Abstract:
Background: People with end-stage heart failure who are ineligible for transplantation face the decision between destination therapy left ventricular assist device (DT-LVAD) or palliative care. Individuals often rely on heuristics, or decision-making shortcuts, such as anchoring. This can predictably bias decision outcomes. In clinical practice, the introduction of DT-LVAD therapy is not standardized, with variations that may influence decisions.

Objectives: Investigate whether showing a previous generation, larger LVAD (HeartMate XVE) creates an anchor, making the currently approved, smaller LVAD (HeartMate II) appear more favorable, and thus biasing people towards choosing DT-LVAD.

Methods: Amazon Mechanical Turk (MTurk), an online interface used for decision-making research, was used to present informational videos. Participants were asked to imagine themselves in a scenario where they were dying of end-stage heart failure, and then presented with the option of DT-LVAD as life-prolonging therapy. Participants were randomized; the control group only saw the HeartMate II (HMII) device, while the experimental group saw the XVE device before the HMII. Survey questions assessed likelihood of choosing the LVAD and participants’ perception of the size of the devices. Attention checks allowed exclusion of participants who did not watch the video or read the questions carefully.

Results: After excluding 64 respondents based on failed attention checks, 252 control and 235 experimental surveys were analyzed. The experimental group was not more likely to accept the HMII compared to the control group (68% vs. 61%); however, seeing the XVE before the HMII changed participants’ perception of the HMII and the importance of “size of the device” to their decision. Participants in the experimental group were more likely (51% vs. 17%) to agree with the statement that the HMII was “smaller than expected”. Participants in the experimental group were also more likely (61% vs. 46%) to rate the size of the device as “important” or “very important” to their decision.

Conclusions: Although the XVE anchor did not change the likelihood of accepting the HMII, it affected perception of the device. The results indicate that device size was considered but outweighed by other factors. Information presentation may affect perception of healthcare options.

Research Category: Outcomes Research