

LETTERS TO THE EDITOR

To the Editor — Remote monitoring devices and the unseen challenges



We read with interest the paper by Harvey and Seiler¹ that successfully carried out a study to identify the challenges in managing a remote monitoring device clinic using a 27-item mixed-methods survey. The study highlighted connectivity, staffing, and technological education to be the major challenges. However, the use of these phrases within the 27-item mixed-methods survey may have subconsciously led participants to focus on these issues in the open-ended questions without identifying other potential issues with remote monitoring devices. This could have been altered by only using closed questions that included more questions about other potential concerns with monitoring or only open questions to allow participants to freely share their concerns without bias.

The response rate for the study was low considering the Heart Rhythm Society Allied Health Professional communities' group, owing to the short time window, which could be increased in future studies. However, carrying out a study internationally requires a balance of responses between countries. In this case, most responses were from the United States, whereas Egypt and Australia each represented a single participant, leading to the study majorly applying to the United States. Hence, staffing and technological education may not have been an issue in countries such as Egypt, the United Kingdom, or Australia. Therefore, focusing the study to identify challenges in managing a remote monitoring device clinic in the United States alone may have been more suitable for this study.

The research identified large volumes of alerts as a flaw given by the remote cardiac monitoring devices. The manufacturer of the monitoring devices used by the participants in their respective hospitals to collect the data was not surveyed in this study. This would have allowed a potential novel area of research to overcome the flaws of the algorithms to reduce the volume of alerts.

Overall, the study highlighted many challenges faced in managing remote monitoring devices in clinics. Future research can build upon this study to resolve the challenges identified.

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Reply to the Editor — Remote monitoring devices and the unseen challenges



We thank Latif and Patil for their interest in our study, which describes the challenges in managing a remote monitoring device clinic using a mixed-method approach. We agree, there may be some potential bias in respondents' open-ended answers, given the specific question phrases used for the closed-ended questions. However, the phrases used in the closed-ended questions, such as connectivity, technology, staffing, and education, have been well described in the related literature and were validated by content experts, as noted in the study.^{1–4} The major themes for the open-ended questions related to the biggest challenge perceived in managing a remote monitoring were connectivity, transmissions, and staffing. When asked what was the greatest barrier to optimal staffing, staff training and administrative/financial issues were identified as major themes. Finally, when asked to describe a process their clinic had adopted that improved workflow and quality of patient care for patients being remotely monitored, the major themes identified were optimizing alert transmissions, increasing remote staffing, and utilizing third-party platforms. A mixed-method approach facilitates the collection and analysis of data from multiple sources in a single study and enables researchers to answer questions with adequate depth and breadth.⁵ One of the challenges is choosing an approach that avoids the instance of one method possibly influencing data interpretation from another method, as possibly seen in the sequential design of this study. We appreciate the authors' recommendations to further identify other potential issues with remote monitoring by either using more closed-ended questions or using only open-ended questions to prevent bias.

We used the Heart Rhythm Society Allied Community of Practice discussion forum as a means of deploying the survey. Since membership is international, we included all respondents, but we agree it may have been more appropriate to focus on clinics in the United States vs internationally, as others may not have had similar issues with staffing and technological education. We would also recommend future

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research to include the names of the manufacturers of various remote monitoring technologies that could provide additional insight as to algorithms, alert types, and frequencies. We feel our research has highlighted some important challenges with burgeoning remote monitoring technologies and look forward to future research investigating some of the unseen challenges.

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