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Review Article

Improving shared decision making in virtual breast cancer surgery consultations

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ABSTRACT

With the COVID19 pandemic, use of telehealth has expanded rapidly in subspecialties with limited prior telehealth experience. While telehealth offers many opportunities to improve patient convenience, access, and comfort, the virtual platform poses unique challenges for shared decision making. In this review article, we describe what occurs within a standard in-person breast surgery consult and propose a model for an ideal virtual breast surgery consult, including strategies to foster patient engagement and shared decision making. Our model incorporates pre-visit preparation, deliberate pauses, and targeted engagement as ways to encourage patients to integrate information and actively participate in treatment decisions. Intentional strategies such as these must be adopted to improve shared decision making on the virtual platform.

1. Introduction

The rapid expansion of telehealth during the COVID19 pandemic brings many challenges and opportunities.^{1,2} Prior to the COVID19 pandemic, telehealth visits (synchronous video and/or audio) were used mostly in primary care settings and amongst some subspecialties such as endocrinology and rheumatology following patients with chronic medical conditions.³⁻⁶ Many subspecialties, including oncology, are now utilizing telehealth and are new at navigating virtual visits. While transitioning care for established oncology patients to telehealth has seen successes during the pandemic, engaging new oncology patients for the first time on a virtual platform highlights challenges with telehealth and opportunities for improvement.⁷⁻⁹

Commonly cited patient benefits of telehealth include visit convenience, improved access, and comfortable environment.^{3,10} However, compared to in-person visits, patients have reported feeling less involved in decision-making and having trouble speaking up and posing questions during video visits.^{11,12} Additionally, both oncology patients and providers have expressed concerns that telehealth may diminish the doctor-patient relationship in cancer care.^{7,13} This may be especially problematic for new oncology consultations. If patients feel less engaged and less able to speak up in these often emotionally-laden visits, the trust building, information sharing, and shared decision making that are central to developing a therapeutic relationship and patient-centered

treatment plan are jeopardized.^{14,15} It is necessary to understand barriers to engagement and other pitfalls associated with virtual visits. This understanding will allow us to leverage telehealth systems to optimize delivery of cancer care.

Surgical consults with patients newly diagnosed with breast cancer are highly representative of the challenges associated with using virtual platforms. These visits are often associated with high patient anxiety.^{16,17} Further, surgical decision-making for breast cancer relies heavily on patient preference, making shared decision making essential.

In this review article, we describe the course of a typical in-person new breast cancer surgery consult, building off our own experience, observations of consultations, and the literature. Although many decisions occur during this initial consultation, our description within this review largely centers on the decision for mastectomy versus breast conservation. We also describe strategies surgeons use to establish rapport and elicit patient preferences. We then leverage the existing literature on shared decision making and telemedicine to generate strategies to promote patient engagement in the virtual environment. We believe that this intentional approach to planning a virtual new patient consultation is critical to establishing trust and facilitating shared decision making during virtual consults, thereby improving the quality of care delivered.

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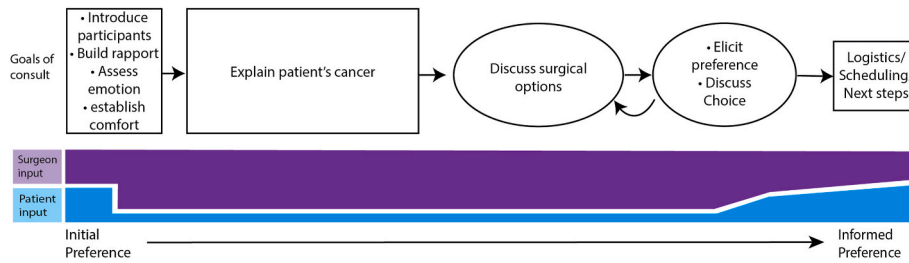


Fig. 1. Average observed in-person breast cancer surgery consult.

1.1. In-person consultations

Based on our own clinical experience, review of hundreds of audio-recorded in-person consultations by multiple breast surgeons in clinics across the country, and the literature, we describe a generally reproduced consult format of introductions, explanation of the patient’s cancer, discussion of applicable surgical options, elicitation of patient preference, and planning of next steps/logistics (Fig. 1). In these consults, surgeons supported shared decision making by building trust during the introductions, sharing information in a patient-centered manner, and eliciting preferences at the end of the consult; this closely follows the model of shared decision making proposed by Elwyn et al.^{14,18} We also found that surgeons control a significant component of the conversation, most commonly by eliciting medical history and sharing information. However, surgeons employ a variety of verbal and non-verbal communication strategies during an in-person consultation to ensure patients are engaged throughout, despite the imbalance in communication.

In most consultations, there is an initial interaction between surgeons and patients where introductions occur. This serves to build relatability and trust with the surgeon.^{19–22} In addition, this interaction allows the surgeon to assess the patient’s emotional state using non-verbal cues and directed questioning, identify a patient’s social support, and introduce other members of the medical team.

Surgeons spend a large proportion of the consultation explaining a patient’s cancer to them, including reviewing the imaging and pathology. Although this is largely unidirectional communication, surgeons often use several visual resources to present information and gauge patient understanding. For example, surgeons display a patient’s imaging to point out findings that will support future treatment considerations and explain the pathology report while marking up the document for later patient review. Many surgeons also use drawings and graphical aids to describe breast anatomy and cancer biology.

When discussing surgical options, surgeons often use drawings and graphical aids, which have been shown to improve patient knowledge and decision satisfaction.^{23–29} These documents facilitate presentation of options and enumerate the risks and benefits of the choices, specific to an individual patient. We have observed that some surgeons offer their graphical aids for patients to take home for further review and reference. Again, although this section of the consultation is largely unidirectional and surgeon-driven, the use of drawings and graphical aids during an

in-person consultation allows the communication of information to feel interactive and personalized to the patient.³⁰

Finally, most consultations end with discussion about a patient’s choice for type of surgery, with some form of preference elicitation. How this proceeds is variable based on the surgeon’s approach to shared decision making and the patient’s decision-making style. In general, this is the part of the consultation where patients are most active. Patients ask questions to clarify ideas, share preferences, and make a final decision (or set a timeline for decision-making) before proceeding to planning next steps. The engagement fostered earlier in the consult primes patients to actively participate in the discussion about their choice.^{31,32}

1.2. Virtual consultations

The COVID-19 pandemic led to a rapid rise in the use of telemedicine to deliver cancer care. We quickly found in clinical practice that the shared decision making strategies that are successful during in-person consults do not readily translate to the virtual platform. Compared to in-person visits where the clinical team has organic opportunities to make small talk, such as when the care team enters the room or transitions to the physical exam, virtual visits start abruptly and have no natural breaks. This makes it harder to engage in small talk that can build comfort and rapport.^{33,34} Further, body language and emotive cues that are apparent in-person can be less discernible virtually.^{33,35} This makes it more difficult for clinicians to assess and react to the patient’s emotional state. Finally, information sharing, an aspect of a consult that tends to be surgeon dominated, becomes increasingly one-directional on a virtual platform. This can make patients less comfortable with questioning, sharing, and engaging with decision-making.¹¹

We reimagined how to provide breast cancer care via a virtual platform to address the challenges posed by telemedicine (Fig. 2). In the text that follows, we describe deliberate strategies to create a virtual consultation where patients are active participations in treatment decision-making. Table 1 describes these strategies in more detail, along with example dialogue.

1.2.1. Patient pre-visit preparation

Preparing patients for consultations in advance of the visit itself can improve patient satisfaction, understanding and communication during

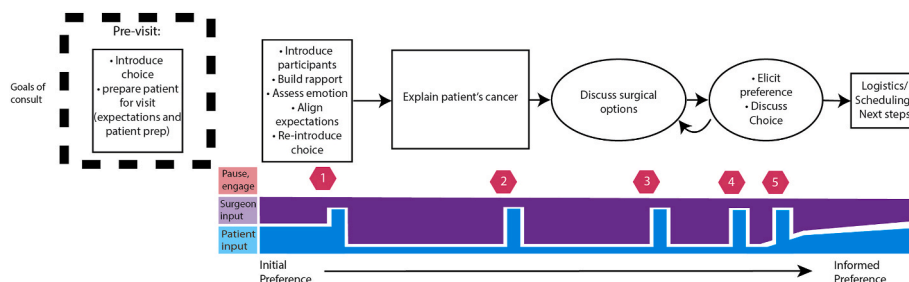


Fig. 2. Ideal virtual breast cancer surgery consult.

Table 1
Goals of ideal virtual breast surgery consult and related strategies.

Goals	Virtual consult strategies/Example dialogue
Pre-visit:	
Provide relevant materials	Possible materials for clinic to send in advance <ul style="list-style-type: none"> • Have on-hand for consultation: <ul style="list-style-type: none"> • Pathology report • Surgeon handout or graphical aid • Something to take notes on • Optional patient materials to use in supporting decision making: <ul style="list-style-type: none"> • Decision aid or other decisional support tool • Question list
Set expectations	"We will explain your diagnosis, discuss surgery options and what is important to you to help you decide about surgery"
Explain materials to have on-hand for consult	"Please have your pathology report available. If you have time, please review the graphical aid and/or surgeon-specific handout. The surgeon will discuss these during your visit."
Introduce that patient input will be needed to make a treatment choice	"For most women, there is not one 'right' choice. Your input will be needed to make a decision about breast cancer surgery."
During visit	
Introduce and orient	
Introduce/identify participants	Make eye contact and provide a warm welcome. Invite family/care team, as applicable, and make introductions
Review agenda for consult	Review agenda and remind the patient to have pre-visit materials on hand
Re-introduce choice	"You will have a choice to make about what surgery you want. I am here to help you make that choice."
Introduce technology limitations	"The technology can make it hard to interrupt me. If you need to ask a question or want to make a comment, please wave your hand or say something. I will also pause at regular intervals to check in with you about any questions or thoughts you may have."
Acknowledge emotion	"During an in-person visit, I can usually tell how people are feeling about the diagnosis or the conversation. It is harder to tell on video. I'm going to need your help to know how you are feeling. If things are overwhelming and you need to pause, it is OK to mute or turn your video off if you want to collect yourself"
Assess emotion	1 PAUSE. Assess current emotional state: "How have you been managing the news of your diagnosis?" "Are you ready to start?"
Determine readiness to proceed	
Explain patient's cancer	
Review diagnosis	Share imaging on screen, if desired Review pathology report together Use graphical aid and/or surgeon-specific handout from pre-visit materials (e.g. anatomy diagram)
Assess understanding	2 PAUSE. "What questions do you have about your imaging and biopsy results?"
Discuss surgical options	
Review pros cons of surgical decision personalized to patient	Use graphical aid and/or surgeon-specific handout from pre-visit materials (e.g. surgery diagram) Discuss surgical options and associated considerations e.g. radiation, recurrence (probabilities), recovery from surgery, loss of breast
Assess understanding	

Table 1 (continued)

Goals	Virtual consult strategies/Example dialogue
	3 PAUSE. "What questions do you have about lumpectomy and mastectomy?" Consider teach back: "Tell me what you understand about lumpectomy versus mastectomy"
Elicit preference and support decision-making	
Elicit preference	4 PAUSE. Discuss preference: "Most women are a candidate for either lumpectomy or mastectomy. This is/is not the case for you. What surgery are you leaning towards? Tell me more about that" Discuss pros/cons of options in light of patient values
Discuss choice	5 PAUSE. Summarize/endorse choice: "It sounds like ____ is a good choice for you because what you find important is ____ (patient values). Tell me your thoughts." Or "I agree that ____ is a good decision for you."

the subsequent consult.³⁶⁻⁴² Visit agendas and decision aids/educational tools also serve to notify patients early-on that their preferences are important and that their input will be needed in treatment decision-making.⁴³⁻⁴⁵ We recommend a consult introduction be sent in advance as a pre-visit packet. In addition to the visit agenda and any decision aids/educational tools, this packet should include any materials that would typically be provided to a patient during an in-person visit. This may include pathology reports and surgeon-specific handouts that they use to guide their conversation. Patients can use these materials for note taking and reference after the visit. Although some telehealth platforms may allow documents to be screen-shared and annotated in real-time, telehealth capabilities vary by patient, provider and practice. It is important to consider how to most effectively offer the materials that are readily available during in-person consults to the virtual consult patient. Providing relevant materials ahead of time invites patients to engage early and ensures that patients have access to these important materials during and after the visit.

1.2.2. Introduction and orientation

The start of a virtual consult must expand beyond simple introductions between the visit participants to also include an overview of the technology and how to address its limitations. Surgeons should be thoughtful about their "webside manner" (which has some important differences from the "bedside manner").^{35,46-48} Key behaviors include clear enunciation, making eye contact, using a well-lit space with professional background, and limiting off-screen gestures.^{34,35} In addition, telehealth technology can make it difficult for patients to interrupt when the surgeon is speaking, limiting opportunities for patient input.¹¹ We recommend explicitly addressing this challenge by saying up front that you welcome interruptions, suggesting specific gestures to signal needed interruptions, and explaining that you will be deliberately pausing to create space for patient input.

Additionally, it can be harder for surgeons to recognize and respond to emotion on the telehealth platform.^{13,49} This should also be acknowledged at the start of the consult to create a safer space for patients to express themselves if they choose. Accepting patient emotion and providing empathic responses reduces distress and improves treatment adherence.⁵⁰ It is crucial to integrate these behaviors in the telehealth breast surgery consult. At the start of the consult, it may be

helpful to specifically assess the patient's emotional state and readiness to proceed to facilitate a patient-centered approach to what can be an emotionally challenging conversation.

The introduction should also include reiteration of the visit agenda (explaining cancer and discussing surgical treatment preferences/decisions). Importantly, the surgeon's introduction should also reinforce the patient's central role in deciding treatment.

1.2.3. Explaining the cancer

Information sharing is an essential component of the consult. However, this portion of the consult tends to be surgeon dominated with limited opportunities for patients to engage. Although it is feasible to screen share materials, such as imaging or pathology on the virtual platform, doing so removes the face-to-face aspect of the visit and may make the consult even less interactive. We recommend encouraging patients to have copies of the pathology reports and any handouts/graphical aids provided in the pre-visit packet available during the consult for review and note taking. We recommend pausing after explaining a patient's pathology and imaging to elicit questions and identify areas requiring further clarification. This will also enforce to patients that the consult should be an exchange of information.

1.2.4. Discussing surgical options

Discussion of the surgical options is another surgeon-led activity, and should follow principles described above when presenting general information about a patient's cancer, including provision of relevant materials ahead of time. Decision aids can contribute to this step by preparing patients for the discussion in advance of the visit and simplifying the process of explaining options to the patient.^{27,51-53} Provision of handouts that outline the basics of the surgical decision and follow surgeons' usual approach to describing the surgeries may also be beneficial. We again recommend pausing after presenting the surgical options to explicitly elicit any questions regarding surgical options.^{30,54}

1.2.5. Patient preferences and decision

The conclusion of the consult heavily involves eliciting patient preferences for surgery and supporting decision making. In the virtual visit, we recommend surgeons pause and remind patients that their input is necessary for the surgical decision. This will help signal to patients that the consult will be shifting from a surgeon-led sharing of information to more of a mutual discussion centered on patient preference. We suggest explicitly asking patients about their perspectives and/or choice for type of breast surgery. Surgeons should invite patients to elaborate on their thought processes behind decision-making to support patient value-concordant decisions and to address potential gaps in understanding.¹⁴ Surgeons can also further highlight the pros and cons of surgical options based on questions or preferences that patients share.⁵⁵ This is the most challenging aspect of the virtual visit given the barriers to establishing rapport virtually. Engaging patients during the early aspects of the consult will increase the likelihood that they will feel comfortable sharing their preferences when asked.¹⁴

Finally, surgeons can again pause to clarify or support a patient's decision. Restating a patient's decision and related motivations can validate a patient's choice and enforce to the patient that their perspective was heard.

2. Conclusion

We have developed an overarching conceptual description and accompanying strategies to better foster virtual shared decision making in breast surgery consults. It must be noted that while we largely focused on the structure of the virtual consult and associated strategies, it is important to practice the foundational competencies of "webside manner" in all virtual patient interactions. Integrating these behaviors with our proposed approach to breast surgery consults should foster patient engagement and empowerment on the virtual platform. Our

deliberate approach to the virtual consult involves identifying key structural components of the consult (pre-visit preparation, introduction, cancer explanation, surgery explanation, preference/decision elicitation) and associated spaces to pause, explicitly invite patient input and build rapport. We believe that planning each of these steps is critical to supporting patient engagement in breast cancer surgery decision-making in a virtual environment. Providers can use our model to better understand challenges with virtual shared decision making and adapt strategies that address their practice-specific gaps. An important future step will be to assess patients' experiences with virtual care when employing this model to ensure patients' needs are being met and to identify opportunities to further improve care delivery.

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Declaration of competing interest

None.

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