**Clinician And Patient Perspectives On Smartphone-Integrated Hearing Aids**

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**Objectives:** We used a recent innovation in hearing aids a mobile-integrated hearing aid to begin to understand the larger phenomenon of adopting integrated hearing aid technologies.

**Background:** Innovations in hearing aid technology influence clinical practice and individuals who use hearing aids. Yet minimal extant literature explicates the technology adoption experiences and perspectives of audiologists and patients. These experiences and perspectives matter to a field like audiology, the practice of which is so intimately tied to technological advancement. By understanding the interactive relationship between technological innovation and audiologist and patient experience, the field of audiology can develop technologies and ways of practicing that are more responsive to patients needs and attentive to societal developments. One innovation of current interest is the integration of hearing aids with other everyday technologies (e.g. mobile/smart phones).

**Methods:** To gain a deep understanding, we used a qualitative multiple case study methodology, borrowing from constructivist grounded theory for data collection and analysis techniques. Specifically, we conducted a multiple case study of one integrated hearing aid plus smartphone application, comprised of two instrumental cases: the case of audiologist experiences and the case of patient experiences with this innovation. We employed purposive and theoretical sampling methods culminating in a total collective case n of 19 (audiologist case n = 8; patient case n = 11). Contributing to data triangulation and increasing the rigour of the case study design, we also included a purposive sample of 10 news media and grey literature articles collected during the study timeframe. We conducted semi-structured interviews and analyzed interview and document data using the constant comparative method, and compared the two instrumental cases by looking at trends within, between, and across cases.

**Results:** The audiologist case explained audiologist's heuristic-based candidacy judgements for the integrated hearing aid and app. The patient case highlighted patient's perceptions of themselves as technologically competent, or incompetent, and the learning processes they underwent to adopt the new technology. Between cases, a notable difference related to how the device and app changed clinical interactions. While audiologists valued the increased time they spent getting to know their patients in order to counsel them to use the device and app, patients experienced additional troubleshooting brought on by Bluetooth connectivity requirements. Across cases was a resounding theme of normalization of hearing aids via their integration with a normal technology (mobile phones) and general lack of concern about privacy in relation to the smartphone application and its tracking and geotagging features. Both audiologists and patients credited the device and app with increased opportunities to participate more fully in everyday life.

**Conclusions:** The introduction of mobile-integrated hearing aids influenced the identities and candidate profiles of hearing aid users and the nature of time spent in clinical interactions. These findings contribute new knowledge and raise more questions about technological innovation. For instance, audiologists might need to carefully consider both the positive and negative potential of normalization as it relates to stigma. The influence of integrated hearing aids on patient experience and audiology practice calls for continued research and clinical consideration, with especially exciting implications for candidacy decision-making.