

Media release

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Doctors urged to treat patients with sudden hearing loss within seven days

A team of clinician scientists at UCLH have identified the factors which predict full hearing recovery, with the strongest predictor being treatment with steroids within seven days of a sudden drop in hearing.

The researchers collaborated with 240 junior doctors and undertook the largest study to date of adults who were seen with sudden hearing loss across 76 hospitals in England and Wales. The team analysed the data from the study and found that patients who received steroids within seven days were five times more likely to fully recover their hearing compared to those who were not given steroids, even after accounting for all other patient and hearing loss factors.

These findings are outlined today in *JAMA Otolaryngology – Head & Neck Surgery*.

The team at the National Institute for Health and Care Research (NIHR) UCLH Biomedical Research Centre (BRC) also found that only about 60 per cent of these patients were treated within this critical window. This led them to develop an online tool that can predict the chance of full hearing recovery in adults presenting with sudden hearing loss.

The Seashel recovery calculator, which is freely available online to clinicians, estimates the chance of full hearing recovery based on five key patient and disease factors (age, presence or absence of heart disease, presence or absence of dizziness, the severity of hearing loss and whether steroid treatment has already been given). The tool can help specialists and their patients make informed decisions about treatment and follow up plans.

Suddenly losing hearing in one ear happens to thousands of adults each year in the UK. A significant number of these adults will spontaneously recover, but the majority do not. In those that do not recover, the resulting hearing loss leads to considerable disability. It remains unclear why some people recover their hearing and others do not, and there is uncertainty on how best to manage these patients.

UCLH Ear, Nose and Throat surgeon Mr Nish Mehta led the research. He said: “Time is of the essence when it comes to restoring hearing after sudden hearing loss. It is important that patients who experience a sudden drop in their hearing seek urgent medical attention. It is also important that the medical teams who first see these patients either arrange appropriate urgent specialist review or consider steroid treatment if the specialist review is unlikely to occur within the appropriate timeframe.

“Consultations between specialists and patients can now benefit from precise predictions on the chance of full hearing recovery if our free online calculator is used. This information can be used to guide shared decision making between specialists and their patients regarding treatment and follow up plans.”

The BRC at UCLH led the development of the tool, which was developed using data from the SeaSHeL (Sudden onset Sensorineural Hearing Loss) study collected between December 2019 and May 2022.

ENT surgeon Professor Anne Schilder, who is Director of the UCLH BRC Hearing Health theme, said: “This study shows the power of collaborative research. It was uniquely delivered by junior doctors in NHS hospitals across England within the framework of the NIHR. The study answers questions that come up every day in the conversations between doctors and patients about sudden hearing loss.”

Professor Karl Peggs, UCLH Director of Research and Director of the NIHR UCLH BRC, said: “This study is one among several led by our BRC Hearing Health theme which is pushing forward our understanding of hearing loss and is an example of research led by our BRC which has huge potential to make real impact if its findings are taken up in the healthcare system.”

Joint first authors of the paper are ENT trainees Rishi Mandavia and Nikhil Joshi at UCLH who coordinated the work of the teams from hospitals across England.

The study was conducted with the expertise of Senior Researcher Gerjon Hannink of the Radboud Institute for Health Science at Radboud University Medical Centre in Nijmegen, the Netherlands, who has been vital to the publication.

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Note to editors

The full title of the paper is “A Prognostic Model to Predict Hearing Recovery in Patients With Idiopathic Sudden Onset Sensorineural Hearing Loss” and the DOI is: 10.1001/jamaoto.2024.2598

The SeaSHeL recovery calculator is freely available for use by clinicians at <https://suddenhearingloss.shinyapps.io/recovery>

About UCLH

UCLH (University College London Hospitals NHS Foundation Trust) provides first-class acute and specialist services in six hospitals in Central London. UCLH is committed to education and research and forms part of UCLPartners which in March 2009 was officially designated as one of the UK's first academic health science centres by the Department of Health. UCLH works closely with UCL, translating research into treatments for patients. For more information visit www.uclh.nhs.uk. We are also on Facebook (UCLHNHS), Twitter (@uclh), Youtube (UCLHvideo) and Instagram (@uclh).

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- Investing in world-class expertise, facilities and a skilled delivery workforce to translate discoveries into improved treatments and services;
- Partnering with patients, service users, carers and communities, improving the relevance, quality and impact of our research;
- Attracting, training and supporting the best researchers to tackle complex health and social care challenges;
- Collaborating with other public funders, charities and industry to help shape a cohesive and globally competitive research system;
- Funding applied global health research and training to meet the needs of the poorest people in low and middle income countries.

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