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Starting the Conversation about Left Ventricular Assist Devices

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Abstract

Some patients with advanced heart failure (HF) are eligible for consideration of a Left Ventricular Assist Device (LVAD), a mechanical assist device that aids in improving cardiac output. However, having the *first* conversation to introduce the topic to a patient is often challenging due to the life-long implications of obtaining an implanted device. In-depth semi-structured interviews were used in this pilot study to explore how nurse practitioners (NP) have the *first* conversation with potentially eligible patients. Results were conceptually framed around the Serious Illness Conversation Guide which has been used to structure meaningful conversations with very ill patients.

Background

A left ventricular assist device (LVAD) is offered to patients with advanced heart failure (HF) who have persistent symptoms despite optimal medical treatment.¹ LVADs are indicated as a means to live longer while waiting on a heart transplant (“bridge therapy”) or for patients who are not transplant candidates (“destination therapy”).² LVADs are surgically implanted mechanical devices that are attached to the left ventricle of the heart.³ Receiving an LVAD is a life-changing, requiring patients to follow strict protocols to prevent infection and other physiologic complications.⁴ Post-implantation, patients are also at risk for psychological distress (anxiety, depression, post-traumatic stress disorder).^{4–5}

The decision-making process patients experience when considering LVAD placement has been explored in the literature.^{4–8} The use of shared decision-making tools are recommended to ensure that patients’ decisions are aligned with their expectations.^{5,9} Although there is literature about how LVAD coordinators⁷ and caregivers^{5,6,8} assist with this decision-making, there is a paucity of literature focusing on how nurse practitioners (NPs) initiate the *first conversation* related to LVAD placement. Thus, the purpose of this

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pilot study was to explore how NPs begin the *first* conversation with advanced HF patients to determine interest about an LVAD.

Methods

A qualitative design was used to gain an in-depth understanding about how NPs initiate the conversation about LVAD placement. Data were collected through one-on-one, semi-structured interviews with NPs who treat advanced HF patients. The interview guide was developed from clinical experience, literature related to patient decision-making related to LVADs, and conversations with experts. A purposive sample of NPs who treat adults with advanced HF for at least one year was used. IRB approval was obtained prior to recruitment. Email invitations (with an IRB approved information sheet) were sent to potentially eligible NPs identified through professional networking. A convenient date/time/place was chosen to conduct the interviews with interested NPs. Transcriptions of the audio recordings (excluding names) were cross-checked by both authors. Directed content analysis was used to capture the themes based on the larger topical areas from the interview guide. As themes emerged they were categorized based on a pre-existing framework/the *Serious Illness Conversation Guide*.¹⁰

Results

Five NPs who met inclusion criteria participated. All interviews were conducted by telephone, lasting ~45–60 minutes. All were Caucasian females with a mean age of 43 years (*SD* 11.7). The highest degree earned for 4 participants was a DNP (one had an MSN). The mean number of years treating advanced HF patients was 7.7 years (*SD* 6.8). Four NPs were affiliated with academic centers; one worked in private practice. Two NPs were from the southeast, two from the west, and one from the mid-west. On average, participants worked 24 hours/week (*SD* 21.4) caring for advanced HF patients (remaining hours were teaching or other clinical duties).

Key themes from the interviews are based on the *Serious Illness Conversation Guide*. This guide conceptualizes the following steps in the process: setting up the conversation, assessing patients' understanding and preferences, sharing the prognosis, exploring key topics, and closing the conversation.¹⁰

Setting up the Conversation

Three themes arose related to the need to establish rapport early, a preference for having the first conversation in the outpatient setting, and the strategy of introducing the topic as part of a larger discussion of advanced therapies. All participants agreed that it is best to establish rapport as early as possible with any patient with an advanced disease state, especially conversations that involve death. Rapport serves as a foundation for a trusting relationship which is needed for more challenging conversations that follow.

All participants preferred having the first conversation as an outpatient, in a relaxed, less rushed setting. NPs noted the ability to obtain a more comprehensive depiction of the patient physically and psychologically in the outpatient setting when determining candidacy for

LVAD placement. This differs from conversations that NPs described with patients the met for the first time in a hospital, often with patients in an acutely decompensated state, creating a time sensitive situation.

The majority agreed that is best to introduce the topic of LVADs “sooner rather than later” as part of the broader “other advanced treatment options” when other therapies have failed. For example, when inotrope therapy to treat advanced symptoms was discussed, the idea of a mechanical device was also mentioned, being careful not to overwhelm the patient with information.

Assessing Patients’ Understanding and Preferences

Themes that arose related to the importance of assessing baseline knowledge of the condition, including the perception of their prognosis and misconceptions that the patient has before starting the conversation. NPs emphasized the importance of conducting a baseline assessment “to know where to begin” when educating the patient about the device. As one NP put it: “most don’t know how the heart works.” This was echoed by the other NPs who shared misconceptions that patients have regarding LVADs. Some misconceptions related to patients’ cultural backgrounds, religious beliefs, and reading about celebrities with health-related issues. Although patients often have flawed perceptions of what an LVAD is, the NPs believed it was their job to rectify those misconceptions by providing adequate information.

Sharing the Prognosis

Important themes that arose related to sharing the prognosis included: being honest and direct with the patient, sharing information in a way that was easy to understand, and avoiding “false hope”. Participants advised being straight forward with patients to help build (and retain) trust. To avoid giving false hope, NPs discussed how they frequently shared statistics, in an easy to understand manner, to equip patients/caregivers with the facts, while emphasizing that the decision ultimately rests with the patient.

All participants spoke about using visual aids to accompany the *first* conversation with patients. The NPs acknowledged the importance of having resources to make learning about LVADs less overwhelming, to explain risks and benefits of this form of therapy, and to provide patients an opportunity to be more involved in their care.⁸ One participant discussed a shared-decision aid⁹ available through the *American College of Cardiology* which provides information about LVADs with video testimonials from providers and LVAD patients offering patients insight into what it would be like to have an LVAD.

Exploring key topics

Pertinent themes relevant to key topics of the conversation included: the need for the patient to understand what an LVAD is, how it works, and the lifestyle changes that go with implantation. If the patient has been newly diagnosed, the conversation should begin with an explanation of the disease process and the components of an LVAD (the driveline, battery, and other internal components). NPs explained that patients need to understand that an LVAD is *not a cure* for HF, but a form of therapy that comes with its own challenges to

activities of daily living, including potential complications that may occur after receiving an LVAD.

Closing the conversation:

Three themes that arose relevant to closing the conversation included: summarizing the content for patients, acknowledging emotions while providing therapeutic support, and making a final assessment of patients' interest in pursuing an LVAD. The NPs articulated how important it is to ensure that the patient feels comfortable in expressing emotions, especially when talking about end of life. As one NP put it: "you need to pay close attention to what the patient says and what they don't say." Thus it is often subtle cues, provided by patients, that serve as indicators of how ready the patient is with moving further with advanced therapy. Notably, all of the NPs commented about how patients "ask for advice on making the decision,". All recommended reframing the conversation to shed light on the fact that although the NP is there to offer support, the decision is ultimately up to the patient.

Tips for New NPs

As parting words the NPs offered two tips for NPs new to these conversations. The first related to the importance of displaying "a certain level of confidence" with a calm demeanor in serious conversations to reassure patients/family as they engage in meaningful dialogue about serious illness-related matters. Participants also acknowledged a need for self-care after having these emotionally draining conversations.

Discussion

The *first* conversation with patients about the possibility of getting an invasive device, such as an LVAD, is critical in the decision-making process for this life-altering treatment. The intent of this preliminary work was to determine if the NPs were indeed involved in initial conversations with advanced HF patients and to determine if the interview guide was successful in capturing pearls for clinical practice. Because this was a pilot study, there was not an intent to determine saturation. Although only five NPs were interviewed, a strength of the study was that the one-on-one interviews with NPs (lasting up to one hour) provided rich in-depth insight into experiences of these providers. Participants shared challenges and potential solutions related to these important conversations. Future studies could extend this work by interviewing a larger sample of NPs and other members of the health care team as well as obtaining patient perspectives of how the *first* conversation went.

Conclusion

NPs play a vital role in a patient's decision-making process for whether to seek LVAD implantation. The *first* conversation that an NP conducts with a patient about possible advanced treatment options can influence the patient's future health and quality of life. The NPs interviewed agreed that it is best to introduce the topic earlier in the disease trajectory in order to prevent further complications and to build trust early on. Overall, having the *first* conversation with a patient about LVAD implantation requires the nurse to approach the patient in earnest, maintain good rapport, and not give false hope. Furthermore, it is

important to avoid overwhelming the patient, ultimately realizing that the patient is charged with making the final decision.

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References

1. Starrh L, Becker D. Ventricular assist device: the basics. *Journal for Nurse Practitioners*, 2018; 14(7), 538–544.
2. Brouwers C, Denollet J, Caliskan K, et al. Psychological distress in patients with a left ventricular assist device and their partners: an exploratory study. *Eur J Cardiovasc Nurs*. 2015;14 (1):53–62. [PubMed: 24351334]
3. Kiernan MS, Sundareswaran KS, Pham DT, et al. Preoperative determinants of quality of life and functional capacity response to left ventricular assist device therapy. *J Card Fail*. 2016; 22(10):797–805. [PubMed: 26777757]
4. Kitko LA, Hupcey JE, Birriel B, Alonso W. Patients' decision-making process and expectations of left ventricular assist device pre and post implantation. *Heart Lung*. 2016;45 (2):95–9. [PubMed: 26742707]
5. McIlvennan CK, Thompson JS, Matlock DD, et al. A Multicenter trial of a shared decision support intervention for patients and their caregivers offered destination therapy for advanced heart failure: DECIDE-LVAD: Rationale, design, and pilot data. *J Cardiovasc Nurs*. 2016; 31(6):E8–E20.
6. McIlvennan CK, Jones J, Allen LA, Lindenfeld J, Swetz KM, Nowels C, Matlock DD. Decision-making for destination therapy left ventricular assist devices: implications for caregivers. *Circ Cardiovasc Qual Outcomes*. 2015;8(2):172–8. [PubMed: 25759442]
7. McIlvennan CK, Matlock DD, Narayan MP, et al. Perspectives from mechanical circulatory support coordinators on the pre-implantation decision process for destination therapy left ventricular assist devices. *Heart Lung*. 2015;44 (3):219–24. [PubMed: 25724116]
8. McIlvennan CK. Improving decision making for advanced heart failure patients and caregivers. *J Nurs Adm*. 2017 4;47(4):190–191. [PubMed: 28333785]
9. Shared Decision-making; Heart failure: Left Ventricular Assist Device. American College of Cardiology website. <https://www.cardiosmart.org/SDM/Decision-Aids/FindDecision-Aids/LVAD> Accessed October 5, 2018.
10. Serious Illness Conversation Guide. Copyright by 2015 Ariadne Labs: A Joint Center for Health Systems Innovation (www.ariadnelabs.org) and Dana-Farber Cancer Institute. Revised April 2017.

Highlights:

- Patients with advanced heart failure may be offered mechanical assist devices as a treatment option
- Undergoing mechanical device implantation is a life changing event for patients.
- Often nurse practitioners are the first to introduce the topic of LVAD placement to patients.
- Serious medical conversations should begin as early as possible in the disease trajectory.
- The patient ultimately is in charge of making the final decision for device implantation.