Almost everyone (80-95% of individuals) with motor neurone disease (MND) will lose their ability to communicate via speech over the course of their condition (MND Association, 2014) and will need to access some form of alternative and augmentative communication (AAC) to enable them to continue to express their needs, thoughts and wishes.

Traditionally, voices on AAC devices have been fairly ‘robotic’ and although digitised voice quality has improved, it can never replace an individual’s own voice in quite the same way. Our voices are very personal to us and we know them as well as we know our minds, so the prospect of a voice lost can be devastating. Our voices are integral to our identity and sense of self, and the psychological consequences of losing your voice are well documented (Andrews, 1995).

From the opposite perspective, it is well known that Stephen Hawking, probably the most famous person living with MND at present, has refused offers to update his digitised voice because it has become so closely linked to his identity and people recognise him for his robotic-sounding voice.

**Voice banking**

Voice banking allows the user to record a set of sample phrases, which then produce a synthesised version of their own voice, allowing for generation of unlimited words, phrases and sentences.

I first came across voice banking using the ModelTalker system while reading up on the new features of Predictable 4 when it was released in November 2014. At the same time, one of my patients who had also been reading about voice banking approached me. He was keen to see whether it was possible for him and was happy to be our ‘guinea pig’, so we agreed to give it a go. The process of voice banking using ModelTalker has proved to be amazingly simple to manage, speaking as a therapist who is not an AAC specialist, and not a ‘techy’ person. Incredibly enough it is also free. Owned by Nemours Speech Research Institute in Delaware, their aim is to make voices for children who have never had a voice of their own. By agreeing to donate your voice, you can become a beta tester for them. There is no pressure to be a donor, but they very clearly say that at no point would your voice be identifiable as given to someone else. You can also withdraw your permission for them to use your voice at any time. Patients seem to like this idea and have responded positively to it.

ModelTalker has proved to be amazingly simple to manage, speaking as a therapist who is not an AAC specialist, and not a ‘techy’ person. Incredibly enough it is also free. Owned by Nemours Speech Research Institute in Delaware, their aim is to make voices for children who have never had a voice of their own. By agreeing to donate your voice, you can become a beta tester for them. There is no pressure to be a donor, but they very clearly say that at no point would your voice be identifiable as given to someone else. You can also withdraw your permission for them to use your voice at any time. Patients seem to like this idea and have responded positively to it.

All you need is a computer with internet access and Google Chrome installed, good quality USB headphones with a microphone attached (less than £50 on Amazon) and a quiet room. This can be the most challenging thing to achieve, and is the reason why this technology is so suited to patients in the community.

Once the account is set up with ModelTalker, you then record a screening inventory of 10 phrases, which automatically go off for analysis. It can sometimes take some fiddling about and re-recording to get the quality exactly right, but the communication from ModelTalker is clear and easy to follow when this happens.

**Building the inventory**

Once the screening sentences are accepted, you receive a link to access the full inventory of 1,600 sentences. It is then up to you to record these on the system in whatever timeframe you need. ModelTalker quote six to eight hours to do this, which I found accurate – I could record an average of 100 sentences in 20 minutes, as a non-fatiguing ‘healthy speaker’. The software allows you to listen to how your synthesised voice is building up as you input more sentences, which is very motivating when giving through the process. Once you have completed the recordings, ModelTalker
FEATURE
MOTOR NEURONE DISEASE

Case study: Greg’s story

Greg Dent is 50 years old and was diagnosed with limb onset MND two years ago. He lives at home with his wife Mandy Baldwin and their three children. He had had only brief input with Greg and Mandy, really to assure them of SLT input when it was required, and to give reassurance that his speech was functioning well.

Mandy contacted me to ask about support with voice banking about six months later, and felt Greg’s speech was beginning to deteriorate slightly. We discussed AAC and they both felt that keeping Greg’s own voice was of paramount importance to them as a family.

We started recording as soon as possible after that. We had a few problems initially - due to neither of us being familiar with the process, a slow internet connection and the deterioration of Greg’s MND. The overall recording process took around three months. He was experiencing a lot of fatigue in his speech at that time, and therefore was only able to record short segments of speech.

We were able to overcome the internet issues and the process became more familiar, with the recordings following on as Greg was able to manage. In the meantime, we bought an iLuv with Predictable installed and a switch box. I set this up so Greg could practise using the system with the built-in digitised voices, while working on his ModelTalker voice.

Spine tingling

When Greg completed the recordings and obtained the link for his digitised voice, we downloaded it directly into his system and it was ready to go. Hearing Greg’s digitised voice for the first time was something I can only describe as spine tingling. He sounded exactly like him. Greg had a mild dysarthria when he completed his recordings, and his synthesized voice is Greg with mild dysarthria.

Greg and Mandy were both delighted with the outcome of the recording. We had all expressed concerns that it would be strange for Greg to hear himself recorded, and that none of us like hearing ourselves. Greg said he did find it strange at first, but he has quickly got used to hearing his voice and feels he will really appreciate this when his speech deteriorates further.

When Greg completed the recordings and heard his digitised voice for the first time was something I can only describe as spine tingling. He sounded exactly like him. Greg had a mild dysarthria when he completed his recordings, and his synthesized voice is Greg with mild dysarthria.

Mandy and Greg are both delighted using a family member as a donor with voice banking about six months later, and felt Greg’s speech was beginning to deteriorate slightly. We discussed AAC and they both felt that keeping Greg’s own voice was of paramount importance to them as a family.

We started recording as soon as possible after that. We had a few problems initially - due to neither of us being familiar with the process, a slow internet connection and the deterioration of Greg’s MND. The overall recording process took around three months. We discussed AAC and they both felt that keeping Greg’s own voice was of paramount importance to them as a family.

We started recording as soon as possible after that. We had a few problems initially - due to neither of us being familiar with the process, a slow internet connection and the deterioration of Greg’s MND. The overall recording process took around three months. We discussed AAC and they both felt that keeping Greg’s own voice was of paramount importance to them as a family.

We started recording as soon as possible after that. We had a few problems initially - due to neither of us being familiar with the process, a slow internet connection and the deterioration of Greg’s MND. The overall recording process took around three months. We discussed AAC and they both felt that keeping Greg’s own voice was of paramount importance to them as a family.

We started recording as soon as possible after that. We had a few problems initially - due to neither of us being familiar with the process, a slow internet connection and the deterioration of Greg’s MND. The overall recording process took around three months. We discussed AAC and they both felt that keeping Greg’s own voice was of paramount importance to them as a family.

We started recording as soon as possible after that. We had a few problems initially - due to neither of us being familiar with the process, a slow internet connection and the deterioration of Greg’s MND. The overall recording process took around three months. We discussed AAC and they both felt that keeping Greg’s own voice was of paramount importance to them as a family.

We started recording as soon as possible after that. We had a few problems initially - due to neither of us being familiar with the process, a slow internet connection and the deterioration of Greg’s MND. The overall recording process took around three months. We discussed AAC and they both felt that keeping Greg’s own voice was of paramount importance to them as a family.

We started recording as soon as possible after that. We had a few problems initially - due to neither of us being familiar with the process, a slow internet connection and the deterioration of Greg’s MND. The overall recording process took around three months. We discussed AAC and they both felt that keeping Greg’s own voice was of paramount importance to them as a family.

We started recording as soon as possible after that. We had a few problems initially - due to neither of us being familiar with the process, a slow internet connection and the deterioration of Greg’s MND. The overall recording process took around three months. We discussed AAC and they both felt that keeping Greg’s own voice was of paramount importance to them as a family.

We started recording as soon as possible after that. We had a few problems initially - due to neither of us being familiar with the process, a slow internet connection and the deterioration of Greg’s MND. The overall recording process took around three months. We discussed AAC and they both felt that keeping Greg’s own voice was of paramount importance to them as a family.

We started recording as soon as possible after that. We had a few problems initially - due to neither of us being familiar with the process, a slow internet connection and the deterioration of Greg’s MND. The overall recording process took around three months. We discussed AAC and they both felt that keeping Greg’s own voice was of paramount importance to them as a family.