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accessible information standard
The Action on Hearing Loss team discuss the Accessible Information Standard, currently being rolled out by NHS England. This requires the communication needs of all people with hearing loss to be identified at the earliest possible opportunity.

a multimedia solution
Dr Melanie Ferguson, a Consultant Clinical Scientist in Nottingham discusses the findings of the HEAR-IT research trial involving interactive multimedia videos to address some of the difficulties experienced by hearing aid users.

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I had no idea that as many as ten million people suffer with hearing loss in the UK – that’s one person for every six of the population. This number is also set to rise as our population ages. Hearing loss can be extremely frustrating and lead to depression and social isolation.

Despite this high percentage of sufferers, only 25% of people who could benefit use hearing aids. In this issue we learn that reasons for this include stigma, increased background noise and discomfort. Another reason is lack of understanding and support and we hear of exciting multimedia educational support initiatives that can have a dramatic impact, particularly during the adjustment phase to new aids.

Most of us are also aware of the harmful benefits of smoking on health, but I had not appreciated this can also have a profound effect on hearing. Equally, moderate alcohol consumption can have a beneficial effect. These changes seem to be related to their influence on blood flow to the sensitive hearing structures and make us think about the wider implications of a smoking cessation programme.

We see a repeating theme across many issues of Innov-age about the importance of seeking early professional support. This issue re-enforces this position and highlights the important role audiologists have to play in supporting people, not only with hearing difficulty, but also in helping in the management of tinnitus and other associated hearing problems.

I’ve found this issue extremely informative. I’m familiar with the issues of hearing loss in terms of my own family members but I’ve learnt a lot about new approaches to management that could be particularly helpful in the future. I hope you find this issue equally informative.

Jackie Oldham
Honorary Director, Edward Centre for Healthcare Management Research
Insight

Accessible Information Standard – Improving health communication for the ageing population

Action on Hearing Loss

Action on Hearing Loss is the Royal national charity helping people confronting deafness, tinnitus and hearing loss to live the life they choose. Providing practical advice, supporting research, campaigning to change public policy around hearing loss issues, supplying communication services and training, and day-to-day care for people who are deaf and have additional needs.

It’s no secret that the UK has an ageing population. There’s scarcely a day goes past without articles fearing the worst for our health service – that, undeniably, the number of people with age-related illnesses and disabilities is set to grow in the years to come.

Whilst action is ostensibly being taken on the more visible of these age-related issues, such as dementia, many don’t consider hearing loss – something much more ‘invisible’, but something that one in six adults in the UK live with. Whilst many view hearing loss as a natural part of ageing, and not necessarily something to be overly concerned about, it is a serious condition with serious impacts, not least communication barriers. However, it is a condition which NHS England is finally addressing with mandatory new guidelines - the Accessible Information Standard.

Evidence suggests that over 6.3 million people of retirement age or older in the UK have hearing loss (Action on Hearing Loss, 2011). With people waiting an average of 10 years to go to their GP after they notice symptoms (a length of time unimaginable for almost any other condition), there is a significant portion of the population living with serious communication barriers.

Access All Areas (Ringham, 2012) research paints an alarming picture of how hearing loss can affect access to, and experience of, health and social care. It shows that people often struggle to access their GP because of a lack of other options, such as online booking, SMS or text relay. It also reveals that one in seven people with a hearing loss have missed appointments because they didn’t hear their name being called in the waiting room. After the appointment, more than a quarter (28%) of patients with a hearing loss were unclear about their diagnosis, and approximately one fifth (19%) were unsure about their medication.

The situation is even worse for those who are profoundly deaf: for British Sign Language (BSL) users, two in three did not get an interpreter for a GP appointment even if they had requested one, and almost half of those who did, said the quality of interpretation was not good enough.
**Accessible Information Standard**

The Accessible Information Standard has been developed to enable patients to access services, to understand the information they are given, to manage their own health and to participate fully in decisions about their treatment. This is a very positive step, which will improve patient experience and health. Action on Hearing Loss has been involved in the development of the standard for over two years as a member of the advisory group inputting evidence and expertise, and organising an event to enable supporters to contribute to its development.

Currently being rolled out, the standard provides clear guidance on what people with deafness and hearing loss should expect when they use health and social care services, as well as what staff should provide. By 31st July 2016, it will require that the communication needs of all people with hearing loss should be identified at the earliest possible opportunity. This must be recorded by a robust IT or paper based patient record system, with those needs met when the person is contacted or has a consultation with their GP or doctor, and shared when the person is referred to another service. Correspondence and health information must be accessible for people with hearing loss, either in written plain English or in BSL video translated text. Communication equipment such as hearing loops for those wearing hearing aids, and notetakers must be made available during consultations if the person needs it. A qualified BSL interpreter must be made available for all those that need one.

For health and social care services, there are undoubtedly going to be challenges implementing this, as well as some costs. However, this is the first time the NHS has provided clear guidance acknowledging hearing loss for the serious health condition that it is, and to reap the benefits of enabling people to take ownership of their health.

The standard is just a part of an overall Action on Hearing Loss drive towards equality for people with hearing loss – and, as mentioned above, with an increasingly ageing population it is more urgent than ever for the NHS and the government to take action.

Low levels of diagnosis mean people with hearing loss are not getting the treatment and support they need – just one in three people who could benefit from hearing aids currently have them. Many delay seeking help. When people eventually do, research suggests that GPs fail to refer 45% of those reporting hearing loss to audiology services. Whether this is down to GPs being unaware of the benefits of hearing aids or the misperception that hearing loss is a normal part of the ageing process, this is a figure that needs to drastically reduce.

More research is needed to prove the long-term effectiveness of earlier diagnosis and in particular hearing checks and screening for hearing loss. As a charity, Action on Hearing Loss is currently spearheading a campaign to introduce a national hearing screening programme for over 65s. Hearing aids are most effective when fitted early and people with severe hearing loss find it more difficult to adapt to hearing aids. A screening programme could identify hearing loss at the stage when intervention would be most beneficial – reducing the risk of older people gradually withdrawing from social interaction and losing access to vital information.

Action also needs to be taken to improve access to treatment and to reduce variations in hearing services. Many vital hearing services are under threat due to budget cuts and increasing demand, which has led to increased waiting times and reduced follow up appointments. Under Pressure research (Lowe, 2015) released earlier this year shows that approximately a third of NHS audiology providers have had their budgets cut in the last two years and increased demand has caused a third to reduce the service. Less than half of providers offer face to face follow up appointments to all patients fitted with hearing aids.

With 71% of people over 70 living with some kind of hearing loss, and with the number of people over 65 estimated to increase by 60% by 2027, urgent action needs to be taken to ensure that the UK’s ageing population is no longer denied a good quality of life and equal access to essential services.

The Accessible Information Standard will greatly improve older people’s access to health services and quality of care and will, we hope, set a precedent for reaping the benefits of treating hearing loss as the serious health condition that it is.

**References**


Martin has been an Audiologist for 25 years having trained and qualified at Fairfield General Hospital in Bury. Predominantly he has worked in adult services with extensive experience of managing complex hearing loss, hearing assessments on adults with learning disabilities, and vestibular testing and rehabilitation. He has also worked in Rochdale and Oldham before joining Bolton in 1998. Since 2011 he has been the Adult Audiology Service Manager at Royal Bolton Hospital.

Historically, audiology has had a low profile when compared to awareness of other NHS services. In fact many other health professionals and the public would, when asked, struggle to define what the role of an audiologist is. Essentially, assessing hearing and fitting hearing aids is the primary role but audiologists are increasingly concerned with provision of tinnitus therapies and counselling, undertaking of diagnostic vestibular (balance tests) and provision of vestibular rehabilitation.

Audiologists increasingly hear about the ageing population and pressures on health services attributed to long term conditions associated with age, often portrayed in a negative tone. People are living longer but these same people are also healthier at comparable ages with those from a generation ago. Hearing loss is a part of the ageing process but it doesn’t need to be perceived as a sign of age or cognitive decline as it has in the past.

Statistics show that 65% of people aged over 65 have a hearing loss that would benefit from amplification – that’s 6.3 million people nationally (Action and Hearing Loss, 2011). A high proportion of these people do not perceive their hearing loss as originating from them and often make remarks as:

- They mumble
- Kids these days talk too fast
- They spoke properly in old films
- It’s these accents

Most hearing losses associated with age affect the ability to hear high frequency (pitch) sounds. In speech this means people struggle to hear quiet consonants – the very speech sounds that give clarity and meaning to words. However hearing for low frequency (pitch) sounds remains good so louder vowel sounds can still be heard. This gives rise to getting the wrong end of things and a perception that people aren’t speaking clearly but because the volume of speech heard is unaffected overall it’s difficult to acknowledge a hearing loss.

Sadly when people mishear it causes tensions and frustration between people; sometimes expressed with well-intentioned but poorly received comedic replies, or full on confrontation. This leads to feelings of inadequacy, loss of confidence, and withdrawal from activities due to these barriers that even a mild hearing loss can cause. A simple unmanaged mild hearing loss giving rise to isolation and reduction in activity has been associated with an increased risk of depression. Furthermore, an independent association exists between hearing loss and dementia, and hearing loss may lead to an increased risk in deterioration of overall their health.

The benefits of managing hearing loss in early stage cognitive decline or dementia cannot be underestimated – reducing confusion from mishearing reduces the burden on people with cognitive difficulties. The benefits of seeking impartial free assistance for a hearing loss cannot be underestimated.

Since the year 2000 the NHS has invested substantially in audiology services in order that up to date digital hearing aids are available free on the NHS to those that need them. In Bolton approximately 60% of new hearing aid users wear 2 hearing aids – it’s not a sign of a greater hearing loss in the same way that wearing spectacles doesn’t mean you have more severe visual problems, just that it affects both sides.
For the vast majority of new users hearing aids available on the NHS are incredibly discreet.

Due to the digital technology they are also very easy to use as the aid adjusts itself automatically to the environment.

How do I recognise that I may have a hearing loss?

Try answering the following questions:

- Do people seem to be mumbling?
- Do you have to strain to hear when someone talks or whispers?
- Do you have difficulties hearing someone call you from behind or from another room?
- Do you need to watch a speaker’s lips more closely to follow the conversation?
- Do you find it hard to keep up in meetings, in restaurants, or in lectures?
- Do you have to turn up the volume on the TV or radio?
- Do you find it hard to hear clearly on the telephone?
- Do you have difficulties hearing at the theatre, cinema or other entertainment venues?
- Do you find it hard to hear in noisy environments like in the street or in a car?
- Do you tend to limit your social activities because it’s difficult to hear and communicate?
- Do family, friends, or colleagues mention that they often have to repeat themselves?

If you ended up answering ‘Yes’ to some of these questions it doesn’t mean that you have a hearing loss but it is worth seeking further assessment via your GP.

If you do seek a referral from your GP to an audiology service your audiologist will enquire as to the nature and duration of your hearing difficulties and also ask you more specific questions about your ears to rule out any significant cause for your hearing loss. The audiologist will examine your ears and will undertake a hearing test. Should there be any signs or symptoms that are of concern your audiologist will advise of the need for a referral to an Ear, Nose, and Throat specialist to investigate matters further, although it is very rare that there is a serious underlying cause. Your Audiologist will explain your hearing loss to you and explain how it affects your lifestyle and why it causes the problems you experience. They will then go on to advise you of your hearing aid options and explain how it takes time to adapt to listening with an aid as the brain needs to re-learn the sounds it hasn’t heard for a while.

It is the job of the audiologist to inform you of the best management options but ultimately the decision lies with you as to whether you wish to try one, two, or no hearing aids. Should you decide to try an aid then arrangements will be made to fit your hearing aids and your progress with them will be reviewed approximately 2 months after they have been fitted.

Audiologists are there to support you with your hearing problems and you can access the service whenever you need assistance no matter how trivial you feel the matter is, as very often a simple solution makes a big difference. How to do this will be explained at your fitting and review appointments.

If any of this sounds familiar to you, then what are you waiting for? Hearing loss managed earlier leads to better outcomes and improves long-term benefit from hearing aids compared to those individuals who put off having an impartial and free hearing assessment via a GP referral to your local Audiology service.

References
Hearing loss is a big problem. It’s very common, especially for older adults (Figure 1). There are currently more than 10 million people with hearing loss in the UK. Hearing loss impacts on communication, leading to reduced employment opportunities, social isolation and depression. It makes it difficult to communicate with friends and family and can make relationships difficult. Because it is so common and has such adverse effects, the financial burden it creates on society is substantial. A recent report estimated that hearing loss costs Europe 213 billion Euros per year.

Hearing loss is something that should interest us personally. Everyone is likely to experience some degree of hearing loss as they grow older. With ever-increasing life expectancy, it is becoming more and more important to retain good health and good quality of life with older age. Good quality of life means having good hearing.

Hearing aids are part of the solution. They can reduce communication problems and promote good quality of life in older age. However, hearing aids are under-used. In a recent analysis of UK Biobank data (Collins, 2012), with hearing health data from 500,000 UK adults, it was found that only around a quarter of adults who could benefit from hearing aids actually use them (Dawes, et al., 2014). Despite significant technical advances in hearing aid technology and design, the proportion of people who use hearing aids has not changed substantially since the early 1980s, the last time hearing aid use was assessed in a large study in the UK. Reasons for under-use of hearing aids include limited benefit (especially in situations with high levels of background noise), uncomfortable fit and negative stigma associated with hearing aid use. Research is currently focussing on addressing problems with hearing aids and promoting hearing aid uptake.

Another part of the solution is to avoid or postpone hearing loss. Traditional thinking was that hearing loss is a normal and inevitable part of growing older. It is now known that there is substantial variation between individuals in the rate of hearing loss and the degree of impairment. There is also geographical variation in levels of hearing loss. Counties in the northern parts of England have higher levels of hearing loss than counties in the south. Hearing loss is also becoming less common in younger generations. At equivalent ages, hearing loss seems less common in baby boomers than in the wartime generation.

All of this suggests that hearing loss may not be inevitable, and that there may be things we can do to delay or prevent hearing loss. Another major focus of research therefore involves identifying lifestyle changes that we can make to reduce our chances of developing hearing loss.

Two such factors are smoking and alcohol use (Dawes, et al., 2014). Analyses were based on 164,000 UK adults who completed a hearing test as part of the UK Biobank resource. Statistical
modelling was used to establish what extra risk was associated with smoking and alcohol use, accounting for variations in age, sex, socio-economic status, ethnicity, exercise and co-morbid diseases such as diabetes and heart disease.

Results found that smoking was associated with a 30% increase in the chance of hearing loss. Interestingly, passive exposure to tobacco smoke appeared to be just as dangerous to hearing as smoking. For both smoking and passive smoking, the chance of hearing loss increased with increasing levels of exposure. Despite decades of anti-smoking campaigns, one in five people in the UK are smokers. The families and friends of smokers may also be passively exposed to tobacco smoke. Smoking may therefore be a major contributor to hearing loss in the UK.

Somewhat surprisingly, alcohol consumption was associated with a reduced risk of hearing loss. Compared to teetotallers, alcohol drinkers had around 40% reduction in risk of hearing loss. The protective effect of alcohol consumption on hearing was similar across all levels of alcohol consumption – even levels of consumption that are damaging to general health.

Actually, it isn’t surprising that smoking is damaging and alcohol is protective against hearing loss. Smoking increases likelihood of cardiovascular disease, reduces oxygenation and impedes waste removal from tissues of the body. These effects may be particularly damaging for sensitive hearing cells of the ear, which have a delicate vascular supply and high metabolic demands. Conversely, moderate alcohol consumption is reliably associated with reduced likelihood of cardiovascular disease.

In summary, quitting smoking and minimising exposure to tobacco smoke could reduce the risk of hearing loss. In the analysis, ex-smokers were at no extra risk than non-smokers. This finding fits with research in cardiovascular disease; ex-smokers tend to have no extra risk of cardiovascular disease than non-smokers. Alcohol consumption may also help retain good hearing, though to protect one’s general health it is advisable to limit consumption to very moderate levels. Further analysis will help describe other lifestyle-related risks for hearing loss, including diet and exercise.

From previous studies, it is known that lifestyle factors like smoking and alcohol consumption contribute about 50% to a person’s likelihood of hearing loss. Genetic factors contribute the other 50%. But to date, a reliable association between only one gene and age-related hearing loss has been identified. If age-related hearing loss is like other complex age-related conditions, there are likely to be many genes that contribute, each with a small effect. Genetic factors are likely to interact with lifestyle factors. For example, noise exposure may have a much more damaging effect on hearing for someone with certain genetic factors. Understanding which genes are important could also tell us which biological processes are most important for hearing loss. These biological processes could be good targets for drug-based intervention treatment.

Manchester academics, along with collaborators from Harvard University, Cincinnati, Kings College London and UCL, are about to commence the largest ever study of the genetics of age-related hearing loss. An understanding of genetic and environmental contributions to age-related hearing loss will allow interventions to prevent and/or treat hearing loss. If public health promotion efforts considered the effect of particular lifestyles on hearing loss and interactions with genetic susceptibility, it may be possible to reduce the severity of hearing loss and/or the numbers of people with disabling levels of hearing loss in the UK. Reducing the severity of hearing loss or reducing the numbers of people with hearing loss would improve quality of life for millions of people. On a personal level, it’s good to know that we can take control of our own hearing destiny, and that there are healthy lifestyle choices that we can make today that will increase the chances of retaining good hearing in older age.

References


Picture books on Prescription

Helen Bate is a specialist in visual communication and dementia. She was originally an Architect before going on to obtain BA and MA degrees in illustration and founding the social enterprise publisher Pictures to Share C.I.C. in 2005. Helen became aware of the lack of suitable media resources when her own mother had dementia. She decided that more should be done, carried out research and feasibility studies and obtained charitable funding to develop the first Pictures to Share books. She is currently developing the 17th book in a range of titles that is now used extensively by those with dementia across the UK.

With the growing numbers of people living with dementia, and the increasing numbers of people caring for those with dementia in the community, it is timely that a range of recommended book titles are available completely free of charge in almost every library in England.

The book list for dementia (Reading Agency Books on Prescription for Dementia) includes a wide variety of titles that aim to provide support and self-help for those with dementia or their carers, providing advice and information on subjects from diagnosis to the end of life. They are books that have been endorsed by a range of both professionals and lay people involved in the world of dementia care.

Also included on the list is the range of books that are published by the social enterprise, Pictures to Share. These are included because a wide range of professionals and family carers have seen how they can help people with mid to later stage dementia enjoy life and maintain meaningful communication with family, friends and carers.

The books look like nice ‘coffee table’ books, and their secret is deceptively simple. By presenting the right pictures and the right texts in the right format, the books have shown that even people with late stage dementia can still engage with and enjoy visual media on a daily basis.

It has been an interesting journey, getting to the point where an idea born out of a love of illustrated books and anger with the treatment of people with dementia, has led to a flourishing organization that is making a difference to many thousands of people across the UK and even further afield.

Pictures to Share was set up in 2005 as a Community Interest Company, and with grant support published the first three titles and launched them on to an unsuspecting dementia care world. Financial support from the Andrews Charitable Trust has since ensured production of more books and growth of the organization.

There were many problems that needed to be resolved. Forward thinking people working in the field of dementia care welcomed the books and immediately saw the benefits they could bring. Others who were still entrenched in the belief that those with mid to later stage dementia couldn’t possibly read or benefit from books, just ‘didn’t get it’. There were (and still are) far too many people with dementia in care homes and hospitals where
staff just don’t have the time to spend ten minutes sitting with someone with a book, regardless of how much easier it may make their job in the long run.

Ten years later, 17 books have been published (as well as 2 films and a number of other products) and with the backing of the Reading Well ‘Books on Prescription’ initiative, the books are available free of charge to everyone in England. They’re also available in some libraries in Scotland and Wales and are in thousands of care homes, hospitals, day centres and individual homes across the country.

**How the pictures to share books work**

Pictures are central to our modern lives yet we usually give little thought to how sophisticated the process of understanding two-dimensional imagery really is. There are highly complex neurological processes that our brains have to deal with to successfully interpret the massive range of complex images that we encounter on a day-to-day basis.

When people are in the mid to later stages of dementia, the problems they face with the visual perception of the world around them can be complex and debilitating. When they are faced with understanding two-dimensional images such as those in books and magazines, the problems are even more complex. However, many of these difficulties can be overcome by understanding what makes images difficult to understand and by making them more accessible.

The main problems people with dementia face in understanding or enjoying two-dimensional images lie in the high level of complexity of many images. When there is significant ‘over-lapping’ of objects or where there is a lot ‘going on’ in an image, the level of interpretation this involves overloads the capabilities of those with significant levels of dementia and they ‘switch off’. By only using simpler images with less complex shapes and no unnecessary information, we can immediately make the understanding of images easier.

Some people however, see dementia as an excuse to use images in a way that could be seen as patronizing – assuming that people with dementia can only relate to images of old household packaging, old street scenes, pretty rural views, the Royal family or portraits of 1950’s film stars. One thing we usually don’t lose when we have dementia is our aesthetic judgement, and people with dementia can still enjoy a range of beautiful images in the same way as anyone else. What is important is the ability of an image to really engage someone through its sheer beauty, or through its ability to conjure up a story that has some relevance to the individual. This relevance is based not upon the fact that they are a person with dementia, but on the fact that they are a person who may have had a long and interesting life, with interests that may range from keeping chickens to Egyptology, from classic cars to classical ballet. A successful image may include almost any subject matter but it has to be less complex and easier to process than most images usually are. This is what the Pictures to Share books provide.

The fact that people with dementia are still able to read often comes as a surprise even to the families of those with later stage dementia. Again the problem with reading is often a problem of presentation. If we expect someone with dementia to read from a novel, a newspaper or a magazine, we are expecting them to be able to read text that is small and arranged in many lines surrounded by other complex images or other sections of text. This again overloads the person whose cognitive capabilities are impaired, and they ‘switch off’. But if we arrange larger print text in a few short lines on a plain background, most people with dementia will be able to cope and will enjoy the process that can help them to feel a sense of achievement that they too, thought was lost.

So like everyone else, people with dementia can enjoy suitable books and pictures.

**For more information visit the website**

www.picturestoshare.co.uk
Harmful alcohol drinking among people aged 50 or over in England

Several socioeconomic factors are found to be associated with high-risk alcohol consumption behaviour among older people.

A study carried out by Professor José Iparraguirre from the Research Department of Age UK has estimated what risk factors might be linked to harmful alcoholic drinking in over-50s. This study showed that higher-risk drinking was linked to a number of factors the researchers described as "middle-class", like higher educational attainment, being socially active and good ratings of health.

Alcohol consumption is growing among older people in England and people in better health, higher income, with higher educational attainment and socially more active are more likely to drink at harmful levels. The results reported that, generally speaking, people aged 50 or over ageing ‘successfully’ in England are more at risk of drinking at harmful levels or of developing harmful drinking consumption patterns than those who fit less well into the paradigm of ageing ‘successfully’, such as non-smoking, greater physical activity, more social contacts, better self-rated health and absence of depression.

To find out more please visit: http://bmjopen.bmj.com/

NHS England and the Fire and Rescue Services (FRS)

A new partnership has been established between NHS England and the Fire and Rescue Services (FRS), to use their collective capabilities and resources more effectively to enhance the lives of older people and those with complex conditions.

Working together with Public Health England, the Chief Fire Officers Association, the Local Government Association and Age UK, the group has established a new working relationship aimed at improving the quality of life for people who would benefit from brief health and wellbeing interventions in their own homes, and better coordinated public services.

Jacquie White, NHS England’s Deputy Director for People with Long Term Conditions, explained: “The Fire and Rescue Services in England carry out 670,000 home visits annually on vulnerable people. These are already providing some basic health interventions – but they are keen to do more.

‘Health and local government staff in some areas are working with the FRS to identify households with complex conditions or needs and increased risk of fire. They agree a local list of health interventions to be provided, while also developing ways of directing people who need help from health or care services.”

NHS England is supporting the local development of a whole system, multi-agency approach to deliver the national commitment of more integrated person centred care closer to home.

There are common risk factors between health and fire services which increase demand such as multi-morbidity, cognitive impairment, smoking, drugs, alcohol, physical inactivity, obesity, loneliness and cold homes.

The risk for someone over the age of 65 of dying in a fire is more than twice as high as the average risk for all ages.

In the NHS 250,000 people go to A&E every year as a result of falls. Older people use three-and-a-half times the amount of hospital care of those aged under 65 and almost two-thirds of general and acute hospital beds are occupied by people over 65.

Each year over 670,000 home safety checks are done by the FRS based on risk factors the NHS would recognise.

Many visits already include some health interventions, like a hearing test to check the fire alarm can be heard, to assessing risks of falls and trips and fitting equipment – which is often already in the van, so no need to wait!

In some areas these checks have been developed into “safe and well” visits with the objective of assessing and identifying wider health and care support needs that the FRS can provide there and then.

These include basic sight tests, discussing safer heating options, brief interventions and even immunisations, as well as directing people to additional support from wider public services, such as benefits advice, telecare and much, much more.

To find out more please visit: www.england.nhs.uk
Sight Loss link to Older Peoples’ Social and Economic Position

A Thomas Pocklington Trust funded study has shown the risks of developing both moderate and severe vision loss were significantly greater among people from poorer backgrounds and those who perceived their position in society to be low. Those in the poorest fifth of the population had an almost 80% higher risk of developing severe visual impairment than those from the wealthiest fifth.

Research conducted by the University of Manchester used the English Longitudinal Study of Ageing (ELSA) to look at the links between development of visual impairment and older peoples’ social and economic position, and the impact of both deteriorating and improving sight on key aspects of their lives.

Following people over eight years, those from poorer backgrounds were more likely to have deteriorating vision, and less likely to have stable excellent or good vision.

Deterioration in vision over a two year period was related to increases in levels of depression and decreases in quality of life, social engagement and income.

Improvements in vision were linked with improvements in quality of life and social engagement, although differences were small.

Smoking, diabetes and hypertension were associated with an increased risk of developing moderate or severe visual impairment.

Among participants with a diagnosis of cataract, wealth and perceived social status were not related to the likelihood of having cataract surgery.

To find out more please visit: www.pocklington-trust.org.uk

Upcoming Events...

**Care Show and Dementia Show** 3rd – 4th November 2015
Care & Dementia Show at the NEC, Birmingham is the largest health and social care exhibition in the UK for those that care for older people or are responsible for the wellbeing of older people. There will be new products and demonstrations from over 250 suppliers with seminars, training and advice, to help network and stay up to date with changes in the sector. Care Show and The University of Stirling’s Dementia Services Development Centre are launching their First International Dementia Conference and Exhibition collaboration to hold the International Dementia Conference, to run alongside Care Show and Dementia Care Show. This collaborative event will be the first of its kind in the UK. [www.careshow.co.uk](http://www.careshow.co.uk)

**International Dementia Conference** 3rd – 4th November 2015
The conference will run at The Vox, Birmingham and is for everyone involved in supporting people with dementia and their carers. It runs concurrently with the Care & Dementia Show 2015. The programme will showcase the latest research alongside best practical guidance on helping improve the lives of people with dementia. The themes of the conference focus on care, and will address critical issues across the range of professions and organisations that support people with dementia and their carers [www.careshow.co.uk/idc](http://www.careshow.co.uk/idc)

**The Future of Ageing Research** 11th November 2015
This one day event organised by the British Society of Gerontology will be held at the Wellcome Collection in London. The Future of Ageing Research will ask if social gerontology in Britain is making the social research contribution it should be, how can its impact & influence be improved in the future and where will research funding be found. [www.britishgerontology.org/DB/bsg-events/the-future-of-ageing-research-far.html](http://www.britishgerontology.org/DB/bsg-events/the-future-of-ageing-research-far.html)

**Falls Prevention and Management in Older People** 2nd December 2015
The implementation of the New Quality Standard for Falls for assessing older people after a fall and preventing further falls released at the end of March 2015 will be discussed at this event held at the Manchester Conference Centre. Aiming to support hospitals and community services to help improve the quality of life of older people and reduce the number of fall-related injuries occurring in people aged 65 and older. Sessions will focus on key elements of the quality standard including developing post fall protocols for every patient and secondary prevention. [www.healthcareconferencesuk.co.uk/falls-prevention-in-older-people-conference](http://www.healthcareconferencesuk.co.uk/falls-prevention-in-older-people-conference)
Addressing poor knowledge on hearing loss, hearing aids and communication: a multimedia solution

Dr Melanie Ferguson is a Consultant Clinical Scientist (Audiology) and Research Lead at the NIHR Nottingham Hearing Biomedical Research Unit. The overall aim of her research programme is to promote healthy hearing by reducing activity limitations and participation restrictions. She is actively involved in professional affairs and sits on committees for the British Society of Audiology, British Academy of Audiology and American Academy of Audiology. She is NIHR lead advocate for Audiology.

Hearing loss is a highly prevalent long-term condition that affects 1 in 6 of the UK population (10 million people) and is the third leading cause of years living with disease (World Health Organization, 2008). Despite this, knowledge about the consequences of hearing loss in the general public is poor. Hearing loss is often thought of as a ‘hidden’ disability and can be considered as insignificant or unimportant. If untreated, hearing loss results in speech perception and communication difficulties, which can lead to increased social isolation and withdrawal, frustration, loneliness, depression, increased risk of dementia, and ultimately reduced quality life (Davis et al., 2007). Consequently, for the people who have hearing loss, its presence is anything but insignificant.

The main intervention for people with hearing loss is provision of hearing aids, which are effective in alleviating the psychological, social and emotional consequences of hearing loss (Chisolm et al., 2007). However, wearing hearing aids is not like wearing glasses, where you get an immediate return to normal vision. Hearing aids are complex to use and understand, sound and speech are amplified but hearing is not returned to normal, and hearing aids take time to get used to. Successful hearing aid use therefore requires new users to have a good understanding of the many practical and psychosocial issues around hearing loss, communication and hearing aids. Failure to do this can result in non-use of hearing aids, which is reported to be as high as 40% (Barker et al., 2014).

Providing all the information required for successful hearing aid use can be difficult to achieve in one short (~1 hour) hearing aid fitting appointment. Furthermore, half of the important information provided to first-time hearing aid users by their audiologists is forgotten 6 weeks later. It is perhaps not surprising then that about half of first-time hearing aid users have difficulties with their hearing aids. A typical comment is “you get a lot of information… by the time you get home you’ve forgotten most of it”.

The HEAR-IT trial

The HEAR-IT trial addressed some of these difficulties by developing a series of interactive, multimedia video tutorials or ‘reusable learning objects’ (RLOs). Based on learning theory, RLOs are short chunks of multimedia that enhance learning through the visual demonstration of concepts and processes. They include interactivity to enable the user to engage with the learning materials, and can be replayed as often as needed to optimise mastery of skills or knowledge.

Development of the RLOs

Eight RLOs were developed covering a range of practical and psychosocial issues relating to hearing loss (Ferguson et al., 2015a). Importantly, the RLOs were developed using a participatory approach. Workshops provided an opportunity for both hearing aid users and audiologists to conceptualise the RLO content by drawing visual representations of their thoughts and perspectives on storyboards, as seen in Figure 1. Usability was assessed by a panel of hearing aid users who reviewed the RLO specifications and materials during development.

Figure 1. Story boards developed in the workshops with hearing aid users

Each RLO included learning objectives, a range of visual imagery and sounds (illustrations, video clips, animations, photos, testimonials), and a commentary with subtitling. Interactive elements included a multiple-choice quiz with feedback, as well as a user-friendly interface for choice of RLO (Figure 2, 3 and 4).

The RLOs were designed primarily for home-delivery using DVD players to maximise accessibility, as PC and internet use in the typical first-time hearing aid user age range (70-74 years) was relatively low (36% and 17% respectively) (Henshaw et al., 2012). For the more IT-literate, there was the option to play the DVD through a PC or via the internet.
those who used their hearing aids sub-optimally (i.e. less than 70% of the time). A health economic analysis also showed that the RLOs were a cost-effective intervention in use, there was significant improvement in hearing aid use in adult auditory rehabilitation. The Cochrane Library.

Compared to the control RLO- group, the intervention RLO+ group showed highly significant improvements in their knowledge of both practical and psychosocial issues (Ferguson et al., 2015b). Practical hearing aid handling skills were also significantly better in the RLO+ group. Although there was no improvement in overall hearing aid use, there was significant improvement in hearing aid use in those who used their hearing aids sub-optimally (i.e. less than 70% of the time). A health economic analysis also showed that the RLOs were a cost-effective intervention in 70% of cases.

**How effective were the RLOs?**

There was high take-up and compliance with the RLOs (78% and 94% respectively). Around half the users watched the RLOs using a DVD for TV, 15% used DVDs for PC, whilst 33% opted to use the internet. Interestingly, half the users referred back to the RLOs two or more times, some as many as seven times. This suggests that the RLOs were used as a tool to self-manage their hearing loss.

Compared to the control RLO- group, the intervention RLO+ group showed highly significant improvements in their knowledge of both practical and psychosocial issues (Ferguson et al., 2015b). Practical hearing aid handling skills were also significantly better in the RLO+ group. Although there was no improvement in overall hearing aid use, there was significant improvement in hearing aid use in those who used their hearing aids sub-optimally (i.e. less than 70% of the time). A health economic analysis also showed that the RLOs were a cost-effective intervention in 70% of cases.

**Feedback on the RLOs was extremely positive - the RLOs were rated as highly useful**

Feedback on the RLOs was extremely positive, and the RLOs were rated as highly useful. The vast majority (>80%) of hearing aid users agreed that (i) they would return to the RLOs if they had a problem, (ii) the interactive quiz was useful to show what had been learned, (iii) the RLOs helped users feel more confident using their hearing aids, and (iv) they preferred the RLOs to written information. These findings complemented the key focus groups themes, which showed the RLOs were reassuring and provided reminders, as well as improved awareness of, and confidence in using hearing aids and communication tactics.

The majority (78%) reported that they would recommend the RLOs to others. This theme continued in the focus groups, where participants reported they had shared or given the DVD to others, in addition to watching the RLOs in the company of friends and family.

**Getting RLOs into the clinic**

To fill the gap in current educational support for hearing aid users, the RLOs are now available through our commercial partner, with the brand name C2Hear. To maximise accessibility, interactivity and impact, online delivery is being developed through the Nottingham Hearing Biomedical Research Unit website, and will be freely available to all by the end of 2015.

**Where to next?**

Telehealth approaches are under development for communication partners (e.g. friends and family) and for use with mobile technologies (e.g. smartphones and tablets). This will enable a move away from the current ‘one-size-fits all’ approach to a more tailored and individualised approach. Future developments for hearing aid users will include the addition of goal setting and monitoring to enhance self-management of hearing loss. Finally, we plan to redesign C2Hear to supplement the training of non-audiological professionals and carers. Sample clips of C2Hear can be viewed on the website (http://www.hearing.nihr.ac.uk/) click on ‘Videos for hearing aid users’ on the front page.

**Acknowledgements**

Thanks to Will Brassington and Nottingham Audiology Services, Heather Wharrad and the Health and Elearning Media team at Nottingham University, and the hearing aid users who helped design the RLOs, in particular the patient panel. Finally, thanks to the NHBRU team, especially Marian Brandreth and Holly Thomas.

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**References**


Apps for Osteoarthritis
Should we ‘prescribe’ digital healthcare interventions?

Nicola Walsh is an Associate Professor in Musculoskeletal Rehabilitation at UWE Bristol, and is also the recipient of a 5 year Career Development Fellowship from Arthritis Research UK. She is a Chartered Physiotherapist who worked clinically and in academia in London before completing her PhD at King’s College London. Her research focusses on supported self-management for osteoarthritis with an emphasis on facilitating engagement with physical activity.

This work was undertaken in collaboration with Dr Jennifer Pearson (Research Associate, UWE) and Victoria Salmon (PhD Student, UWE), and was first presented at Rheumatology 2015.

The technology
The internet and mobile technologies are having a significant impact on daily living. More people are using the internet than ever before; usage in the over-65 age group is growing fastest and more than 43% of people report using the internet for healthcare information (ONS, 2015; OFCOM, 2013). Mobile technology is further enhancing access: 93% of adults use a mobile phone and almost two-thirds of those are smartphone users (OFCOM, 2014). The over-55 age group demonstrates the fastest growing use of this technology (Deloitte, 2014). This is a widespread medium that may provide an appropriate channel for healthcare delivery. Previous research reports the health benefits of a variety of digital media interventions to assist in the management of chronic conditions (Foster et al., 2013) and also in facilitating lifestyle change interventions (Casey et al., 2014; Artinian et al., 2010). The acceptance of technology is further highlighted by the recent declaration from the UK Department of Health stating that apps could be ‘prescribed’ for chronic disease management (DoH, 2012).

Apps are a dedicated piece of software which can be used to provide information and advice, log activities and record symptoms such as pain and mental health status. Such is the rapid expansion of this technology that there is a move by health agencies to regulate apps and their content (MHPRA, 2014).

The impact of osteoarthritis
The increasing impact of chronic disease, in particular musculoskeletal diagnoses, on health and social care resources highlights the potential for alternative means of health intervention. Currently 8.5 million people in the UK are affected by Osteoarthritis (OA); it accounts for 15% of all GP consultations in people over 45 years of age, and the equivalent of approximately 1% of gross national product is spent on managing the condition (NICE, 2014). This healthcare demand is placing considerable strain on traditional rehabilitation services i.e. physiotherapy, with patients experiencing delayed or reduced access to resources (CSP, 2013). For OA, mobile apps have become abundant (van Velsen et al., 2013) and have the potential to provide information and support for people with OA, but determining the content and quality is essential before clinical recommendation can be adopted.

This article outlines some of the preliminary findings of a project that systematically identified apps for OA, appraised the quality of content and documented compliance with recommended development standards.

Identification of apps
Official provider stores were searched for apps that were available in the UK for self-managing OA. Search terms were osteoarthritis, arthritis, joint pain, hip, knee and foot. All searches were completed by November 2014.

To be included, apps needed to provide educational or self-management content for OA. They were excluded if: information was only on pharmacology or complementary and alternative medicine; was not directed specifically at OA; or provided symptom tracking features only.

Appraisal of apps
Apps were appraised for content in accordance with management recommendations in NICE guidelines for OA (NICE, 2014), and for quality in accordance with good practice principles developed by the Health on the Net Foundation (2014). These included: professional credentials of contributors; a declaration statement regarding target audience; the role of the app in supporting professional advice, not replacing it; privacy policy; version and modification dates; contact details of developers; funding sources; and advertising policy.

Included apps
Twenty apps were identified for inclusion, the majority of which were available through the Apple Store, and had dual tablet and mobile phone functionality. Three apps were NHS endorsed; although two of these were developed as decision making aids rather than for self-management, they did however include information that was appropriate to support self-management.

All apps provided information on exercise, with the vast majority emphasising the importance of self-management and education regarding the disease,
whilst fewer provided information on other strategies recommended within NICE guidelines such as the use of TENS, walking aids and orthotic devices. Table 1 demonstrates the content of all included Apps.

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Table 1 – Content of included apps in accordance with NICE guidelines

Whilst content was generally in accordance with guideline recommendations, adherence to good practice principles was variable. Development and production issues such as dates of inception, funding, contact details and correct functioning were all appropriately adhered to by developers. However, most apps did not explicitly state the professional attributes of information providers, but did suggest that the tool should only be used in conjunction with healthcare professional advice. In the majority of cases the privacy/advertising policies were not available.

Should we ‘prescribe’ apps?

The purpose of this work was to determine the suitability of available apps for OA for ‘prescription’ in healthcare. This review identified 20 apps that provided information regarding self-management advice for OA. Whilst all included information about exercise (a core intervention for OA), other recommended strategies such as TENS, orthotics and assistive devices were less prevalent. Furthermore, in many cases the advice to exercise was not supplemented by specific information on which exercises were appropriate, or the recommended intensity of the intervention, so would have limited value. Although there was a considerable lack of detail in the majority of apps, no examples were found of inappropriate or incorrect information as seemingly most developers had used guideline information to populate their content.

Of note, only the ‘NHS 24 MSK Help’ featured in the NHS Apps library (http://apps.nhs.uk). This group reviews all apps included on its website to ensure the safety and relevance of information, provision from a trusted source, and compliance with data protection legislation. This app did contain information on which exercises to do (via embedded video clips), and provided the opportunity to track goals and receive reminders of when to exercise. It also included information on the benefits of different activities such as walking, gardening and dancing. Although some of the information included was OA specific, this was limited, and did not provide a comprehensive overview of management options.

At present, the vast majority of apps for OA could not be ‘prescribed’ with any confidence that they would provide useful ongoing support for people with OA. There is a potential role for this technology in healthcare but the quality of many available apps is questionable, and adherence to good practice principles is in many cases insufficient.

Any app recommended from healthcare professionals should be rigorously checked for content quality and development standards, so current recommendations would suggest that only apps endorsed by the NHS Health Apps library may be suitable for patient use, but even then those that are currently available have limited usability.

References:


Tinnitus, an unseen problem

Dr Hoare trained in adult nursing at the University of Brighton, before retraining as a neuroscientist at The University of Manchester where he completed a PhD in sensory neurobiology. He is currently an NIHR Senior Research Fellow at the Nottingham Hearing Biomedical Research Unit, University of Nottingham. He leads a broad programme of research on hearing-related conditions, with a current emphasis on optimising psychological approaches to managing tinnitus. He also chairs the British Tinnitus Association’s Professional Advisors Committee.

Tinnitus is not a disease per se but a symptom common to a number of medical conditions. It is most notably associated with hearing loss and deafness and may reflect the brains failure to sufficiently adapt to the loss of sensory input. It is characterised by the phantom sensation of sound in the ears or head, commonly described by those who experience it as a hissing, ringing, buzzing, clicking, or whooshing sound. About 10% of the general population will experience prolonged tinnitus at some point in their lives but this rises to 30% among those over the age of 50. Moreover, the incidence of clinically significant problems appears to be rising (Martinez et al., 2015), an effect likely attributable to increased public awareness, increases in exposure to leisure noise such as personal music players, and our ageing population.

In England alone there are about 750,000 GP consultations annually where the primary complaint is tinnitus, with one third of patients being referred by their GPs to secondary or tertiary care services (El-Shunnar et al., 2011). As such tinnitus represents a major healthcare burden.

Clinical assessment and management

For many people having persistent tinnitus impairs quality of life, with negative emotional reactions and functional consequences. Anxiety, depression, insomnia, and cognitive and communication difficulties are not uncommon. Measuring the overall severity of someone’s tinnitus is therefore not straightforward. Perceptual measurements (for example the pitch or loudness) do not reliably reflect how severely tinnitus impacts on an individuals, so self-reported questionnaires are an essential clinical tool to estimate severity and change over time. Interestingly, on measures of tinnitus severity there are gender differences (females tend to report higher tinnitus distress), and this difference is affected by age and duration of tinnitus, e.g. women over 60 report significantly more annoyance and sleep disturbance due to tinnitus than males of the same age (Seydel et al., 2013).

In most instances tinnitus is not yet curable and clinical management can involve any number of strategies including education, relaxation, Tinnitus Retraining Therapy (TRT), Cognitive Behavioural Therapy (CBT), sound enrichment using hearing aids or ear level sound generators, and less often, drug therapies to manage co-morbid insomnia, anxiety, or depression. With the exception of CBT, none of these management strategies are supported by a reliable research evidence base (Hoare et al., 2011, Martinez-Devesa et al., 2010), nor have variables been identified which even suggest which management strategy would likely work best for a patient with a particular profile. Not surprising therefore there is no NICE quality standard for managing tinnitus and care is not currently prescribed or delivered in any...
standardised way. Clinicians and patients alike can therefore sometimes struggle to make informed decisions often resorting to a trial and error approach.

It was only last year that publication of perhaps the first explicitly evidence-based guidelines for tinnitus management, was produced by the American Academy of Otolaryngology (Tunkel et al., 2014). These guidelines used a synthesis of all published tinnitus research studies to make recommendations for or against different assessment and management options. So for example, they make a strong recommendation that tinnitus is assessed using a multi-item tinnitus questionnaire, and recommend use of patient education and CBT. In contrast, despite sound therapy being something of a mainstay in tinnitus management it was only recommended as an option for clinicians to consider; owing to there being relatively weak research evidence of its effectiveness (Hoare et al., 2015).

A case in point is the use of hearing aids, which has been proposed as a useful tinnitus management strategy since the 1940’s. A reasonable hypothesis is that tinnitus results when the hearing brain insufficiently adjusts to, or possibly overcompensates for the loss of sensory input which occurs with hearing loss. Only 10% of people with tinnitus would be assessed as having normal hearing thresholds on a standard hearing test. If very high frequency hearing is tested (above the standard clinical test range), about 99% of people with tinnitus show some hearing loss. If tinnitus does result from hearing loss then compensating for hearing loss using amplification with a hearing aid should reduce tinnitus; a simple question but one that is notably under-studied. A Cochrane review of amplification for tinnitus published last year (Hoare et al., 2014) included just one randomised controlled trial (Parazzini et al., 2011) where hearing aids for tinnitus were compared to using sound generators in a population of people with tinnitus and mild hearing loss, finding no difference in effectiveness. Clinical practices therefore are very much dependent on clinical opinion and patient preference. For example, there is widely conflicting opinion across audiologists on the minimum degree of hearing loss that makes someone with tinnitus a candidate for hearing aids (Hoare et al., 2015, Sereda et al., 2015). The issue arises therefore whether patients who might benefit are being denied a hearing aid, or some patients are being fitted with hearing aids that will not be beneficial, or less beneficial than alternative management strategies. Empirical research is needed to guide practice in this instance.

In terms of psychological support, part of the counselling provided to people with tinnitus involves reassurance that for many, both the perception of the tinnitus sounds and the emotional symptoms they experience should improve over time. A basic understanding of why tinnitus has occurred is often sufficient to demystify it, dispel preconceived worries, and negate the need for further management. Where more formal psychological management strategies are indicated, the Department of Health tinnitus commissioning guidelines recommend a CBT approach (Department of Health, 2009). There is a strong evidence base for CBT, where it is delivered by clinical psychologists (e.g. Cima et al., 2012), but this does not generalise to the model of tinnitus care in the UK. In the UK there are few clinical psychologists associated with audiology departments and there is increasing emphasis on ...

...continued on next page
‘upskilling’ audiologists to deliver psychological therapies for tinnitus patients (Department of Health, 2009). One of the current studies in Nottingham involves audiologist-delivered psychological support, with plans to pilot the intervention in audiology departments next year.

Researching a phenomenon

Tinnitus has long been a poor relation in terms of research funding, with lots of underpowered low quality studies proclaiming treatment benefits of whatever they tested. As Folmer, et al., (2014) posit “Overstatements of a treatment’s efficacy, even in light of modest research findings, are common in this field and other clinical fields as well”. But lack of evidence is not evidence that treatments are ineffective. In the case of tinnitus, many treatment approaches are probably effective for at least a subpopulation of patients. The challenge right now is defining those subpopulations so we know what the best management strategy is likely to be for a particular patient. Large scale studies and careful pre-planned analyses are essential.

Within the UK the tinnitus research agenda was largely defined through a public consultation culminating in a top 10 unanswered tinnitus research questions (Baguley et al., 2013). These have become something of a focus for funders and researchers alike in the years since. Major funding has been awarded to the Nottingham Hearing Biomedical Research Unit team to trial the novel synthetic potassium channel modulator AUT0063 produced by Autifony Therapeutics (Technology Strategy Board, QUIET-1 study), to support new programmes of research into sound therapy (British Tinnitus Association), and counselling (National Institute for Health Research, Research for Patient Benefit). Outside the UK, various other novel treatments are being trialled, such as intratympanic injection of the NMDA receptor antagonist AM-101 (Staecker et al., 2015), transcranial direct electrical stimulation of the cortex (Pal et al., 2015), cochlear implantation (Arts et al., 2015), and even deep brain stimulation (Smit et al., 2015). The future may hold new approaches to managing tinnitus using stem cell therapy, optogenetics, and novel methods of targeted drug delivery (Folmer et al., 2014). The capacity for developments in tinnitus both in terms of therapeutic management and treatment options has therefore never been greater, and patients and clinicians should be demanding of research evidence to support clinical decision making.

Acknowledgements

Dr Hoare is funded by the National Institute for Health Research (NIHR) Biomedical Research Unit Programme. The views expressed are those of the author and not necessarily those of the NHS, the NIHR, or the Department of Health.

References

Most of us have felt the frustration of trying to communicate in a noisy room. It is hard to understand the person talking to you and it feels like it is a strain to make oneself heard. Noisy rooms are not good for communication!

Age-related hearing loss is a common condition. About 70 per cent of 70 year olds have sufficient hearing loss to make understanding speech troublesome. Healthcare waiting rooms can be noisy and many of the users of these settings are older adults. So what do we know about the experience of waiting rooms for older adults?

The Manchester Institute for Research on Ageing (MICRA) funded a small project to begin to explore this topic. This included a series of consultation events with the providers and users of healthcare as well as a review of literature. Overall, more than 100 people attended these events raising a range of issues about how noisy healthcare rooms can be stressful, especially for those with hearing loss. The full project team is listed at the foot of this article.

Many of the difficulties arise from poor room design and acoustics and from poor organisation processes. However, what happens as staff change their voices to communicate with an older person in a noisy room was also discussed. You don’t need to be in healthcare for long to hear an older adult with hearing loss being spoken to in an inappropriate voice. Noisy rooms add to the difficulties.

The guidance for health professionals about communicating with older adults is broadly good. However, it is a little abstract and kind of assumes good audio conditions. It’s one thing to read that you should speak a little more clearly and slowly but another to get a feel for what this involves exactly or how you will have to adapt if it is noisy.

So, during this period of consultation as ideas developed some new audio materials were created to help facilitate the discussion about noise and voice qualities. These were then incorporated into teaching about communication for health students at the University of Manchester. Here are two examples.

First, what is it like to not hear clearly because of noise? Several audio clips were developed that, as far as it’s possible, give a sense of how difficult it can become for someone with mild age-related hearing loss to understand speech in a noisy environment.

Second, what are typical vocal responses to noise and communication with an older adult? With the help of an actor audio clips were developed to illustrate these changes of voice. It’s very revealing about the tendency to shout or the tendency towards a patronising kind of voice and how these vocal responses undermine communication with older adults.

How do these resources help students learn? They are more effective at raising awareness of the issues. ‘An eye-opener’ is one comment but that maybe the wrong metaphor! Certainly they have a greater impact by being more engaging and more memorable. One might nod agreement that as a nurse you shouldn’t raise your voice to communicate with an older adult. Hearing what this sounds like definitely makes you wince.

A video explaining more about this MICRA project and with examples of audio clips within learning materials for undergraduate nursing students is available: https://stream.manchester.ac.uk/Play.aspx? Videoid=28177

Other areas of work from this project will explore further what can be done about room design and organisation processes in waiting areas.

Full team: From The University of Manchester: Dr Ian Brown, School of Nursing, Midwifery and Social Work; Dr Susan Rutherford, Senior Lecturer in Music; Dr Tim Wilding, Audiology & Deafness Research Group; Dr Jo Hart, Senior Lecturer in Communication, Manchester Medical School. From the University of Salford: Dr Bill Davies, Senior Lecturer, Acoustics Research Centre.
The Cochrane Collaboration is an international network of more than 28,000 dedicated people from over 100 countries. They work together to help healthcare providers, policy-makers, patients, their advocates and carers, and the general public make well-informed decisions about health care, by preparing, updating, and promoting the accessibility of Cochrane Reviews.

Do hearing aids work for tinnitus in people with some hearing loss? Tinnitus is the ‘ringing’, ‘whooshing’ or ‘hissing’ sounds that about 10% of people experience. One small study investigated 91 people, average age of 38 years, who had tinnitus for at least six months and some degree of hearing loss. Unfortunately there were only small differences in tinnitus experienced between the effect of hearing aids and sound generators.

What about treatments for sudden onset of hearing loss? Sudden hearing loss where clinical assessment fails to reveal a cause is called idiopathic sudden sensorineural hearing loss. The hearing loss may vary from partial to total loss, and is usually accompanied by tinnitus.

Vasodilators are drugs which widen blood vessels and thus improve blood flow as it is thought that sudden hearing loss may be related to the blood circulatory system. Three studies, involving only 189 people showed some improvement in hearing in those treated with vasodilators compared to those who did not have vasodilators. However there were differences in the type, dosage and duration of vasodilator treatment used in each of these studies, and thus the results could not be combined to reach a conclusion.

Steroids The value of steroids in the treatment of idiopathic sudden sensorineural hearing loss remains unclear since the evidence is contradictory because the studies have very small numbers of people in them.

Antiviral drugs are often used, usually in conjunction with steroids, to treat sudden hearing loss of unknown cause. This is based on the theory that the deafness is caused by a viral infection. However the effectiveness of antiviral drugs is questionable. The results of four studies involving 257 people comparing steroid plus antiviral treatment to steroid treatment only did not show any differences in hearing. There were however some side effects reported related to the steroids.

Hyperbaric oxygen therapy involves breathing pure oxygen in a specially designed chamber and it is sometimes used as a treatment to increase the supply of oxygen to the ear and brain in an attempt to reduce the severity of hearing loss and tinnitus. There is some weak evidence from seven small studies of generally poor quality, that hearing may be improved and possibly that tinnitus may also be improved. This may only be true if the treatment is used within two weeks of the onset of problems. There is no evidence that the treatment can help people who have been deaf for some months.

Can we help people to wear their hearing aids more? People who get hearing loss as adults are often offered a hearing aid(s). However, up to 40% of people fitted with a hearing aid choose not to use it.

The effect of different ways to help someone to manage their hearing loss and hearing aid(s) better has been examined by 32 studies. This included giving information, practice and experience at listening/communicating or by asking people to practise tasks at home. Some studies also changed how self-management support was provided, for example by changing the number of appointment sessions or using telephone or email follow-up. Most of the people in the studies were aged over 65 and many of them were serving in the military or military veterans.

However there was no evidence that any of the interventions helped people to wear their hearing aids for more hours per day over the short, medium or long term. Neither was there any evidence that the interventions encouraged more people to wear their hearing aids. Giving self-management support meant that people reported less hearing handicap and improved verbal communication over the short term. When this was combined with changing how the support was delivered people also reported slightly more hearing aid benefit over the long term.

References:
Without supporting research evidence the first UK practice guidance for those conditions will soon be in development. I look.initiative.

I'm currently planning a new 5 year programme of research for my team.

University of Nottingham as a postdoctoral research fellow in tinnitus, and I think found my interest group for tinnitus and hyperacusis and all the more difficult. However, the British Society of Audiology is about to start a special neurobiology of the fruitfly. In 2009 I moved to are no UK clinical practice guidelines, or NICE quality standard, so demonstrating impact is was there I discovered and pursued a love of neuroscience, doing a PhD in sensory neurobiology of the fruitfly. In 2009 I moved to University of Nottingham as a postdoctoral research fellow in tinnitus, and I think found my niche. I'm currently planning a new 5 year programme of research for my team.

What challenges do you face in your current position and which has been the greatest one?

Research funding is always a big challenge, you can spend a lot of time developing research ideas and grant applications but competition for funding can be fierce. It is so important to work with all relevant stakeholders and plan for impact. As a researcher you want your work to inform evidence based healthcare. For tinnitus, there are no UK clinical practice guidelines, or NICE quality standard, so demonstrating impact is all the more difficult. However, the British Society of Audiology is about to start a special interest group for tinnitus and hyperacusis and the first UK practice guidance for those conditions will soon be in development. I look forward to being involved in this well overdue initiative.

What is your current position and what was your career path that took you there?

I am a Senior Research Fellow at the NIHR Nottingham Hearing Biomedical Research Unit, University of Nottingham. I lead a broad programme of research mostly related to tinnitus. I have been a member of the British Tinnitus Association charity for the last 5 years and currently chair their Professional Advisers Committee.

I first trained in adult nursing at the University of Brighton and spend a number of years working in acute and elderly medicine. Wanting to become a lecturer I moved to The University of Manchester to study biology. It was there I discovered and pursued a love of neuroscience, doing a PhD in sensory neurobiology of the fruitfly. In 2009 I moved to University of Nottingham as a postdoctoral research fellow in tinnitus, and I think found my niche. I'm currently planning a new 5 year programme of research for my team.

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In your opinion, what are the top 3 issues affecting the care of older people?

In general, the sustainability of our healthcare systems with a rapidly increasing older population is a concern. I have been involved in a number of tinnitus health service evaluations and invariably see issues with access and equity of service. In many areas of hearing healthcare clinical practice is most informed by clinical experience and patient preference. Without supporting research evidence however many services could be lost. For example, there has been recent controversy over the provision of NHS hearing aids to people with mild to moderate hearing loss, and withdrawal of the provision by at least one NHS Trust in England.

What changes in elderly care do you anticipate in the next few years?

Age-related hearing loss and associated conditions such as tinnitus typically start to develop from the age of 50 and with an increasing older population comes increased demand on services. Alternative models of healthcare will need to be tested to meet that demand. We should see increased use of technology, for example, the use of online rehabilitation programmes for many long term health conditions are already in development.

If you hadn’t become a researcher what might you have done?

I love facts and data but I would love to try my hand at science fiction writing sometime.

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What experience has influenced your career the most?

Going to The University of Manchester as a mature student was life changing for me. As a first year undergraduate it was lectures on neural networks and systems by Professor Cathy McCrohan that drew me into neuroscience for the first time. I was then lucky enough to end up doing my PhD with Prof. McCrohan. In my current role I am motivated by the needs of people with tinnitus. I’ve met so many wonderful people who took part in our research studies and whose lives are severely disrupted by tinnitus. I want better for them.

Where do you go for advice and information?

I’m lucky to work in a research unit where I’m surrounded by researchers with different backgrounds and expertise I can draw on, and we have an excellent administration and support team. Patient perspective is so important to our work and my links with the British Tinnitus Association and its members are essential to making my work relevant.

Who would you most like to work with?

I’m hoping one of my next big projects will be to work with GPs. I’ve recently developed a grant application to examine the behaviours of patients and GPs when discussing tinnitus management options. I’m hoping to develop an intervention to improve tinnitus management in primary care settings.

What do you enjoy doing when you are not working?

I love the outdoors, national parks, forests, and am a keen walker. More than anything I love to travel and am planning a trip to India to celebrate turning 40 next year.

What do you do in a typical working day?

Every day is different. I might spend today writing a grant application, working on a journal article, project management meetings, supervision with some of my PhD students, or be giving a talk to a group of patients or clinicians.

What advice would you give to someone contemplating following in your footsteps?

It’s tough to get on in academia, most people who plan to be an independent researcher end up taking different career paths. You need to be prepared to work exceptionally hard, and be prepared go to where the opportunities are. Sounds simple, but saying ‘yes’ to things makes all the difference; be on that charity committee, deliver that lecture, represent your team on that community open day, all these things are just as crucial to getting on as a researcher as having ideas and writing papers.

If you were stranded on a desert island what would be your one luxury?

My Stephen King collection! He’s a genius and been my favourite author since I was 11 years old and first read Needful Things.

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In our next quarterly issue of Innov-age we will be looking at Heart Health and Older People. Looking after your heart is important as you reach later life. Heart and circulatory diseases are the largest causes of mortality in adults over 65, and 21.4% of people aged over 65 have been diagnosed with coronary heart disease (Age UK, 2015). The Innov-age team will be summarising the research around this important topic, looking at heart conditions and sharing their knowledge and experiences of other important eldercare issues...