

Research

Evaluating a drive-through walk-in model for hearing aid management in the public healthcare sector during COVID-19 in South Africa

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Abstract

Background The COVID-19 pandemic significantly disrupted healthcare services globally, prompting the need for innovative solutions. In South Africa, a drive-through/walk-in service model was implemented for ear and hearing aid management within the public healthcare sector to address the challenges posed by the pandemic.

Aim This study aimed to explore the development, implementation, and outcomes of the drive-through/walk-in ear and hearing aid management service model in South Africa's public healthcare sector during the COVID-19 pandemic. Specifically, the study investigated patients' experiences with participation, examined perceptions of service efficiency, and explored patients' reflections on the service.

Methods A retrospective qualitative approach was employed, analysing patient feedback and clinical records. Data were collected from 46 patients using a combination of clinical records, observations, and semi-structured interviews. Thematic analysis was conducted to identify key themes related to communication challenges, dependence on hearing aids, service accessibility, and patient satisfaction.

Results The analysis identified several themes under each specific objective, including (a) participation and communication challenges, (b) obligation, dependence, and safety, (c) accessibility and systems constraints, (d) time efficiency and systems management, and (e) recommendations for improvement. Patients reported significant communication challenges due to physical barriers such as the use of face masks, which hindered lip-reading and social interaction. Despite these challenges, patients viewed the service as essential due to their dependence on hearing aids for communication and safety. Most participants appreciated the efficiency of the service, although some noted rigidity in scheduling. Satisfaction levels were high, with many patients expressing a desire for the service to continue post-pandemic.

Conclusion The drive-through/walk-in service model effectively maintained essential hearing aid management during the pandemic, addressing critical patient needs despite some limitations in accessibility and flexibility. The study highlights the importance of adaptable, patient-centred healthcare delivery models in times of crisis and suggests that such services should be considered for future healthcare strategies.

Keywords COVID-19 · Drive-through service · Walk-in service · Hearing aid management · Public healthcare · Patient participation · Healthcare efficiency · South Africa

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1 Introduction

Among the healthcare services significantly disrupted during the COVID-19 pandemic were ear and hearing care, which are vital for individuals with hearing impairments who rely on regular management of their hearing aids to maintain their quality of life (QoL) [1, 2]. The right to health means everyone should have access to the necessary health services [3], and this includes access to ear and hearing (audiology) services. The American Speech-Language-Hearing Association [4] asserts that audiology services are essential for people with communication disorders, which include hearing impairment, balance disorders, and other auditory disorders.

In South Africa, approximately 10% of the population is reported to have significant hearing loss, but only about 2% seek treatment, and furthermore, it takes several years for individuals to seek help [5, 6]. Approximately one-third of people over 65 are affected by disabling hearing loss [3]. Inadequate hearing can lead to exclusion from communication and significantly impact everyday life, causing feelings of loneliness, isolation, and frustration, particularly among older people with hearing loss [7].

The South African public healthcare sector, already strained by limited resources and overcrowding, faced even greater pressure during the pandemic. In-person consultations for hearing aid management were significantly disrupted due to infection control measures and the reallocation of resources to combat COVID-19 [8, 9]. Consequently, healthcare providers were compelled to innovate and implement alternative service delivery models that could maintain access to care while minimizing the risk of virus transmission [1, 10–12].

An innovative response was the introduction of a drive-through/walk-in service for ear and hearing aid management, offering safer, more efficient audiology services. The drive-through model, typically associated with mass testing and vaccination efforts, was adapted to allow patients to receive necessary care for their hearing aids and ear health without the need to enter healthcare facilities. This shift emphasized the need for adaptable, patient-centred approaches in healthcare delivery during crises. However, while the drive-through and walk-in services offered immediate solutions to pandemic-related challenges, their implementation also raised important questions about their long-term viability, efficiency, and influence on patient outcomes.

The potential benefit of implementing a walk-in service, particularly in a public hospital setting, is immense. It not only allows patients to access services without having to wait for an appointment, which usually has increased waiting periods [13], but it also enables clinicians to use a triage model to identify patients who have missed appointments or discontinued follow-up care ("defaulted"). These patients may require referrals or re-engagement with the healthcare system. Early identification of such patients ensures that they receive the necessary intervention promptly, preventing further deterioration of their hearing health or other complications.

Innovative strategies like walk-in clinics in the healthcare sector have been vital during the COVID-19 pandemic for boosting services such as: vaccination rates in preparing for future public health emergencies [14]. These clinics allow for flexible access, efficiently targeting specific patient populations [10, 15]. Implementing a walk-in triage system can balance demand management with operational costs, ensuring resources are used effectively to meet community needs. This approach not only enhances service rates, but also strengthens overall preparedness for public health crises by leveraging the efficient deployment of resources.

The lack of research on walk-in services for ear and hearing aids management within the public healthcare context, especially in South Africa, highlights a significant gap in understanding and optimizing patient care approaches. By improving healthcare systems through walk-in clinics, we could enhance the accessibility, efficiency, and quality of ear and hearing aids management services. Chris Hani Baragwanath Academic Hospital (CHBAH) is currently one of the few institutions that recognised the need to implement a walk-in service for patients presenting with hearing device challenges. At the start of the COVID-19 pandemic, the South African government-imposed lockdowns to control the virus' spread. These restrictions, while necessary, limited patients' access to healthcare services, causing disruptions in routine and emergency medical care [8, 16].

The COVID-19 highlighted challenges prompted the CHBAH audiologists to think divergently and create systems that would benefit patients, allowing them to continue accessing essential services that would enable them to continue deriving maximum benefit from their assistive listening devices. Some adaptations to the service delivery made included improvements in queue management, use of personal protective equipment (PPE), stringent infection control, COVID-19 screening, complimentary use of telehealth, and efficient stock control of hearing devices and consumables. The benefits of these adaptations resulted in patients still being able to access face-to-face sessions at the hospital, using the correct PPE and infection control measures. Alternative forms of telehealth were made

accessible to patients, including troubleshooting videos that would help patients resolve minor issues with their devices if they could not get to the hospital due to national restrictions [17].

Surveys conducted with patients who attended the clinic during this time as part of clinical service provision provided valuable information and engagement, allowing clinicians to consider services such as support groups and succession planning. Analysis of the data from these surveys and clinical interactions is crucial for establishing evidence base for considerations of service delivery models that might be more efficient for this context during and outside of a pandemic such as COVID-19, hence the motivation for this study. This study aimed to explore the development, implementation, and outcomes of the drive-through/walk-in ear and hearing aid management service in South Africa's public healthcare sector during the COVID-19 pandemic. It examined the challenges and opportunities presented by this innovative service model, including its effectiveness in maintaining continuity of care, patient satisfaction, and its implications for future healthcare delivery in the post-pandemic era. By analysing patient perspectives, service efficiency, and the broader influence on the public healthcare system, this study sought to contribute to the ongoing discourse on the future of audiology services in South Africa and beyond, particularly in the context of preparedness for future health crises.

2 Methodology

2.1 Aim

This study aimed to explore the development, implementation, and outcomes of the drive-through/walk-in ear and hearing aid management service model in South Africa's public healthcare sector during the COVID-19 pandemic. The specific objectives of the study were:

- To explore patients' experiences with this service delivery method and how it influenced their participation.
- To examine how this service delivery method was perceived in terms of efficiency within the public healthcare sector.
- To describe patients' reflections on their overall experience with this service delivery approach in the public healthcare sector.

2.2 Study design

2.2.1 Type of study

This study utilized a retrospective clinical approach, meaning that data were reviewed and analysed retrospectively from patient records and surveys that had been collected during routine clinical care. The data were not initially gathered for research purposes but as part of standard clinical documentation and service provision during the operation of the drive-through/walk-in clinic. During routine clinical care, questionnaires were completed during semi-structured interviews with patients utilising the service, and this data was then reviewed retrospectively as part of this study.

2.2.2 Setting

The study was conducted at the audiology clinic based at CHBAH, a tertiary hospital in Gauteng, South Africa. The Audiology and Speech Therapy department at CHBAH provides in- and outpatient clinical services across the lifespan. This hospital, located in Soweto, is part of the public healthcare system in South Africa, a healthcare system which provides healthcare services to over 80% of the South African population that cannot afford private healthcare [18]. The hospital is known to be one of the largest hospitals in the Southern hemisphere and provides critical healthcare in the region, offering comprehensive medical services, aiming to improve healthcare access and awareness in the surrounding areas.

2.2.3 Service delivery model

The drive-through/walk-in ear and hearing aid management service was established as an alternative to traditional in-person consultations during the COVID-19 pandemic to minimize face-to-face interactions and reduce the risk of virus transmission. The intervention was designed to ensure continued access to essential audiology services while adhering to public health safety measures.

- *Structure and operation:* The service operated every Monday afternoon from 12:15 to 15:45 at the audiology clinic in CHBAH. Patients did not require prior appointments and could either drive through in their vehicles or walk into a designated outdoor, well-ventilated area to receive care.
- *Triage process:* Upon arrival, patients were assigned manual queueing numbers at the clinic's reception desk. This helped manage patient flow and prevent overcrowding. Patients were assessed by audiologists who triaged cases based on urgency and the complexity of the hearing aid issue. Triage helped identify patients who required more immediate attention or referrals for further audiological evaluation.
- *Services provided:* The core services offered included:
 - Hearing aid maintenance (e.g., cleaning, adjustments, and troubleshooting),
 - Battery replacements,
 - Basic ear health assessments (such as otoscopy),
 - Education on hearing aid care and use.

The service focused on solving common, straightforward hearing aid issues to allow for efficient care while minimizing contact time between patients and healthcare staff. Complex issues that could not be addressed on-site were referred to follow-up appointments or specialized services.

- *Infection control measures:* Stringent infection control protocols were followed to ensure the safety of both patients and staff. These included:
 - Mandatory use of PPE by all healthcare staff,
 - COVID-19 screening at entry points,
 - Regular sanitization of service areas and equipment,
 - Social distancing measures in the walk-in area and controlled patient flow through the triage system.
- *Patient communication and support:* Patients were informed about the service through the hospital's communication channels, and troubleshooting guides were also made available for patients to address minor hearing aid issues at home. Telehealth options were introduced in parallel for patients who could not attend in person.

This service delivery model provided a flexible, efficient solution that allowed patients to access essential hearing aid management during the pandemic, minimizing disruptions to their care and reducing the risk of COVID-19 exposure, and the service continues to operate.

2.3 Participants

2.3.1 Recruitment process

A total of 46 participants for this study were recruited retrospectively from the pool of patients who attended the walk-in hearing aid repair clinic at CHBAH during the COVID-19 pandemic. As this was a retrospective review of clinical data, the recruitment process involved the following steps:

- *Eligibility criteria:* All patients who attended the clinic during the designated time frame (March 2020 to March 2021) were eligible for inclusion, provided they had been fitted with hearing aids at CHBAH and were experiencing difficulties with their hearing aids that required maintenance or repair. Only adult patients (18 years

and older) were included. No specific exclusion criteria were applied unless patient records were incomplete or missing essential data for analysis. The sample included hearing aid users of all levels of experience.

- *Data collection in clinical care:* During routine clinical visits, data were collected as part of standard care. This included demographic information, details of the patients' hearing aid issues, and notes on services provided (e.g., hearing aid repairs, battery replacement). Additionally, informal feedback from patients interviews about their experiences with the service was gathered during these visits as part of clinical care. This feedback was documented in patient records, with the intention of using it to improve service delivery.
- *Informed consent:* As the data were collected for clinical purposes and not specifically for research at the time of care, explicit consent for this study was not sought during the patients' visits. However, consent to use anonymized data for service improvement and research purposes was covered under the hospital's general consent for treatment and data usage policy.
- *Participant identification:* After the ethical clearance was granted, the researchers reviewed patient records from the clinic to identify eligible participants. Convenience sampling was employed, meaning that all eligible records from the period in question were included in the study. This non-random sampling method was appropriate given the nature of the retrospective data review [19].

2.3.2 Data collection

All staff members involved in the Hearing Aid Repairs clinic during the pandemic period of lockdown restrictions were data collectors, as part of the standard clinical service provision at CHBAH. Three types of data were collected during the operation of the Hearing Aid Repairs clinic, which included clinical records, observations of patient patterns and behaviours, and semi-structured informal interviews.

- *Clinical records:* Clinical data were collected by staff members as part of the standard patient care process during the pandemic. Each time a patient visited the clinic for hearing aid repair or maintenance, the attending audiologist documented the visit in the patient's clinical file. Information included demographic data (age, gender, etc.), details of the hearing aid issue, the services provided (e.g., battery replacement, device cleaning, troubleshooting), comorbidities (e.g. hypertension, diabetes, etc.), and any follow-up actions required. These clinical records formed the foundation of the data set, providing objective information about the patients' attendance, hearing aid problems, and the interventions performed during their visit.
- *Observations of patient patterns and behaviours:* Staff members, including audiologists and clinic support staff, also conducted informal observations of patient behaviours and patterns during their visits. This included noting how patients navigated the drive-through/walk-in service, their reactions to the new service model, and their general demeanour during their clinic visit. These observations were recorded in clinical notes and provided valuable qualitative data on how patients interacted with the service. For example, staff documented whether patients seemed confused by the process, required additional assistance, or expressed satisfaction or dissatisfaction with the service model.
- *Semi-structured informal interviews:* In addition to clinical care, staff conducted semi-structured informal interviews with patients during their clinic visits (Appendix A). These interviews were designed to elicit feedback on their experiences with the drive-through/walk-in service, including how they felt about the service's efficiency, safety, and accessibility. While these interviews were not formalized research interviews, they followed a general guide to ensure key topics related to patient satisfaction and service delivery were covered. These informal interviews were documented in patient records and provided rich qualitative insights into patient perspectives on the service. The interviews helped capture personal experiences, challenges faced, and suggestions for improvement.

After all the data were collected as part of routine clinical care, the records were retrospectively reviewed for this study. This process involved reviewing the clinical notes and interview transcripts to extract key themes and insights related to the study objectives. All identifiable patient information was anonymized during this process, and ethical clearance was obtained for the review of these clinical records.

2.3.3 Data analysis

Both quantitative and qualitative data were analysed to address the objectives of this study. Quantitative data were extracted from the clinical records. This included demographic and medical information (e.g., age, gender, cohabitation numbers, comorbidities) and other numerical data such as duration of hearing aid use, frequency of clinic visits, and mode of transport used to access the clinic. These data were entered into a database and analysed using descriptive statistics (mean, standard deviation, percentages) to summarize the characteristics of the participant sample and service utilization patterns. Qualitative data were derived from two sources: staff observations and the semi-structured informal interviews with patients. These data were analysed using thematic analysis following the six-phase approach outlined by Braun and Clarke [20]. This involved familiarizing ourselves with the data, generating initial codes, searching for patterns and themes, reviewing and defining themes, and finally reporting on key findings. Themes that emerged from the qualitative data provided insights into patients' experiences, perceptions of the service's efficiency, and feedback on the walk-in/drive-through model. The combination of quantitative and qualitative analysis allowed for an overall understanding of both the numerical trends in service usage and the subjective experiences of patients using the drive-through/walk-in hearing aid management service.

2.4 Ethical considerations

Ethical approval for this study was obtained from the University's Human Research Ethics Committee (Medical) (Approval No. M1810644), as well as permission from the Head of the Department of Speech Therapy and Audiology and from the hospital's research committee. The ethical clearance covered both the retrospective review of clinical records and the collection of qualitative data through staff observations and semi-structured informal interviews with patients. By obtaining ethical clearance for both the quantitative and qualitative components of this study, all procedures adhered to the principles of confidentiality, voluntary participation, and the responsible use of clinical data for research purposes. Since this study involved the retrospective analysis of data initially collected for routine clinical care, explicit consent for participation in the research was not obtained at the time of data collection. However, all patients provided general informed consent for their data to be used for service improvement and research purposes upon their admission to the clinic. This consent process was outlined in the hospital's standard consent form, which patients signed when receiving care. To ensure confidentiality, all patient data used in this study were anonymized before analysis. No identifying information, such as names or contact details, was included in the dataset. No financial or material incentives were provided to participants for taking part in this study. Participation in the qualitative interviews and observations was entirely voluntary, and patients were not compensated for their time or feedback. The lack of incentives was in line with the study's retrospective design and ethical guidelines, ensuring that patients' participation was based on voluntary consent. The ethical protocols adhered to the principles of the Declaration of Helsinki (1975 and revised in 2008), ensuring that patient privacy and confidentiality were protected throughout the study.

2.5 Trustworthiness and rigour

To ensure the trustworthiness and rigor of the study, several strategies were implemented in line with established qualitative research criteria [21]. Credibility, transferability, dependability, and confirmability were assured. For credibility, firstly, triangulation of data sources was done where data were collected from multiple sources, including clinical records, observations, and semi-structured informal interviews with patients. This triangulation ensured that the findings were supported by various types of data, contributing to a fuller understanding of patient experiences and perspectives. Secondly, member checking (informal) was done. While the study used informal interviews, audiologists sought clarification and confirmation of certain responses from patients during the interview itself. This process helped ensure that the audiologists accurately understood the participants' experiences. Lastly, prolonged engagements contributed towards credibility. The staff conducting the observations and interviews were already familiar with the clinic's operations and patient population, allowing for a more in-depth understanding of patient behaviours and experiences over time.

For transferability, thick descriptions in the form of detailed descriptions of the clinic's service model, the pandemic context, and the patient experiences were provided. This allows readers to understand the context in which the study was conducted and to assess how the findings might be applicable to other settings or populations. Although the study was conducted in a specific public healthcare context, the insights gained can be useful for other healthcare providers facing similar challenges.

For dependability, firstly, an audit trail in the form of a clear and detailed record of the research process, from data collection through to analysis, was maintained. This included documentation of how clinical records were reviewed, how observations were recorded, and how themes were identified during the analysis. This audit trail allows others to follow the decision-making processes and assess the consistency of the study. Secondly, reflexivity was practiced, where the research team engaged in reflexive practice, acknowledging the potential influence of their own perspectives and biases on the data collection and analysis process. Reflexive notes were kept to ensure that personal biases were minimized and that the analysis focused on the participants' perspectives.

For confirmability, data audit and peer review occurred. The findings were discussed and reviewed by multiple members of the research team to ensure that the interpretations of the data were grounded in the actual patient responses and observations. This peer review process helped to avoid bias and ensure that the findings were an accurate reflection of the data. Furthermore, anonymisation and objectivity were ensured. Patient data were anonymised during the analysis to ensure that the findings remained objective and free from any bias related to personal identifying information. The analysis was grounded in the data rather than the researchers' preconceptions. By implementing these strategies, the study ensured that its findings were credible, transferable, dependable, and confirmable, thereby meeting the criteria for trustworthiness and rigor in qualitative research.

2.5.1 Data management

Appropriate data management procedures were implemented to ensure the security, confidentiality, and organization of both qualitative and quantitative data collected during the study. For data collection and documentation, all data were documented immediately after patient interactions or clinic visits. Clinical records were reviewed, and notes from the interviews and observations were written down in dedicated research notebooks and later transcribed digitally. Each participant was assigned a unique code to anonymise their information to adhere to data anonymisation. This code was used to link their clinical records, interview responses, and observations without revealing their identity, thus protecting their privacy and confidentiality. Only the research team had access to the key that linked participant codes to the original data, and this key was stored separately from the main dataset. For data storage, all physical documents, such as written observation notes and paper copies of clinical records, were securely stored in a locked filing cabinet at the research site. Digital data, including transcriptions of interviews, clinical data entries, and qualitative analysis notes, were stored on a password-protected, encrypted computer. Backup copies were also stored on an encrypted external hard drive to prevent data loss. Data integrity and version control were ensured by conducting checks during the data entry process to ensure accuracy, especially for quantitative data. Any errors or inconsistencies in data entry were corrected immediately. A version control system was employed for digital files to ensure that any changes made during the analysis process could be tracked, and previous versions could be restored if needed. Lastly, retention and disposal of data protocols are in place where data will be retained for a period of five years, in line with institutional and ethical guidelines. After this period, all digital data will be permanently deleted from the computer and external hard drive, and physical documents will be securely shredded. These data management procedures ensured that the integrity, confidentiality, and security of both qualitative and quantitative data were maintained throughout the study.

3 Results

This section reports on both the quantitative and qualitative data collected during the study. The quantitative data includes demographic information, clinic usage patterns, and the characteristics of the participant sample, analysed using descriptive statistics. The qualitative data, gathered through patient observations and semi-structured informal interviews, explores patients' experiences, perceptions of the service, and recommendations for improvement.

The results provide insight into the patients' perspectives and the overall influence of the drive-through/walk-in ear and hearing aid management service in the public healthcare sector during the COVID-19 pandemic. Several themes emerged, with each theme aligning with the specific objectives of the study, offering a broad understanding of how this service delivery method was perceived and its implications for healthcare efficiency.

Table 1 presents a combination of data derived from two sources: (1) patient files (clinical records) which includes demographic information, cohabitation numbers, mode of transport, and duration of hearing aid use, and (2) survey questions (informal interviews).

Table 1 Participant sample characteristics (N = 46)

Participant sample characteristics (N = 46)	
Age, years (M ± SD)	59.2 ± 6.2
Gender	
Male	18
Female	28
Cohabitation numbers	
Range	(0–12 persons)
Mean	2.4 persons
Comorbid medical diagnosis (3 highest documented diagnosis)	
Hypertension	40%
Heart disease	10%
Middle ear pathology	10%
Mode of transport to the hospital during pandemic %	
Private transport	19%
Public transport	81%
Ease of traveling in a pandemic (easy versus difficult) %	
Easy	76%
Difficult	24%
Aided duration %	
Range	(10 months—> 40 years)
Mean	4.5 years
Rate hearing aid benefit	
Most of the time	54%
All of the time	46%

Results depicted in Table 1 reveal that the participants had a mean age of 59.2 years ($SD \pm 6.2$), thus indicating that the sample primarily consisted of older adults. Majority of participants were female (61%), with participants found to be living with an average of 2.4 persons, with a range from living alone to cohabitating with up to 12 people. The most common comorbidity in the sample was hypertension (40%). A significant majority of participants (81%) relied on public transport to access hospital services during the pandemic, and despite the reliance on public transport, 76% of participants found it easy to travel during the pandemic. Lastly, participants had been using hearing aids for a mean duration of 4.5 years, with a range from 10 months to over 40 years. Most participants reported benefiting from their hearing aids most of the time (54%), while 46% reported benefiting all the time.

3.1 Exploring patients' experiences with this service delivery method and how it influenced their participation

When exploring patients' experiences with this service delivery method and how it influenced their participation, three themes, with their sub-themes, emerged from the data. These were (1) Participation and Communication Challenges (poor communication; interpersonal relationships affected); (2) Obligation, Dependence, and Safety (obligation and dependence; safety concerns and uncertainty); and (3) Accessibility and Systems Constraints (systems constraints and opportunities; opportunity and participation).

3.1.1 Theme 1: participation and communication challenges

Poor communication emerged as a strong sub-theme. Patients faced significant challenges due to impaired communication, exacerbated by physical barriers such as masks that hindered lip-reading. This affected their ability to engage in social interactions, leading to strained interpersonal relationships and a decline in overall QoL. The frustration stemming from these barriers made the drive-through/walk-in service a crucial lifeline during the pandemic.

"You can't read lips when someone is wearing a mask...so it was hard to understand people ...really hard, frustrating. It felt like I was alone in my own world, not able to talk to anyone ... and that was really frustrating." (Participant 5)

"The walk-in clinic was a lifesaver for me because without my hearing aids, I couldn't understand any conversations. Wearing of masks and also not being allowed to stand close to people just made everything so much harder, and my life just got hard." (Participant 11)

Interpersonal relationships were affected, where the inability to communicate effectively without their hearing aids, compounded by the social distancing measures, further isolated patients. This isolation not only impacted their participation in daily activities but also deepened feelings of loneliness and dependence on others for communication.

"Without being able to hear properly, I felt cut off from my family and friends. The social distancing only made it worse—I couldn't even enjoy just a simple chat, and this left me feeling very alone." (Participant 2)

"I was finding myself pretending that I am hearing and just agreeing" (Participant 8)

"My hearing aids are my connection to the world, and not being able to use them properly during the pandemic made me more dependent on others to communicate. It was like losing my independence...losing myself" (Participant 10)

3.1.2 Theme 2: obligation, dependence, and safety

A sub-theme of *obligation and dependence* was found. Patients felt compelled to use the service despite potential risks due to their reliance on hearing aids for essential communication and safety. The fear of not hearing properly, which could lead to unsafe situations, made the service indispensable, highlighting the critical role of hearing aids in their daily lives.

"I couldn't imagine going without my hearing aids, even if for a day. Not being able to hear properly, especially during such a stressful time when there was so much new things going on around us and on TV and the news, it made using this clinic a must, not just a nice to do choice." (Participant 33)

"I felt I had no choice but to come due to circumstances" (Participant 20)

"I knew there were risks, but I had to come because my hearing aids are very important to me for my safety and for speaking to and hearing others. It wasn't just about hearing; it was about staying connected and safe." (Participant 7)

Safety Concerns and Uncertainty was an overwhelming sub-theme from the data. While some patients were concerned about COVID-19 exposure, others were more focused on the necessity of hearing well, even if it meant potential exposure. The uncertainty surrounding the pandemic's duration and its impact on healthcare access added to their anxiety, making them more determined to maintain their hearing aids.

"I was very worried about getting COVID-19, but I was even more afraid of not hearing in a dangerous situation than of catching COVID-19. I needed my hearing aids to feel safe and complete, so I had no choice but to go." (Participant 40)

"No one knew really what was the pandemic about, what it will do, and so on..., but I couldn't afford to neglect my hearing. Even if it meant taking risks, I had to make sure my hearing aids were working well, as I depend on them all the time every day." (Participant 31)

3.1.3 Theme 3: accessibility and systems constraints

A sub-theme of *systems constraints and opportunities* was identified. The structured nature of the service, such as specific times for hearing aid repairs, provided a systematic approach but also presented challenges in terms of accessibility. Patients often had to align their appointments with other healthcare needs, reflecting both the benefits and limitations of the service structure.

"The specific times for repairs were a bit strict and not flexible. I had to plan my entire day around my appointment, which was not easy, but I was very grateful the service was available at all...because other hospital services were completely closed" (Participant 2)

"It wasn't easy to balance my other hospital appointments with the hearing aid service times...but I tried very hard because I needed it. The service worked, but the times definitely could have been a bit better or more? I'm not sure." (Participant 11)

Opportunity and participation were the additional sub-theme under this main theme. The service's accessibility during the pandemic was crucial, with patients appreciating the convenience of a drive-through/walk-in model. This model

allowed them to continue participating in essential services without the added risk of entering crowded healthcare facilities.

"This walk in was a big blessing during the pandemic. It allowed me to keep up with my hearing needs without having to worry about crowded hospitals and long lines." (Participant 42)

"I was glad ... does not need an appointment" (Participant 39)

"Continue with the clinic, never stop it" (Participant 46)

3.2 Examining how this service delivery method was perceived in terms of efficiency within the public healthcare sector

When examining how this service delivery method was perceived in terms of efficiency within the public healthcare sector, two themes, with their sub-themes, emerged from the data, and these were 1) Time Efficiency and Systems Management (time efficiency; systems management and adaptability); and 2) Dependence on Healthcare Services (dependence on hearing aids).

3.2.1 Theme 1: time efficiency and systems management

As far as sub-theme *time efficiency* was concerned, the drive-through/walk-in model was perceived as time-efficient by many patients, with shorter waiting times compared to traditional clinic visits. This efficiency not only benefitted patients by reducing their exposure to COVID-19 but also helped the healthcare system manage patient flow more effectively.

"I was in and out much quicker than usual. It was a huge relief not to have to wait around, especially with COVID-19 still a threat." (Participant 14)

"Open clinics more often due to COVID pandemic" (Participant 19)

As far as *systems management and adaptability* sub-theme, the structured scheduling system allowed for better resource allocation and adaptability in response to the pandemic. However, some patients experienced frustration with the rigidity of appointment times, suggesting a need for more flexible service delivery to accommodate varying patient needs.

"The time when we could come in was well-organized, but I wish it was a bit more flexible. If you missed it in the week, you missed it... and this was hard if something unexpected came up during that time... so you must wait another week." (Participant 3)

"The way things were done was good for controlling the fast movement of patients to be seen, but it could have been more better. A little more flexible time for us to come would have made it perfect." (Participant 17)

3.2.2 Theme 2: dependence on healthcare services

A sub-theme on *dependence on hearing aids* emerged from the data. The efficiency of the service was closely tied to patients' dependence on their hearing aids for communication and safety. The necessity to maintain these devices during the pandemic underscored the importance of continuing such services, even under challenging circumstances.

"My hearing aids are very important to me, and I couldn't afford to miss out on this great service. The pandemic made it clear how dependent I am on these hearing aids for everything, from communication to safety." (Participant 5)

"Repairing and fixing my hearing aids was something I just could not avoid doing, even during the pandemic. They are important to my daily life, and this clinic was just what I needed to keep me going." (Participant 22)

3.3 Describing patients' reflections on their overall experience with this service delivery approach in the public healthcare sector

When describing patients' reflections on their overall experience with this service delivery approach in the public healthcare sector, two themes, with their sub-themes, emerged from the data. These were 1) Positive Patient Experience and Satisfaction (satisfaction with service; continued service and financial relief); and 2) Recommendations for Improvement (time management and COVID regulations; future considerations).

3.3.1 Theme 1: positive patient experience and satisfaction

A sub-theme *satisfaction with service* was found. Overall, patients reflected positively on the drive-through/walk-in service, appreciating the effort to maintain access to essential hearing aid management during the pandemic. They recognized the service as a vital component of their healthcare, particularly during a time when traditional services were disrupted.

"I was really pleased with how they kept the service running. It was nice to know that I could still get my hearing aids fixed when everything else seemed to be shutting down." (Participant 20)

"The drive-through service was one of the few things that worked well during the pandemic. It felt like they really cared about keeping us connected and hearing the world around us." (Participant 42)

Continued service and financial relief was the other sub-theme that emerged under this theme. Patients expressed a desire for the service to continue beyond the pandemic, citing benefits such as free batteries and the frequency of clinics as important factors. They appreciated the financial relief provided by the service and suggested that such accommodations should be sustained to support ongoing patient needs.

"Getting free batteries was a very big help, especially with everything else being so uncertain. I hope they keep offering this service because it really made a difference for many of us." (Participant 28)

"The frequent clinics and free batteries they gave us were of such a big help during a really tough time. I think these kinds of services should continue even after the pandemic." (Participant 9)

3.3.2 Theme 2: recommendations for improvement

Time management and COVID regulations as a sub-theme showed that patients recommended improvements in time management to further reduce exposure time at healthcare facilities. They also suggested stricter adherence to COVID-19 regulations, including better social distancing measures, larger waiting areas, and increased availability of sanitizers.

"Add more people to the clinic" (Participant 31)

"They could have managed the time a little better. I still had to wait longer than I would have liked, and I was worried about being exposed to the virus." (Participant 2)

"I was a little bit worried about the virus while waiting. Larger waiting areas ... and more sprays ... hand sanitizers would have helped a lot and made me feel safer." (Participant 44)

The other sub-theme under this theme was *future considerations*. Patients saw the potential for the service model to be adapted and continued in the future, even beyond the pandemic. They emphasized the need for sustainable repairs and more frequent communication to ensure that the service remains effective and responsive to patient needs.

"This type of service should definitely continue, but with more options for repairs and better communication. It's a good system that just needs a few changes here and there." (Participant 46)

"Open slots in the morning and not just on a Monday" (Participant 10)

4 Discussion

This study explored the implementation and outcomes of a drive-through and walk-in service model for hearing aid management within South Africa's public healthcare sector during the COVID-19 pandemic. Designed to maintain essential audiology services while minimizing infection risk, the model allowed patients continued access to hearing aid repairs and maintenance without the need for scheduled appointments. Through a retrospective qualitative analysis of clinical records, patient observations, and informal interviews, this study examined patient experiences, service accessibility, and perceived efficiency. The findings highlight patients' dependence on hearing aids for daily functioning and safety, along with significant communication challenges posed by the pandemic, especially for those using public transport. Overall, the study underscores the need for adaptable healthcare solutions that prioritize patient safety and accessibility, especially in resource-constrained settings and during public health crises.

The participant sample characteristics provide several insights relevant to the South African audiology context. The mean age of 59.2 years suggests that older adults are the primary users of hearing aids in this sample. This finding aligns with global trends where age-related hearing loss is prevalent. For South African audiologists, this emphasizes

the importance of tailored audiology services that address the specific needs of older adults, including managing age-related comorbidities like hypertension [22]. Understanding comorbidities in the population of hearing aid users is essential for several reasons, especially in the context of healthcare delivery during a pandemic. Comorbid conditions, such as hypertension, heart disease, and middle ear pathologies (as identified in this study), can complicate the management of hearing impairments and affect overall health outcomes. For example, older adults with hearing loss and additional chronic conditions may face greater barriers to accessing healthcare, increased dependence on caregivers, and heightened risks of complications from untreated conditions. These factors are especially critical during the COVID-19 pandemic, where patients with comorbidities were at greater risk for severe illness and mortality [23]. Moreover, knowing comorbidities allows healthcare providers to tailor interventions to meet the broader health needs of these patients. For instance, hypertension management or diabetic care could coincide with audiological services, ensuring a more integrated programmatic approach to patient care [24]. Additionally, healthcare workers can prioritize high-risk patients during walk-in services or triage based on both hearing and non-hearing-related conditions. Understanding comorbidities also ensures that the hearing care provided is safe, particularly when some treatments or interventions could potentially interact with other medical conditions or medications the patient is taking, for example where the patient is on ototoxic medications and requires close hearing monitoring [25].

The higher proportion of female participants may indicate a greater willingness or need among women to seek hearing care services [26], and consequently might highlight that understanding gender differences in health-seeking behaviour can help audiologists in South Africa develop more targeted outreach and support services. The average of 2.4 cohabitants in the sample may be evidence that social support systems are available, which may play a role in the management and support of hearing aid use. However, the wide range of cohabitation (0–12 persons) suggests varying levels of social interaction, which could influence the communication needs and mental health of hearing aid users.

An important finding from this study is that the majority of participants (81%) used public transport to access the clinic, which raises questions about the necessity of the "drive-through" component of the service. While the drive-through model is typically designed to cater to individuals with private vehicles, the results suggest that most patients, particularly those reliant on public transport, might not have fully benefited from this aspect of the service. However, for the minority who did arrive by private vehicle, the drive-through option may have been crucial in minimizing their exposure to other patients and streamlining their care. It is important to consider whether public transport users held different perspectives on the convenience and accessibility of the service compared to private transport users. For those relying on public transport, the walk-in component likely served as a more accessible option. These patients may have faced additional challenges, such as the risk of exposure to COVID-19 while traveling on crowded buses or taxis, which could have influenced their perceptions of safety when attending the clinic. Moving forward, healthcare services may need to reconsider the balance between walk-in and drive-through options, tailoring service delivery models to the realities of the patient population. For example, additional safety measures, such as designated public transport routes or enhanced social distancing protocols for walk-in patients, could improve the service for public transport users while retaining the drive-through option for those with private vehicles.

Despite the reliance on public transport, the fact that 76% of participants found it easy to travel suggests that public transportation remained accessible during the pandemic, and/or that the regulations around individuals only accessing healthcare within a close radius to their place of residence improves ease of access to these services. Lastly, the variation in the duration of hearing aid use (10 months to over 40 years) and the high rate of reported benefit (100% benefit either most or all of the time) indicate that hearing aids are valued and beneficial tools for the current participants. For South African audiologists, this reinforces the importance of ensuring ongoing support and maintenance for hearing aids, especially in challenging contexts like a pandemic.

These demographic profile findings highlight critical areas for consideration in the South African audiology landscape, including the need for age-appropriate services, gender-sensitive approaches, awareness of comorbidities, and addressing transportation barriers. The importance of innovative and accessible service models that can adapt to public health crises is also highlighted, ensuring that hearing aid users continue to receive the support they need, regardless of external challenges. Findings from the thematic analysis provide an understanding of the impact of the drive-through/walk-in ear and hearing aid management service on patients' participation, healthcare efficiency, and overall satisfaction during the COVID-19 pandemic. The themes identified offer valuable insights into how such services can be improved and sustained in the future to better meet the needs of patients in the public healthcare sector.

When exploring patients' experiences with this service delivery method and how it influenced their participation, three themes, with their sub-themes, emerged from the data. These were (1) Participation and Communication Challenges (poor communication; interpersonal relationships affected); (2) Obligation, Dependence, and Safety (obligation and

dependence; safety concerns and uncertainty); and (3) Accessibility and Systems Constraints (systems constraints and opportunities; opportunity and participation). These findings revealed that the introduction of a drive-through/walk-in service model during the COVID-19 pandemic seemed to have had an influence on patients' ability to participate in essential healthcare services. These findings highlight several key areas where this model affected patient participation. Firstly, *communication challenges and participation* wherein the use of physical barriers, such as masks, and the necessity of social distancing, significantly hampered effective communication for patients relying on lip-reading or other visual cues. This barrier not only led to frustration but also isolated patients from meaningful social interactions, which is consistent with existing literature that underscores the importance of clear communication in maintaining social connectedness for individuals with hearing impairments [2, 27, 28]. The ability to access hearing aid services, therefore, became crucial for maintaining their QoL and reducing feelings of isolation, particularly during the pandemic period that was filled with heightened uncertainties for everyone [29, 30]. Secondly, another key area affected by the intervention applied in this study was *obligation and dependence*, where patients expressed a strong sense of obligation to utilize the service despite the risks posed by the pandemic, primarily due to their dependence on hearing aids for communication and safety. This finding aligns well with available evidence indicating the essential role of hearing aids in enabling individuals to engage fully in daily activities and to maintain safety [2], particularly in challenging environments [9]. The drive-through/walk-in model provided a necessary service that patients could not forgo, even under pandemic conditions, highlighting its critical role in healthcare delivery during crises. The last key area highlighted by findings from this study on investigating patients' perspectives on the impact of this service delivery model was *system constraints and participation opportunities*. While the structured nature of the service (e.g., specific times for hearing aid repairs) provided an organized systematic approach, it also introduced some challenges in accessibility. Patients had to navigate these constraints by aligning their appointments with other healthcare needs, which speaks to the importance of flexible service delivery options [15, 26, 31, 32]. This flexibility is essential for enhancing patient participation and ensuring that services remain accessible and patient-centred [10, 33].

When examining how this service delivery method was perceived in terms of efficiency within the public healthcare sector, two themes, with their sub-themes, emerged from the data, and these were (1) Time Efficiency and Systems Management (time efficiency; systems management and adaptability); and (2) Dependence on Healthcare Services (dependence on hearing aids). These results indicated that the efficiency of the drive-through/walk-in audiology service model in the public healthcare sector was a critical factor in its success during the pandemic. The findings suggest that this model had both positive and negative implications for healthcare efficiency. Firstly, as far as *time efficiency and systems management* were concerned, the drive-through/walk-in model was generally perceived as time-efficient by patients, with shorter waiting times compared to traditional audiology clinic visits, which are traditionally strictly appointment based. This efficiency was crucial in minimizing patient exposure to COVID-19 while maintaining access to necessary services, an outcome reported in other similar interventions during COVID-19 [15, 33–36]. The structured allocated time for the walk-in service system allowed for better resource management and patient flow, aligned with the South African general nurses run primary healthcare system and, although it is inconsistent with the broader healthcare literature that supports the use of appointment-based models to improve service efficiency [37]. However, the rigidity of walk-in times ("appointment times") also introduced challenges, suggesting that further flexibility could enhance the model's effectiveness. Secondly, as far as *dependence on healthcare service* was concerned, the efficiency of the service was inextricably linked to patients' dependence on their hearing aids. The necessity to maintain these amplification devices during the pandemic underscored the importance of continuing such services even under challenging circumstances. This finding emphasizes the need for healthcare systems to adapt rapidly to ensure the continuity of essential services during crises [1, 2, 12, 38], a lesson that is broadly applicable beyond the context of hearing aid management.

Upon describing *patients' reflections on their overall experience with this service delivery approach in the public healthcare sector*, findings revealed that patients' reflections on the drive-through/walk-in service model provide valuable insights into its strengths and areas for improvement. A key strength identified was the *positive patient experience and satisfaction*, where patients generally reported satisfaction with the drive-through/walk-in service, appreciating the continued access to essential hearing aid management during the pandemic. This positive feedback reflects the service's ability to be patient-centred by meeting a critical need during a time when many other healthcare services were disrupted. The provision of free batteries and frequent clinics were particularly appreciated, as they provided financial relief and ensured ongoing care. These findings suggest that such services should be sustained and potentially expanded in the future, even as the immediate crisis of the pandemic subsides. Key *recommendations for improvement* raised by this study are important to consider in planning and adopting such a model in the broader healthcare service delivery platform during pandemics. Despite overall satisfaction, patients identified several areas for improvement, particularly regarding time

management and adherence to COVID-19 regulations. Suggestions for decreasing exposure time at healthcare facilities and enhancing social distancing measures highlight the need for continuous evaluation and adaptation of service delivery models. These recommendations align with broader calls for healthcare systems to be more responsive to patient needs and adaptable to changing circumstances [10, 15]. Findings also suggested *future considerations*, where patients' reflections also pointed to the potential for the drive-through/walk-in service model to be adapted and continued in the future, beyond COVID-19. The sustainability of hearing aid repairs and more frequent communication were identified as key areas that could enhance the service's long-term effectiveness. These insights are critical for informing future healthcare delivery strategies, particularly in ensuring that services remain accessible and responsive to patient needs in both normal and crisis conditions.

The findings of this study have several important implications for the South African healthcare system, particularly in the context of audiology and public health service delivery. Firstly, as far as adaptability and innovation in healthcare delivery, the success of the drive-through/walk-in service model during the pandemic demonstrates the need for continued innovation in healthcare delivery, particularly in resource-constrained environments. The South African healthcare system can benefit from adopting flexible service delivery models that can quickly adapt to public health emergencies, ensuring continuity of care for essential services like hearing aid management. Secondly, the findings underscore the importance of patient-centred care, where healthcare services are designed and implemented with the patient's needs and perspectives in mind. This includes maintaining and possibly expanding services like the drive-through/walk-in model to enhance accessibility, reduce patient anxiety, and improve overall satisfaction, especially for vulnerable populations. Thirdly, the positive reception of the service suggests that similar models could be sustained and even scaled to other provinces within South Africa. Fourthly, the communication challenges faced by patients, particularly those who rely on lip-reading, highlight the necessity of developing more inclusive and accessible healthcare environments in the country. This could involve training healthcare workers in alternative communication strategies, providing clear masks that facilitate lip reading, or using technology to facilitate better communication for patients with hearing impairments.

As far as policy development and support, findings from this study can inform policymakers about the benefits and challenges of innovative service delivery models. There is a need for policies that support the integration of such models into the mainstream healthcare system, ensuring that they are adequately funded, staffed, and accessible to all patients who need them. These policies would have significant implications for increased focus on preventive audiology, with the pandemic having highlighted the importance of preventive measures in audiology and hearing care. The continuation of such services can be a key component in preventing hearing loss and/or its consequences from worsening, particularly for patients who are unable to regularly visit clinics. This has broader implications for public health strategies focused on prevention rather than just treatment.

Based on the findings from this study, the following recommendations are proposed to support the sustainable implementation of the walk-in/drive-through hearing aid management service within public healthcare settings, particularly in resource-constrained environments like South Africa. Firstly, *integration of walk-in services with scheduled appointments*, where healthcare services should maintain a hybrid model, where walk-in services are available alongside scheduled appointments. This approach offers flexibility to patients who may not have easy access to appointments, while also allowing for more predictable patient flow. Practically, a triage system that prioritizes urgent cases during walk-in hours, ensuring that patients with more immediate needs (e.g., non-functioning hearing aids) are seen quickly can be implemented. Scheduled appointments can be reserved for more complex cases that require longer consultation times. Secondly, *staffing and resource allocation* should be carefully considered and planned. To ensure the sustainability of this model, adequate staffing and resource allocation are critical. Healthcare services must ensure that there are enough trained audiologists and support staff available to manage the increased demand for services through both the walk-in and drive-through models. Practically, rotating shifts must be used to distribute the workload and prevent staff burn-out. Training auxiliary healthcare workers to handle basic hearing aid repairs and patient queries, allowing audiologists to focus on more complex cases should be considered. The use of volunteers or community health workers to assist in patient navigation during peak times could also be considered.

Thirdly, *use of technology for efficiency* should be considered. Incorporating digital tools can streamline service delivery and reduce the time patients spend at the clinic. For example, implementation of an online booking system for patients to secure a place in the walk-in queue, reducing the need for physical waiting times. Patients could receive a time slot via text message to prevent overcrowding at the clinic. Additionally, telehealth options should be explored for troubleshooting minor hearing aid issues remotely, further reducing in-person visits. Fourthly, *enhanced patient education and communication* on self-management of their hearing aids can reduce the frequency of visits for minor issues. Patients could be provided with simple, easy-to-understand guides for hearing aid care, battery replacement, and troubleshooting common problems. Short

educational sessions during clinic visits could be offered and printed or digital materials distributed. Additionally, a telephone helpline or mobile app for quick patient queries or concerns that don't require a clinic visit could be implemented.

Lastly, *monitoring and evaluation for continuous improvement* should be put in place. The hospital should establish a system for regularly evaluating the effectiveness and efficiency of the service, where feedback from patients and staff is collected periodically to identify areas for improvement. The use of key performance indicators, such as patient waiting times, service satisfaction, and hearing aid repair rates, to monitor the success of the walk-in model could be beneficial; followed by adjustment of service delivery based on data-driven insights to ensure ongoing sustainability. By implementing these recommendations, healthcare services can optimize the walk-in/drive-through hearing aid management model, ensuring it remains accessible, efficient, and sustainable, while continuing to meet the needs of the community even beyond the COVID-19 pandemic.

5 Conclusion

The drive-through/walk-in ear and hearing aid management service in the South African public healthcare sector during the COVID-19 pandemic was a necessary and largely effective response to the challenges posed by the pandemic. The service model allowed for continued patient participation, improved healthcare efficiency, and generally positive patient experiences, although areas for improvement were identified. The findings from this study underscore the importance of flexibility, patient-centred care, and the ability of healthcare systems to adapt rapidly in response to crises. These lessons, which can be adopted and applied elsewhere, are invaluable for future healthcare delivery, both in South Africa and globally. Current findings open avenues for further research on the long-term effects of such service delivery models on patient health outcomes, particularly in underserved populations. They also suggest the need for ongoing development of similar models to cater to other aspects of healthcare, leveraging the lessons learned during the pandemic.

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Data availability Data supporting the findings of this study are available within the paper and the rest of the data that support the findings of this study are not openly available due to reasons of sensitivity and are available from the corresponding author upon reasonable request.

Declarations

Ethics approval and consent to participate Prior to commencing any form of data collection, the researcher secured ethical clearance from the University of the Witwatersrand's Human Research Ethics Committee (Medical) (No. M1810644).

Consent for publication Because this is a retrospective review of hospital clinical data consent was obtained from the relevant hospital authorities as part of the ethics approval process. Consent to publish was not necessary as no participant images and/or identifying information is used in the manuscript.

Competing interests The authors declare no competing interests.

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Appendix

Interview guide: understanding patient experiences and perspectives on the walk-in hearing aid clinic during the COVID-19 pandemic

Introduction:

- Briefly explain the purpose of the interview: to understand their experiences with the clinic, their hearing aid use during the pandemic, and any suggestions they may have for improving services.
- Emphasize that their responses are confidential and there are no right or wrong answers—just their personal experiences and opinions.
- Ask for permission to record the interview for analysis purposes (if applicable).

Section 1: background and reasons for attending the clinic

1. **Why was it important for you to attend this clinic today, especially during this time (during the coronavirus pandemic)?**
 - o Follow-up: What were the main issues you were facing with your hearing aid before coming to the clinic?
 - o Follow-up: Did you have any concerns about visiting the clinic during the pandemic?
2. **Have you attended this clinic before, or is this your first time using the walk-in service?**
 - o Follow-up: How did you learn about this service? Was it recommended to you?

Section 2: impact of the pandemic on hearing and daily life

3. **Tell us about your experience at home and in the community during this coronavirus outbreak, especially with not having a working hearing aid before coming here today?**
 - o Follow-up: How has your hearing impairment affected your communication during the pandemic, especially with masks and social distancing?
 - o Follow-up: Have you faced any challenges in accessing healthcare or other services due to your hearing impairment during this period?
4. **How has your quality of life been affected without a properly working hearing aid?**
 - o Follow-up: Were there any specific situations (e.g., safety concerns, difficulty understanding others) where not having a working hearing aid was particularly challenging?

Section 3: experience with the clinic and service satisfaction

5. **How would you describe your overall experience with the walk-in/drive-through clinic today?**
 - o Follow-up: Was the process easy to follow, or did you face any challenges while using the service?
 - o Follow-up: Did you feel safe while attending the clinic during the pandemic?
6. **What aspect of the service did you find most helpful or convenient?**
 - o Follow-up: Were there any aspects that you think could be improved?

Section 4: recommendations for improvement

7. What recommendations do you have for the clinic during this time (during the coronavirus pandemic)?

- o Follow-up: Do you have any suggestions for improving safety measures, convenience, or service delivery?
- o Follow-up: Would you recommend any changes in how the clinic is run during the pandemic to make it easier for patients like you?

Section 5: additional thoughts

8. Is there anything else you would like to share about your experience with the clinic or your hearing aid issues during the pandemic?

- o Follow-up: Do you think this service model (walk-in/drive-through) should continue after the pandemic? Why or why not?

Conclusion:

- Thank the participant for their time and valuable insights.

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