Improving the clinical approach to ear health in a SEND setting

Verity Langlands, Principal Audiologist, and **Alivia Thomas**, Therapy Assistant, at Seashell provide an overview of the use of technology in supporting the therapy assistant role to become competent in otoscopy and improving the clinical approach to ear health in a SEND setting

Seashell offers specialist education and residential facilities for children and young people (CYP) with learning difficulties, disabilities, complex health needs, and autism. Our students have profound and complex learning and communication difficulties. We provide highly specialised care and support to ensure each student's needs are understood and met with the support of a specialist health team and support staff, including Qualified Teachers of the Deaf (QToDs).

The audiology team support children with hearing loss and those with concerns regarding ear health (such as persistent wax build up, frequent infections, etc), and it is particularly important for the team to ensure vigilance as most students have significant communication difficulties, preventing them from effectively reporting their needs: including discomfort and pain.

We recently participated in a hearing checks pilot in collaboration with NHS (National Health Service) England, and we were introduced to the TympaHealth video otoscopy device, which uploads images and videos to a cloud-based platform. Around the same time as our participation in this pilot study, we employed a therapy assistant who transferred from a learning support assistant role in an educational setting to her first clinical role. To support the caseload within Seashell, our priority was to develop the skills of our new therapy assistant to become competent in performing otoscopy, identifying a healthy eardrum, and identifying when to ask for a second opinion or raise concerns regarding infections and other ear health concerns.

Initially, the therapy assistant was sent on a course that focused on the anatomy of the ear, identifying a healthy and unhealthy ear, and practical use of the video otoscopy device. This course could be attended by anyone wanting to up-skill to perform otoscopy, enabling education-based roles to feed into the clinical aspect of a young person's care, and with the potential to prevent time being taken out of education to attend appointments.

Following this course, I observed a couple of otoscopy sessions to ensure the therapy assistant was conducting examinations safely, particularly with our complex cohort (as unpredictable movement or inability to have the subject sitting still might be more difficult than the training session environment). Once competency of performing the examination was established, we began a programme of supervision performed 100% remotely.

In the first couple of weeks, the therapy assistant would inform the audiologist when otoscopy had been completed and describe the findings. The images were

Using the video otoscopy device

then reviewed on a cloud-based system remotely and verified that they were in keeping with the clinical picture described by the assistant therapist. If any concerns arose, they were flagged as of high importance and the audiologist would review the images and make a clinical decision in a timely manner.

As it was established that the therapy assistant was able to correctly identify the clinical picture of the ears, the supervision moved to reviewing the images once a week, but continuing with a high priority approach for the cases of concern that were flagged via email/phone with the audiologist, who could quickly review the images remotely and action/recommend treatment.

The remote technology enabled the therapy assistant to become quickly competent and the audiologist to supervise remotely and was more time and cost-effective. The approach has also improved the trust-wide pathway for identification and action of ear infections; we have been able to have suspected ear infections reviewed quickly, and the remote reviewing allows for quick clinical decisions to be made, in collaboration with the on-site nursing team and external general practitioner (GP) surgeries to enable treatment.v

The therapy assistant perspective:

"When I started my new role as a therapy assistant for audiology, I had little knowledge about audiology; however, I quickly developed my skills, which were supported by the user-friendly equipment. For otoscopy purposes, I used the TympaHealth system.

The system is an intuitive piece of technology that allows the user to perform otoscopy, microsuction, and audiometry with a client. What makes this product unique is that it allows the user to record a video/take pictures whilst performing an otoscopy, which can then be uploaded to a remote review platform for further analysis by other healthcare professionals (including ear, nose and throat (ENT) specialists, or audiologists).

The initial face-to-face training run by the company was extremely useful in developing my ability to identify the health status of the ear: a healthy ear, a waxy ear or abnormality in the ear such as infection. The training included a practical session that supported performing examinations and using the digital features on the device to enhance the images and videos uploaded. The training allowed me to use the device to complete otoscopy on staff and students in my workplace at Seashell.

The device is easily portable and patient data is accessible through a password-protected smartphone device. This makes it a perfect device to have onsite at a school as the otoscopy can be performed anywhere and supports the detection of potential ear/hearing problems at the early stage. This has been an incredibly valuable feature for use at seashell as the students we support have learning difficulties and complex needs, and therefore, transitioning can become an issue for them – for example, trying to support them to a GP surgery or hospital/clinic setting. The remote technology feature also means that other professionals aside from healthcare professionals (such as care staff and teaching assistants) can be trained to use the device, which means that the students can be supported by familiar staff, which can make the process more successful and allow them to be treated quicker. I have found the remote review feature of the device to be particularly useful in detecting ear infections and monitoring ear infections of students with SEND (Special Educational Needs and Disabilities) in my workplace. On one occasion, a student was distressed, holding their hand to their ear in pain and there was no audiologist on site to attend to them. I was able to go to the classroom with the handheld device, perform otoscopy (which I suspected was an ear infection), upload a video to be remotely reviewed. Within minutes, our audiologist could access the system offsite; she was able to confirm the ear infection and we were able to provide the correct support to the student quickly.

Overall, I have found remote technology an extremely helpful way to train in otoscopy as my line manager has been able to review my images/interpretations of results and provide me with feedback without having to be onsite. I feel confident and proficient in using this device to support ear/hearing checks for our students with SEND.

A review on the TympaHealth website states, "This has the potential to revolutionise the pathway for people with ear and hearing problems, as it improves communication, and bridges the gap between primary and secondary care"; for me, I agree with this statement and feel this has been the case with the use of remote technology in our SEND setting."

Considerations for the future?

As we consider the advancements in technology, as well as the ways in which we support our mainstream and SEND students, remote technology enabling examinations could provide streamlined and cost-effective solutions to meeting the needs of our CYP. This offers another potential collaboration between professionals such as QToDs and audiologists to create person-centred and family-friendly holistic services which work together as effective multi-disciplinary teams. User-friendly equipment and online support can provide the necessary platform to develop our practice further and improve the skill sets of the staff already supporting our students within their education settings.

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