewhat or strongly agree	162 (88.0%)
Neutral	5 (2.7%)
Somewhat or strongly disagree	17 (9.2%)
Access to internet for telehealth video visits	
Somewhat or strongly agree	164 (88.7%)
Neutral	4 (2.2%)
Somewhat or strongly disagree	17 (9.2%)
Confident using technology for telehealth visits	
Somewhat or strongly agree	150 (82.9%)
Neutral	4 (2.2%)
Somewhat or strongly disagree	27 (14.9%)

Table 1. Continued

Characteristic	n (%)*
Preferred mode of oncology visits	
In person only	101 (53.7%)
Telehealth only	6 (3.2%)
Combined, but primarily in person	68 (36.2%)
Combined, but primarily telehealth	13 (6.9%)
In contact with oncology team since COVID-19 pandemic began	
No	45 (23.9%)
Yes	143 (76.1%)
Any telehealth visits since March 2020	
No	96 (51.1%)
Yes	92 (48.9%)

*Data expressed as n (%) unless otherwise indicated.

(telephone or video) starting March 2020. In-person visits were prioritized for patients with cervical and lower genital tract malignancies where physical examination was deemed imperative. All other patients were scheduled for telehealth, with exceptions at provider discretion based on patient and disease characteristics.

We described cohort characteristics, use of, preferences for, and satisfaction with telehealth visits, and perceived importance of a physical exam. We categorized participants into 2 groups based on their stated preferences for future gynecologic cancer care: those favoring an in-person-only care model versus those favoring telehealth alone or in combination with in-person care. We compared characteristics between these 2 groups using Chi-squared and Fischer’s exact tests.

Results

The median age of participants in this analysis was 64.1 years. Most participants self-identified as white, were not currently receiving cancer treatment, had access to reliable transportation and technology enabling telehealth, and felt confident in using telehealth technology (Table 1). Most (76.1%) reported contact with their gynecologic oncology provider since March 2020, and 48.9% reported ≥1 telehealth visit. Among those who used telehealth, 80.3% at least somewhat agreed they were satisfied with their experience and most agreed it saved time (75.7%) and was easier (61.4%) compared with in-person visits. Greater difficulty building a relationship with their provider (29.8%) was the most cited disadvantage of telehealth, while not having to travel (45.2%) and greater ease of scheduling around other obligations (30.3%) were frequently endorsed advantages.

A majority (53.7%; 39.1% among those with ≥1 telehealth visit versus 67.7% among those without any telehealth visits, $P < .0001$) preferred exclusively in-person visits for their cancer care and surveillance; few preferred telehealth exclusively (1.6% telephone, 1.6% video visits). Those who were younger (<65 years old), had used telehealth during the pandemic, or were on active treatment were more likely to consider continuing some telehealth in the future (Table 2). Over half (58.8%) of participants considered a physical examination critical to detecting recurrence. Concern their provider may miss something during telehealth visits was more common (43.9% vs 19.5%) among those who preferred in-person

Table 2. Factors influencing preference for telehealth or in-person visits for gynecologic oncology care.

Characteristic	In-person only (N = 101)	Telehealth ^a (N = 87)	P-value
Age category			.05
<65 years	45 (45.5%)	52 (59.8%)	
≥65 years	54 (54.5%)	35 (40.2%)	
Since March 2020, visits with oncology team have primarily been:			<.0001
Telehealth—video	7 (7.0%)	20 (23.3%)	
Telehealth—telephone	5 (5.0%)	18 (20.9%)	
In-person	71 (71.0%)	32 (37.2%)	
None planned since March 2020	17 (17.0%)	16 (18.6%)	
Any telehealth visits since March 2020			<.0001
No	65 (64.4%)	31 (35.6%)	
Yes	36 (35.6%)	56 (64.4%)	
Cancer site			.74
Cervical	12 (11.9%)	9 (10.3%)	
Endometrial	48 (47.5%)	36 (41.4%)	
Ovarian	34 (33.7%)	36 (41.4%)	
Vaginal/vulvar	7 (6.9%)	6 (6.9%)	
Current treatment status			.004
Not currently receiving treatment	88 (88%)	63 (72.4%)	
Receiving initial treatment	2 (2.0%)	0 (0.0%)	
Receiving treatment for disease progression/recurrence	10 (10.0%)	24 (27.6%)	
Has had tumor marker blood tests (ie, CA-125) since COVID-19 pandemic began			.05
No	64 (63.4%)	41 (47.1%)	
Yes	34 (33.7%)	39 (44.8%)	
Uncertain	3 (3.0%)	7 (8.1%)	
Any imaging tests for surveillance since March 2020			.02
No	76 (76.0%)	50 (57.5%)	
Yes	23 (23.0%)	34 (39.1%)	
Uncertain	1 (1.0%)	3 (3.4%)	
Concern for contracting COVID-19			.17
Not at all	35 (34.7%)	16 (18.4%)	
Slightly	31 (30.7%)	27 (31.0%)	
Somewhat	12 (11.9%)	18 (20.7%)	
Moderately	12 (11.9%)	14 (16.1%)	
Extremely	7 (6.9%)	7 (8.1%)	
Already had it	4 (4.0%)	5 (5.8%)	
Feel physical exam is critical for detecting recurrence			<.0001
Strongly agree	76 (76.0%)	34 (39.1%)	
Somewhat agree	15 (15.0%)	28 (32.2%)	
Neutral	6 (6.0%)	13 (14.9%)	
Somewhat disagree	1 (1.0%)	8 (9.2%)	
Strongly disagree	2 (2.0%)	4 (4.6%)	
Worry provider will miss something by telehealth			.01
Strongly agree	43 (43.9%)	17 (19.5%)	
Somewhat agree	24 (24.5%)	28 (32.2%)	
Neutral	19 (19.4%)	26 (29.9%)	
Somewhat disagree	3 (3.1%)	6 (6.9%)	
Strongly disagree	9 (9.2%)	10 (11.5%)	

^aTelehealth alone or in combination with in-person care.

visits only. Patients who had undergone imaging for cancer surveillance or monitoring of tumor markers (ie, CA-125) were more open to continuing telehealth visits as part of their

care going forward. Primary cancer site and concerns about contracting SARS-CoV-2 were not associated with preference for future visit modalities.

Discussion

Despite a high degree of technological access and acumen, many gynecologic cancer survivors in our study did not find telehealth visits an appropriate substitute to in-person visits, and about half preferred to have no telehealth care at all. Our data suggest that inherent limitations of telemedicine (eg, inability to perform a pelvic examination) may limit its wider acceptance post-pandemic. This mirrors other authors' findings that the lack of a physical examination in gynecologic oncology telehealth increased patient anxiety and concerns about recurrence.⁷ Factors associated with finding telehealth visits acceptable in addition to in-person visits included having used telehealth, being in active treatment, having had blood tests or imaging during the pandemic, and being under 65 years old. These findings suggest that for those with frequent in-person visits or other time obligations such as work, some telehealth may be acceptable if coupled with in-person monitoring of potential cancer progression. Greater skepticism among those who never used telehealth highlights the importance of patient education regarding telehealth to foster acceptance. While providing key data to support future work, this study has limitations, including a cross-sectional study design and a study population of established cancer survivors with reliable transportation at one academic institution. Our overwhelmingly white patient population limits the generalizability of our findings since racial and ethnic minorities have been disproportionately affected by SARS-CoV-2,⁸ and Black patients have used telehealth more often during the pandemic than white patients.⁹

Moving forward, integrating a successful telemedicine practice into gynecologic oncology will require targeted adaptations,¹⁰ thoughtful patient selection, and patient education to ensure telehealth offerings align with best practices and patient preferences.

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Conflict of Interest

The authors indicated no financial relationships.

Author Contributions

Conception/design: N.Q., P.J., H.M.P., J.H., R.G.G., A.B., D.T., R.I.V. Provision of study material/patients: D.T., R.I.V. Collection and/or assembly of data: K.B., R.I.V. Data analysis and interpretation: A.S., P.J. Manuscript writing: N.Q., A.S., K.B., P.J., H.M.P., R.I.V. Final approval of manuscript: All authors.

Data Availability

The data underlying this article will be shared on reasonable request to the corresponding author.

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