

Jameel Muzaffar, Anne Schilder and James O'Hara

In a follow-up to the interview with Anne Schilder back in 2016*, Jameel Muzaffar speaks to Anne and to James O'Hara about the current research landscape in ENT in the UK.

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Jameel Muzaffar: Please could you introduce yourselves?

Anne Schilder: I am an ENT surgeon at UCLH's Royal National ENT Hospital and hold a chair at the UCL Ear Institute. I lead a programme of translational hearing research across the two organisations supported by the NIHR UCLH Biomedical Research Centre.

James O'Hara: I'm an ENT/head and neck surgeon and a clinical senior lecturer/honorary consultant within Newcastle University/Newcastle upon Tyne Hospitals. For the last year, I've been the ENT surgical specialty lead within the Royal College of Surgeons of England, which is a really helpful role to see exactly what's going on in terms of research within ours and other surgical specialties.

JM: Anne, what are the main changes you've seen in the research arena in ENT over the last 8-10 years?

AS: First of all, you two have taken over the RCS and NIHR lead roles and it's wonderful to see you building a strong portfolio of ENT studies to support ENT surgeons in making evidence-based decisions. Compared to 10 years ago there is a deeper understanding of the need to work together to do impactful research. For me, working together means working across universities and trusts, professional boundaries and geographical locations. Increasingly, ENT researchers are bringing in experts from associated specialties like GPs, paediatricians and geriatricians to address big clinical questions and they set up projects with ENT trainees and surgeons across the country. Great examples are those initiated by James and his colleagues in Newcastle: the tonsillectomy trials NESSTAC and NATTINA, NAIROS about septoplasty, and TOPPITS about proton pump inhibitors in persistent throat symptoms. Current examples are the MACRO and STARFISH trials which

will answer how best to manage chronic rhinosinusitis and sudden deafness, and COACH and FAMOUS around cochlear implantation and hearing care. These trials underpin conversations about best management with our patients, hospitals and commissioners. Our ENT trainee research collaborative, INTEGRATE, has been key in gathering important observational data to inform these trials and improve services. It is a joy to see the next generation of ENT surgeons taking high-value research forward.

JM: Can you give us an example of a common area that you think is particularly ripe to be explored?

AS: Even after many years of practice, I am still uncertain which children with sleep disordered breathing need surgery or are likely to improve without an intervention, and when a sleep study will bring clarity. These questions require prognostic research from large cohorts or registries, which are currently difficult to get funded, so may require a strategic push from our professional organisations to get started. There are good examples in the US and Nordic countries. We should also make better use of routinely collected healthcare data and apply new techniques, such as machine learning, to better understand clinical phenotypes and predict management outcomes. An example is the NIHR Hearing Health Informatics Collaborative, designed to do this for the hearing field.

JO: My colleague in Newcastle, David (Winnie) Hamilton, has had a lot of success with the LARCH study. This is a cohort study pushing towards personalised medicine for those with laryngeal cancer, where little is known about the optimum options for any individual patient.

JM: Are there any particular challenges you'd like to highlight?

JO: We need to ensure that research and academia is recognised in NHS consultant job plans. If we want our trainee researchers

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to continue to flourish, we need to ensure that there are academic opportunities for the NHS consultants of the future. That has always been the challenge, but particularly so now.

AS: This is something that has come up frequently in discussions around the Action Plan on Hearing Research that we are developing on behalf of the Department of Health and NHS England. Capacity and capability to deliver high-value research in our field needs to grow. This means that research needs to be embedded in job plans for ENT surgeons, speech and language therapists, audiologists and trainees. We need to engage with commissioners and managers to develop strategies that will grow research opportunities for both patients and professionals.

JO: The Royal College of Surgeons has a great programme of submitting research themes to NIHR, specifically to the health technology assessment (HTA) funding panel with a high pick-up rate and ultimately success in being commissioned. The HTA programme is very much based on pragmatic clinical trials looking at the clinical and cost effectiveness of treatment. The trials that we've discussed (NATTINA, NAIROS and TOPPITS) all came through HTA. This means that if the NIHR commissions a research question, we know if we design a suitable trial for the research brief, they will fund it. I'm keen to hear from anyone that has a research question to see if this is something we could submit to NIHR for commissioned funding. These can be worked up in the Population Intervention Comparison Outcome(s) (PICO) format. We should recognise that, whilst we've had great success in raising the bar for research trials, we've not had a lot of specifically surgical research in ENT. We are a surgical specialty with lots of high-volume procedures; we should be looking at trials to improve those surgical interventions that we offer. There are so many areas of controversy amongst surgical procedures that the research questions are limitless.

JM: I'd be keen to see more surgical intervention trials, not just focusing on which surgical technique or device is best, but also which patients need surgery and which don't. This is also perfect for the NIHR Associate Principal Investigator (API) Scheme which should form part of everyone's training. From an NIHR perspective, ENT is an overperformer in API participation and completion for both ENT surgeons in training and allied health professionals.

JO: In Newcastle, we're massive advocates of the API scheme. We've had a lot of ENT and AHP APIs involved in trials. This broadens the research team and gets

them heavily involved so they understand the research process so much more. In future, we'll start to see people who've been through the API scheme go on to be principal/chief investigators, because getting hands-on experience in research really helps you think about how you'd design the next research study yourself.

JM: There is a lot of excitement about novel therapeutics for the ear, particularly the first clinical trials of gene therapy for deafness. Anne, do you have any thoughts from your experience with the REGAIN trial?

AS: We initiated REGAIN 10 years ago and the results have just been published (<https://www.nature.com/articles/s41467-024-45784-0>). Our consortium was the first worldwide to take the discovery of a regenerative hearing drug from the lab to the clinic. The trial has not only established whether this approach is safe and efficacious but allowed us to develop recommendations for future trials of novel hearing therapeutics. When we started REGAIN, we were unsure if people would want to take part, but we received emails from over 5000 people worldwide hoping to join the trial, highlighting the unmet need. We learned that we need better biomarkers and hearing tests to pick up signals that these therapeutics may work. Most hearing tests are subjective and have evolved little over time; they may work well in a clinical setting but lack sensitivity and replicability for clinical trials. New hearing measures that guide us to the cause of hearing loss may allow us to better select patients for these highly targeted treatments. The REGAIN timelines are illustrative of how long the journey from the lab to the clinic is. This is longer than clinical training in ENT, so we need to find ways for trainees to be involved in parts of such large projects, so they can take learnings forward.

JM: Are you concerned about the potential impact on research of more NHS work being carried out by outsourced providers, away from traditional research settings?

JO: High-quality research, like NATTINA and NAIROS, is hugely enabled by NHS and NIHR infrastructure. If all the tonsils and septoplasties were done in the private sector that would be a worry.

Recent drives to move primary care conditions into pharmacy settings is clearly an area we should take an interest in as ENT surgeons and researchers. I'm thoroughly impressed with the NICE prescribing guidance for antibiotics in sore throats,

presented in a very easily accessible format. Pharmacists could manage sore throats following treatment protocols without issue. I don't think there are similar guidelines/pathways for other common scenarios, for example middle ear infections, otitis externa or symptoms of sinusitis. Huge amounts of research have demonstrated the relative ineffectiveness of giving everybody antibiotics. This is a concern, and we need really strict guidance as to how patients should be treated.

AS: There is much concern about the arguments for withdrawal of free NHS earwax removal services and subsequent inequality of access. Research would not so much focus on whether removal of wax is useful – we know obstructing wax is bothersome – nor whether syringing or micro suction is more effective. What this needs is research on how we best organise the patient pathway, which is currently too convoluted in the UK.

JM: Have you got any advice for readers that might be thinking about a clinical academic career?

AS: Being a clinical academic in ENT is the best job ever. The UK is unique in terms of opportunities for healthcare professionals of all backgrounds and career stages to pursue a clinical academic career. The NIHR offers support for fellowships or projects that allow clinicians to create protected research time. The NIHR is often referred to as the best kept secret in the NHS, and it shouldn't be. It funds the Clinical Research Network so that all NHS Hospitals can offer their patients and professionals opportunities to take part in research. The NIHR also funds our Biomedical Research Centres, which have really accelerated hearing and tinnitus research in recent years. I would encourage all young ENT surgeons to come to us for advice on how to access that support. As a clinical academic, there are so many opportunities to learn and grow. You have experienced that through the RCS Surgical Specialty Lead scheme and NIHR leadership network. I would like to encourage others to apply for such national roles when they come up, because they are fun and offer great learning.

JO: Anyone can go into academia and research if they want to. It will keep you enthused and interested in your profession throughout your working career. I just don't think we've made enough of that. I think it is important for those of us who are involved in academia to wave that flag, saying this is still a fantastic area for people to come into.