



# Facilitators and Barriers to Audiologic Follow Up in Malawi

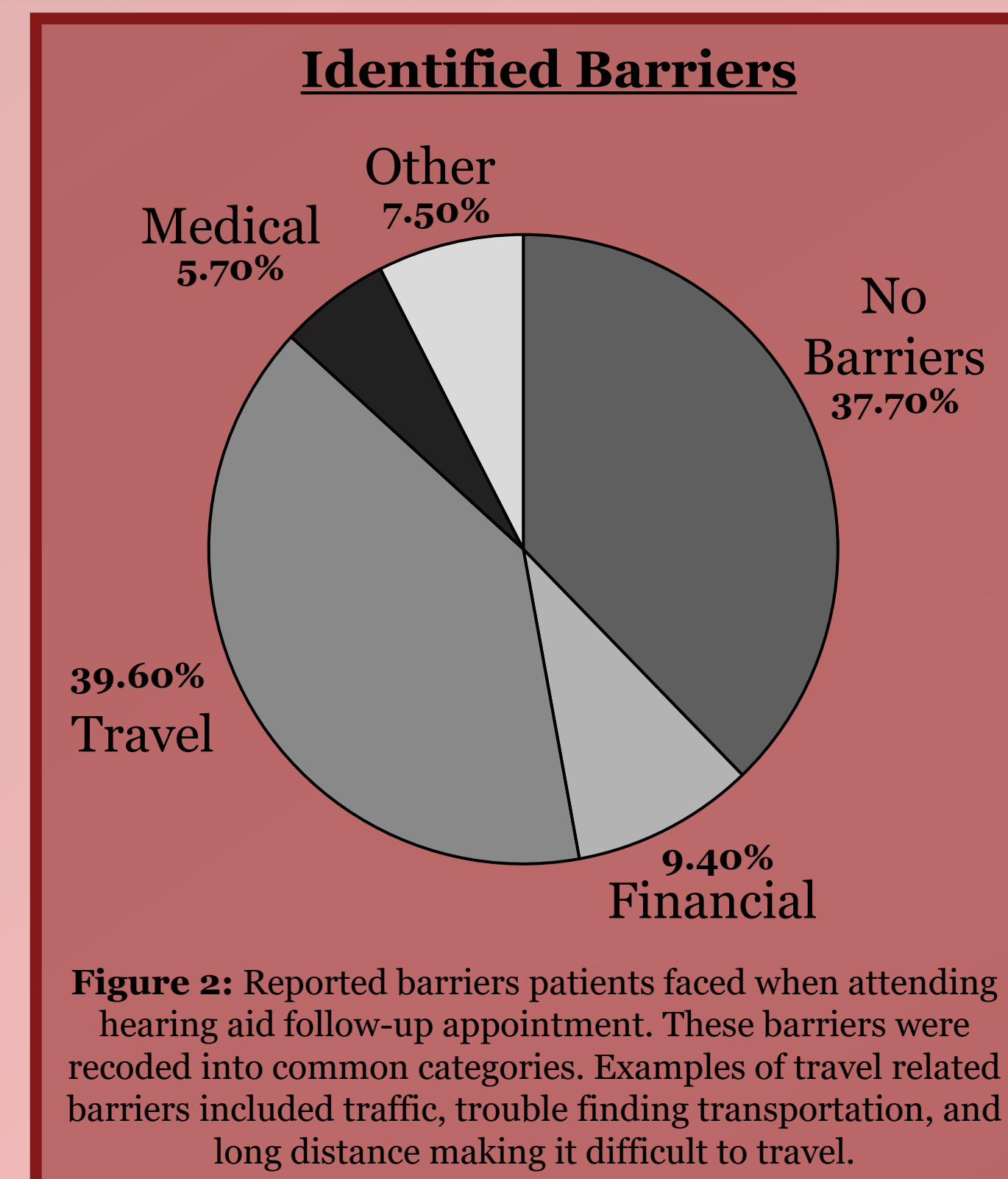


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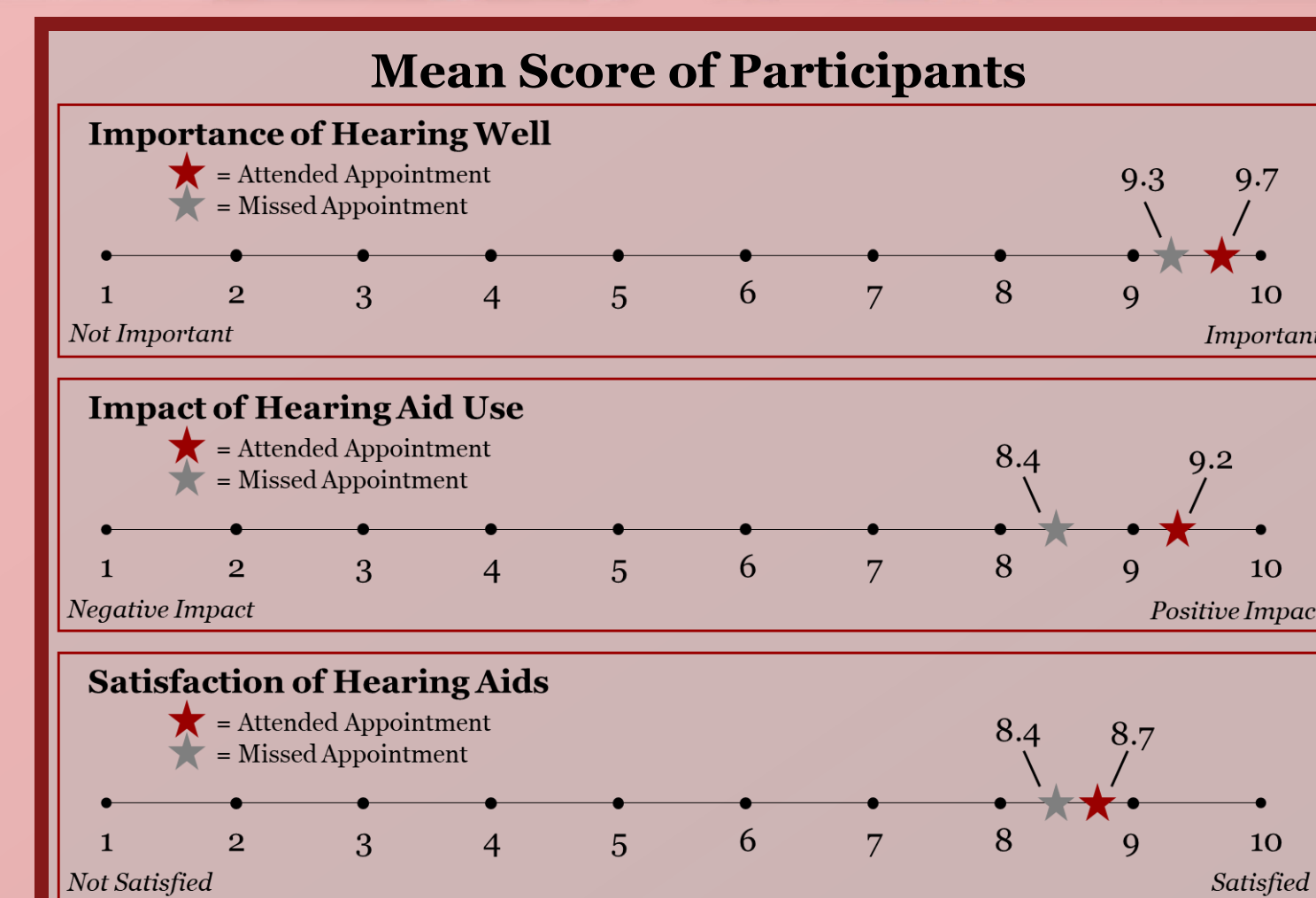
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## Background:

- In many Low -and- Middle-Income Countries (LMIC), there is a severe shortage of quality ear and hearing services.<sup>1</sup>
- African Bible College Hearing Clinic and Training Center (ABC HCTC), the first Audiology clinic in Malawi, serves a significant role in providing ear health care plus sourcing hearing aids to the general public.<sup>2</sup>
- As one of the poorest countries in the world, the people of Malawi face numerous barriers when seeking hearing care, including lack of financial resources, distance and transportation, lack of awareness and understanding of hearing loss, and lack of availability/accessibility to services.<sup>1</sup>
- Routine follow-up care for hearing aid users is crucial, therefore individuals faced with these barriers are at risk for poor hearing aid outcomes and reduced quality of life.<sup>3</sup>



**Figure 2:** Reported barriers patients faced when attending hearing aid follow-up appointment. These barriers were recoded into common categories. Examples of travel related barriers included traffic, trouble finding transportation, and long distance making it difficult to travel.



**Figure 4:** Participants were asked to respond to three Likert Scales to assess the importance of hearing well, impact of utilizing hearing aids, and their satisfaction of their new hearing aids. The average score for those who attended and missed their follow-up appointment are represented above.

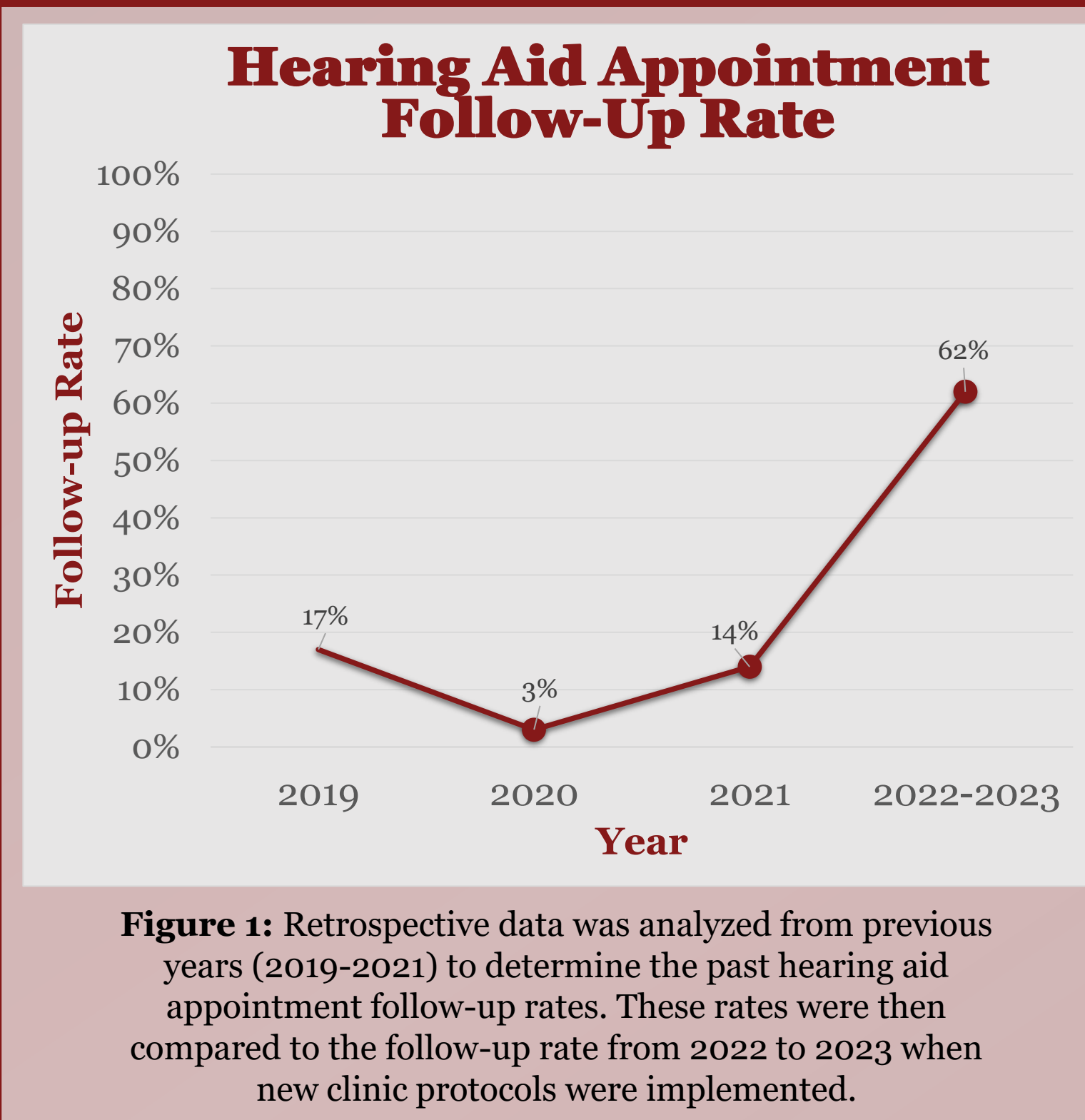


## Objective:

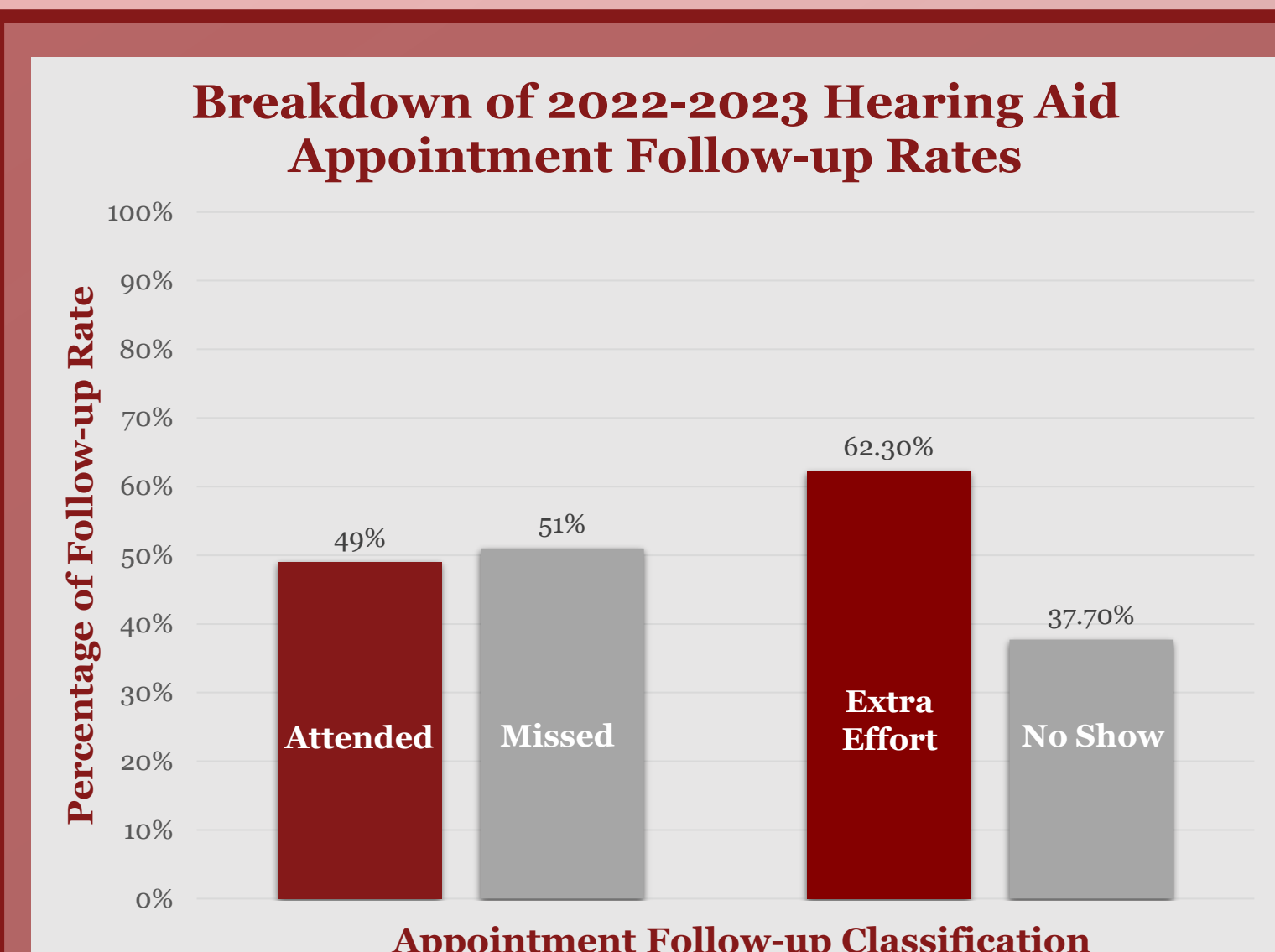
The study aimed to explore the impact of changes to the ABC HCTC hearing aid fitting protocols and specific educational initiatives surrounding follow up care on follow up rate and engagement with hearing aid devices.

## Design:

- A retrospective data analysis was performed for 2019-2021 adult hearing aid follow-up rates.
- Hearing aid follow-up rates were analyzed following a new clinic protocol that was implemented in 2022-2023 including: providing transportation costs (if needed), additional educational materials, limited 1-month supply of hearing aid batteries, back-up contact phone numbers collected, initiation of a two-week phone call follow-up, and a reminder phone call for the face-to-face follow-up appointment.
- A survey was completed at the hearing-aid face-to-face follow-up appointment to assess the barriers to follow-up care and hearing aid satisfaction.



**Figure 1:** Retrospective data was analyzed from previous years (2019-2021) to determine the past hearing aid appointment follow-up rates. These rates were then compared to the follow-up rate from 2022 to 2023 when new clinic protocols were implemented.



**Figure 3:** Hearing aid appointment follow-up rates were analyzed for the 2022-to-2023-year time period. Patients were classified into two main categories, whether they missed or attended their scheduled follow-up appointment. Extra effort went into contacting and rescheduling those patients who missed their initial scheduled appointment. Patients were then re-classified based on if they were a complete no-show or if they eventually returned to the clinic to receive services, giving an overall follow-up rate.

## Results:

- The fitting follow-up rate at ABC HCTC increased from an average of 11.5% in 2019-2021 to 62.3% in 2022-2023.
- Hearing aid follow-up rates were significantly impacted by the new clinic protocol designed to improve hearing aid satisfaction among hearing aid users at ABC HCTC.
- Barriers to follow-up care indicated difficulty with travel, financial, and medical related obstacles.

## Conclusions:

- The changes implemented in ABC HCTC fitting follow-up protocols in 2022 to 2023 led to improved follow-up rates as compared to 2019-2021.
- Barriers to follow-up care are evident, even with newly-implemented clinic protocols aimed at increasing return rates.
- Routine follow-up care and hearing aid success depends on the protocols set in place by each respective practice.
- The improved return rate in this study must be credited to changes to ABC HCTC fitting follow-up protocol.

## References:

- Bright, T., Mulwafu, W., Thindwa, R., Zuurmond, M., & Polack, S. (2017). Reasons for low uptake of referrals to ear and hearing services for children in Malawi. *PLOS ONE*, 12(12), e0188703. <https://doi.org/10.1371/journal.pone.0188703>
- Gordie, K., Davis, N., Lister, J., Vallario, J., Bartlett, P., Khomera, M., Toman, J., & Kapalamula, G. (n.d.). *Malawi*. Global Audiology. <https://globalaudiology.org/africa/index>
- McCormack, A., & Fortnum, H. (2013). Why do people fitted with hearing aids not wear them? *International Journal of Audiology*, 52(5), 360-368. <https://doi.org/10.3109/14992027.2013.769066>

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