Delivery of menopause care during a pandemic: an evaluation of patient satisfaction with telephone visits

Emily Wright, MD, Ola Shaltout, MD(c), Mary Ann Zokvic, MD, and Lindsay Shirreff, MD, MSc(HQ), FRCSC

Abstract

Objective: We aimed to evaluate patient satisfaction with telephone appointments during the first wave of the COVID-19 pandemic, determine visit type preference (in-person vs telephone), and predictors of those preferences.

Methods: In this cross-sectional study, patient visits during the first wave of COVID-19 (March 20 to July 15, 2020) were characterized (in-person vs telephone) in a single provider’s weekly menopause clinic in Toronto, Canada. Patients attending telephone appointments were asked to complete a modified Telemedecine Satisfaction Questionnaire with 5-point Likert-scale responses. Demographic information was collected along with the patient-reported cost to attend an in-person appointment (monetary, travel time, and time away from work). Of those who experienced both visit types, preference was evaluated and bivariate analysis was performed identifying factors associated with visit type preference and included in a multivariable binary logistic regression model.

Results: During the first wave of the COVID-19 pandemic, 214 women had 246 visits, attending mostly by telephone (221/246, 90%). Mean Telemedecine Satisfaction Questionnaire composite score was 4.23 ± 0.72. Of those who attended a prepandemic in-person appointment (118/139, 85%), a minority (24/118, 20%) preferred in-person visits. Those favoring in-person were more likely to commute less than 30 minutes (OR 3.78, 95% CI 1.16-12.29, P = 0.027), require less than 2 hours away from work (OR 4.05, 95% CI 1.07-15.4, P = 0.04), and spend less than $10 to attend (OR 3.67, 95% CI 1.1-12.26, P = 0.035).

Conclusions: Menopause clinic telephone appointments had high patient satisfaction, with most preferring this visit type, although in-person visits are preferred among a minority of women.

Key Words: COVID-19 – Menopause – Patient satisfaction – Quality improvement – Telehealth.

Specialized menopause care for Canadian women is limited as few subspeciality clinics exist. As the population ages, clinical volume is expected to increase, requiring innovative and more efficient ways to deliver care to a larger number of patients. Furthermore, in light of the COVID-19 pandemic, there has been a pressing need to deliver care to women virtually.

Received August 16, 2021; revised and accepted September 30, 2021.

From the 1Department of Obstetrics and Gynaecology, University of British Columbia, Vancouver, BC, Canada; 2Royal College of Surgeons in Ireland School of Medicine, Busaiteen, Bahrain; 3Temerty Faculty of Medicine, University of Toronto, Toronto, ON, Canada; 4Department of Obstetrics and Gynaecology, University of Toronto, Toronto, ON, Canada; and 5Department of Obstetrics and Gynaecology, Mount Sinai Hospital, University of Toronto, Toronto, ON, Canada.

This paper was presented as an Oral Presentation at The North American Menopause Society Annual Meeting, Washington, DC, September 22-25, 2021.

Funding/support: None reported.

Financial disclosures/conflicts of interest: None reported.

Address correspondence to: Lindsay Shirreff, MD, MSc(HQ), FRCSC, 700 University Avenue, Room 3-337, University of Toronto, Toronto, ON M5G 1X5, Canada. E-mail: lindsay.shirreff@sinaihealth.ca

Until March 20, 2020, the Menopause Clinic at Mount Sinai Hospital, a tertiary care centre in Toronto, Canada, was a typical ambulatory clinic with up to 80 weekly in-person visits split between two providers. The wait time to be seen is approximately 6 to 9 months. Clinics were a mix of new consultations and follow-up visits. At the start of the COVID-19 pandemic, however, there was a sweeping change in health care delivery to many Canadians to maintain social distancing and protect vulnerable populations. Clinics and hospitals were required to limit outpatient visits, with virtual appointments being the only means to continue delivery of patient care for many nonurgent conditions. As such, in the Menopause Clinic, patient care was transitioned to virtual appointments at the start of the pandemic. Visits involved clinicians telephoning patients during a predetermined time window to complete the appointment. In-person visits were available but limited to patients with urgent concerns such as postmenopausal bleeding.

Benefits of virtual care include time and money saved on travel to the clinic, shorter periods away from work and/or other obligations, and no in-clinic wait time for a health care provider. Disadvantages of virtual care include loss of face-to-face physician-patient discussions and the potential for...
VIRTUAL MENOPAUSE CARE DURING A PANDEMIC

METHODS

Research Ethics Board approval was obtained for this project (20-0285-E). This was a retrospective, cross-sectional study of patients receiving virtual care during the first wave of the COVID-19 pandemic (March 20, 2020 to July 15, 2020) in a single physician’s weekly menopause clinic at Mount Sinai Hospital in Toronto, Canada.

A new patient, in-person visit typically involves history-taking, focused physical examination, assessment of menopause symptoms, and discussion of treatment options, with counseling around risks and benefits of each. An in-person follow-up visit reviews current menopause symptoms and treatment regimens (if any), ensures the absence of potentially worrisome symptoms, such as bleeding, and confirms that screening tests, including mammograms, are up to date. Physical examination is completed, as needed, and always includes a blood pressure reading. Follow-up visits typically finish with a discussion around starting, stopping, or adjusting treatment, as necessary. Telephone visits, for both new and follow-up patients, are similar with respect to content but lack a physical examination. As such, for new patients, height and weight are obtained and body mass index calculated. For all telephone visits, documentation of a recent blood pressure, based on patient recall, is carried out.

Visit volumes (new and follow-up) during the first wave of COVID-19 were tallied and care was characterized based on visit type (in-person vs telephone). Those having at least one telephone visit during the first wave of the pandemic were approached by a study team member unrelated to the circle of care. Patients wishing to participate provided an e-mail address to which an electronic survey was sent. Information collected included demographic information (age, level of education, and city of residence) and cost incurred if attending a traditional in-person appointment (commute time to clinic, monetary expense [Canadian Dollars (CAD)], and time away from work, if applicable). Distance to the hospital (in kilometers) was calculated using Google Maps. Participants were asked to indicate current menopause treatments from a predetermined checklist and whether therapy was started or adjusted during the pandemic.

For those with at least one previous in-person visit, visit type preference (in-person vs telephone) was elicited. Last, participants completed the validated modified Telemedicine Satisfaction Questionnaire (TSQ), a 14-question survey measuring telemedicine technical quality, effect on communication, ease of use, comfort, accessibility, perceived effectiveness, intention to reuse, and overall satisfaction with the telemedicine modality. Answers are given on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). For the purposes of evaluating patient satisfaction with telephone visits in this context, questions about video consultations as well as multiple visits were removed, resulting in a total of 12 questions.

Statistical analysis

Continuous variables were summarized using mean and standard deviation. Categorical variables were reported using frequencies and percentages. Chi-squared tests were used to compare proportions, and odds ratios were calculated. Cronbach alpha for the TSQ was 0.94, suggesting the questionnaire is internally consistent (reliable, alpha > 0.8), and therefore the composite score was calculated as a mean response of the 12 questions. Bivariate analysis was performed to identify individual factors that have a significant association with in-person versus telephone visit type preference. Significant factors from the bivariate analysis were then included in a multivariable binary logistic regression model.

RESULTS

From March 20 to July 15, 2020, 214 patients had 246 appointments in the weekly clinic. Most visits were follow-up appointments (137/214, 64%), but 36% (77/214) were new consults (Fig. 1). Most appointments were completed by telephone although a minority (25/246, 10%) were in-person and typically involved a test, such as a pap, endometrial biopsy, or vulvar biopsy (Fig. 1). Almost all patients having a telephone visit agreed to participate in the study (195/214, 91%) with 139/195 (72%) completing the electronic study survey.

The mean age of participants was 53.3 ± 7.37 years with most having postsecondary education (130/139, 94%) and being managed with menopause hormone therapy (94/139, 68%) (Table 1). For a typical in-person appointment, most commute more than 30 minutes (93/139, 67%), and approximately half require a half- or full-day off work (68/139, 49%).

The median cost to attend an in-person appointment was $20 CAD (10, 30 [interquartile range]) with most participants spending more than $10 (CAD) on their visit (106/139, 76%) (Table 2). Among those living outside of the Greater Toronto Area (22/139, 16%), the median distance to travel to the clinic was 119 km (92, 195 [interquartile range]).

Patient satisfaction with phone visits was high with a mean TSQ composite score of 4.23 (SD 0.72) (Table 3). Of the 139 participants, 118 (85%) had attended a prepandemic in-person visit. Of these, 24/118 (20%) preferred in-person appointments, whereas most (94/118, 80%) preferred telephone visits. There were no differences in baseline characteristics among participants preferring telephone visits compared to
those having an in-person visit type preference (Table 4). However, when participants’ TSQ responses were stratified by visit type preference, there were significant differences between groups with those preferring in-person appointments having lower scores for almost all questions (Table 5). Participants preferring in-person visits were more likely to commute less than 30 minutes (OR 3.78, 95% CI 1.16-12.29, $P = 0.027$), require <2 hours away from work (OR 4.05, 95% CI 1.07-15.4, $P = 0.04$), spend less than $10 on a visit (OR 3.67, 95% CI 1.1-12.26, $P = 0.035$) and have a lower composite TSQ score (OR 0.147, 95% CI 0.056-0.387, $P < 0.001$).

**DISCUSSION**

This study sought to assess patient satisfaction with telephone visits for menopause care during the first wave of the COVID-19 pandemic and to identify factors associated with visit type preference. Of the 118 participants who had attended both a prepandemic, in-person appointment and a pandemic, telephone appointment, 80% preferred telephone visits. Participants preferring in-person appointments were more likely to report a shorter commute, less time off work, and lower monetary expense to attend an appointment.

**TABLE 1. Baseline characteristics among patient having a telephone visit during the first wave of the COVID-19 pandemic, $n = 139$**

| Characteristic                                      | Total sample |
|-----------------------------------------------------|--------------|
| Age, Mean ± SD$^*$ (y)                              | 53.3 ± 7.37  |
| Type of visit$^b$                                   |              |
| New                                                 | 21 (15%)     |
| Follow-up                                           | 113 (81%)    |
| Level of education                                  |              |
| Postgraduate                                        | 41 (30%)     |
| University                                          | 49 (35%)     |
| College                                             | 40 (29%)     |
| High school                                         | 9 (6%)       |
| Elementary school                                   | 0 (0%)       |
| Home community                                       |              |
| Living in the Greater Toronto Area                  | 117 (84%)    |
| Living outside the Greater Toronto Area             | 22 (16%)     |
| Current menopause management$^c$                    |              |
| Hormone therapy                                     | 94 (68%)     |
| Nonhormonal prescription medication                 | 15 (11%)     |
| Over the counter nonprescription medication         | 13 (9%)      |
| Lifestyle modification                               | 13 (9%)      |
| No treatment                                        | 24 (17%)     |
| New menopause therapy started during the COVID-19 pandemic |        |
| Yes                                                 | 31 (22%)     |
| No                                                  | 108 (78%)    |
| Menopause therapy adjusted during COVID-19 pandemic |              |
| Yes                                                 | 54 (39%)     |
| No                                                  | 85 (61%)     |

$^a$Standard deviation.

$^b$Follow-up patients may have also had a new visit during the study period.

$^c$Participants may have selected more than one option.

**TABLE 2. Time and monetary costs incurred to attend in-person appointment, $n = 139$**

| Time away from work, N (%) | N (%) |
|----------------------------|-------|
| Less than 15 min           | 7 (5%) |
| 15-30 min                  | 39 (28%) |
| 31-59 min                  | 48 (35%) |
| 1-2 h                      | 34 (24%) |
| Over 2 h                   | 11 (8%) |
| Time spent away from work  |       |
| 1 h                        | 11 (8%) |
| 2 h                        | 32 (23%) |
| Half-day                   | 44 (32%) |
| Full-day                   | 24 (17%) |
| Not currently working      | 28 (20%) |

| Monetary cost, (CAD)       | N (%) |
|----------------------------|-------|
| Less than $10              | 33 (24%) |
| $10 to less than $20       | 25 (18%) |
| $20 to less than $30       | 43 (31%) |
| $30 to less than $50       | 25 (18%) |
| $50 or more                | 13 (9%) |

CAD, Canadian Dollars.
Although telemedicine satisfaction has been evaluated in other medical specialties, to our knowledge, this has not been assessed in the menopause patient population. Studies on virtual visits for specialties ranging from obstetrics to neuroradiology have all demonstrated the feasibility and patient satisfaction. In the radiation oncology patient population, a study of a similar size demonstrated high levels of patient satisfaction and physician satisfaction using video visits during the COVID-19 pandemic. Our study has shown consistency with the results seen in other patient populations.

Given visit type preference among our participants, virtual menopause appointments were a feasible and acceptable way to deliver care, both in this pandemic and potentially moving forward. Interestingly, even patients preferring in-person visits had relatively high satisfaction when assessed through the TSQ questionnaires. The mean composite score of that group of patients was 3.65/5, corresponding to a neutral-to-agree position with respect to satisfaction on a Likert scale.

### TABLE 3. Patient satisfaction with telephone visits (Modified Telemedicine Satisfaction Questionnaire [TSQ])

|                                      | Strongly disagree N (%) | Disagree N (%) | Neither agree nor disagree N (%) | Agree N (%) | Strongly agree N (%) | Agree or strongly agree N (%) | Mean score (1-5) |
|--------------------------------------|-------------------------|----------------|----------------------------------|-------------|----------------------|-------------------------------|------------------|
| I could easily talk to my health care provider | 6 (4%)                  | 5 (4%)         | 4 (3%)                           | 48 (35%)    | 76 (55%)             | 124 (89%)                    | 4.32 ± 1.01      |
| I could hear my health care provider clearly | 5 (4%)                  | 1 (1%)         | 4 (3%)                           | 45 (32%)    | 64 (46%)             | 129 (93%)                    | 4.45 ± 0.85      |
| My health care provider was able to understand my health care condition | 1 (1%)                  | 4 (3%)         | 12 (9%)                          | 48 (35%)    | 74 (53%)             | 122 (88%)                    | 4.37 ± 0.82      |
| I did not need assistance while using the system | 4 (3%)                  | 3 (2%)         | 8 (6%)                           | 44 (32%)    | 80 (58%)             | 124 (89%)                    | 4.39 ± 0.91      |
| I felt comfortable communicating with my health care provider | 2 (1%)                  | 3 (2%)         | 7 (5%)                           | 43 (31%)    | 84 (60%)             | 127 (91%)                    | 4.47 ± 0.81      |
| I obtained better access to health care services by use of telemedicine | 3 (2%)                  | 21 (15%)       | 63 (45%)                         | 26 (19%)    | 26 (19%)             | 52 (37%)                     | 3.37 ± 1.02      |
| Telemedicine saved me time travelling to hospital or a specialist clinic | 3 (2%)                  | 2 (1%)         | 7 (5%)                           | 46 (33%)    | 81 (58%)             | 127 (91%)                    | 4.44 ± 0.84      |
| I did receive adequate attention | 4 (3%)                  | 9 (7%)         | 9 (7%)                           | 52 (37%)    | 65 (47%)             | 117 (84%)                    | 4.19 ± 1.01      |
| Telemedicine provided for my health care needs | 2 (1%)                  | 10 (7%)        | 13 (9%)                          | 55 (38%)    | 61 (44%)             | 114 (82%)                    | 4.16 ± 0.97      |
| I find telemedicine an acceptable way to receive health care services | 5 (4%)                  | 6 (4%)         | 14 (10%)                         | 53 (38%)    | 61 (44%)             | 114 (82%)                    | 4.14 ± 1.01      |
| I will use telemedicine services again | 2 (1%)                  | 5 (4%)         | 12 (9%)                          | 55 (40%)    | 65 (47%)             | 120 (86%)                    | 4.27 ± 0.87      |
| Overall, I am satisfied with the quality of service being provided via telemedicine | 3 (2%)                  | 10 (7%)        | 13 (9%)                          | 49 (35%)    | 64 (46%)             | 113 (81%)                    | 4.16 ± 1.01      |

### TABLE 4. Bivariate comparison of participants preferring telephone visits versus those with in-person visit preference, n = 118

|                                      | Telephone (n = 94) | In-person (n = 24) | P     |
|--------------------------------------|-------------------|-------------------|-------|
| Age, Mean ± SD* (y)                 | 52.99 ± 6.89      | 53.54 ± 8.11      | 0.74^  |
| Level of education                  |                   |                   | 0.41^c|
| Postgraduate                        | 28 (74%)          | 10 (26%)          |       |
| University                          | 35 (83%)          | 7 (17%)           |       |
| College                             | 25 (86%)          | 4 (14%)           |       |
| High school                         | 6 (67%)           | 3 (33%)           |       |
| Elementary school                   | 0 (0%)            | 0 (0%)            |       |
| Home community                      |                   |                   | 0.19^c|
| Living in the Greater Toronto Area  | 78 (77%)          | 23 (23%)          |       |
| Living outside the Greater Toronto Area | 16 (94%)       | 1 (6%)            |       |
| Current menopause management        |                   |                   |       |
| Hormone therapy                     | 67 (80%)          | 17 (20%)          | 1.00^d|
| Nonhormonal prescription medication | 14 (100%)         | 0 (0%)            | 0.07^f|
| Over the counter nonprescription medication | 7 (70%)       | 3 (30%)           | 0.42^f|
| Lifestyle modification              | 6 (60%)           | 4 (40%)           | 0.12^f|
| No treatment                        | 11 (69%)          | 5 (31%)           | 0.31^d|
| New menopause therapy started during the COVID-19 pandemic | 0.36^c |
| Yes                                 | 18 (90%)          | 2 (10%)           |       |
| No                                 | 76 (78%)          | 22 (22%)          |       |
| Menopause therapy adjusted during COVID-19 pandemic | 0.48^c |
| Yes                                 | 37 (84%)          | 7 (16%)           |       |
| No                                 | 57 (77%)          | 17 (23%)          |       |

*Standard deviation.
^Independent samples t test.
^Chi-square test.
^Fisher exact test.
which warranted further in-person investigation. Although we cannot determine how many patients needed an in-person visit but did not have one, it is likely that much of the care to this patient population can likely be delivered virtually with only a minor requiring in-person visits. In our study, only 16% of participants lived outside the city. With virtual care, however, it may be possible to expand much-needed menopause care to cover a wider population, thereby improving access to specialized care across Canada. If women living far from the clinic required a procedure, many could be easily performed by a general gynecologist in their community.

These data must be interpreted in the context of the study design. Our study evaluated a limited population in a single provider’s clinic during the first wave of the COVID-19 pandemic, a very specific and unique time in healthcare. Results are not necessarily generalizable to other providers, patient groups, or care settings. Our study population was fluent in English, without the need for translation services. We did not evaluate telephone visits needing a translator, which may not have worked as well. All patients in our study had access to a telephone for their appointment, however, there may have been a patient group without access who missed care. This was not formally assessed. Further, it is possible participants were biased by their own wish to avoid visiting healthcare facilities during that time, subsequently reporting high satisfaction with telephone visits. However, of those who had experienced both types of visits, a majority still chose telephone appointments as their visit type preference. Last, as with any survey-based research, there may be selection bias in respondents choosing to participate with the possibility of those preferring telephone visits more likely to have completed the study.

CONCLUSIONS

In conclusion, given the nature of care provided, menopause treatment is uniquely suited to telemedicine. We demonstrated high levels of patient satisfaction with telephone visits, which were preferred by a majority of participants. As such, virtual care may help expand access for menopausal women in Canada, where there is a shortage of subspecialty clinics. With COVID-19 restrictions ongoing, our findings are important now but also in the future as we look to plan new and innovative healthcare delivery models for this and other patient populations.

Acknowledgments: The authors would like to thank Josie Chunda-mala, Scientific Grant Editor funded by the Department of Obstetrics and Gynaecology at Mount Sinai Hospital, for complimentary assistance editing and preparing this manuscript for submission.

REFERENCES

1. Shifren JL, Gass MLS. The North American menopause society recommendations for the clinical care of midlife women. Menopause 2014;21:1038-1062.
2. Ministry of Health. (June 15, 2020). COVID-19 operational requirements: health sector restart version 2. Available at: https://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/2019_guidance.aspx#health. Accessed July 18, 2021.
3. Holcomb D, Faucher MA, Bouzid J, Quint-Bouzid M, Nelson D, Dureya E. Patient perspectives on audio-only virtual prenatal visits amidst the severe acute respiratory syndrome Coronavirus 2 (SARS-CoV-2) pandemic. Obstet Gynecol 2020;136:317-322.
4. Roof KS, Butler JM Jr, Thakkar VV, et al. Virtual on-treatment visits: implementation, patient perspectives, barriers, limitations, benefits and opportunities. Adv Radiat Oncol 2021;6:100579.
5. Layfield E, Triantafillou V, Prasad A, et al. Telemedicine for head and neck ambulatory visits during COVID-19: evaluating usability and patient satisfaction. Head Neck 2020;42:1681-1689.
6. Tenforde AS, Borgstrom H, Polich G, et al. Outpatient physical, occupational, and speech therapy synchronous telemedicine: a survey study of patient satisfaction with virtual visits during the COVID-19 pandemic. Am J Phys Med Rehabil 2020;99:977-981.
7. Lun R, Walker G, Daham Z, et al. Transition to virtual appointments for interventional neuroradiology due to the COVID-19 pandemic: a survey of satisfaction. J Neurointerv Surg 2020;12:1153-1156.
8. Langbecker DJ, Caffery LJ, Gillespie N, Smith AC. Using survey methods in telehealth research: a practical guide. J Telemed Telecare 2017;23:770-779.