

evidence for benefit and the risk of serious harm from accidental retention, routine insertion of throat packs should be questioned and the risk/benefit ratio discussed for each individual patient at the theatre team brief.

### 19 A PROFILE OF THE PSYCHOSOCIAL IMPACT OF CHRONIC, ORGANIC VOICE DISORDERS IN THE ADOLESCENT POPULATION AND THE FACTORS THAT AFFECT THIS

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Clinical voice disorders in children arise from, or are associated with, both congenital and acquired laryngeal conditions and whilst many can be managed to a point of resolution some disorders may be expected to have a life-long impact on vocal function. Research indicating the intractable nature of some laryngeal disorders is relatively recent (Reynolds, Meldrum, Simmer, Vijayasekaran, & French, 2017), and studies exploring the nature of impact arising from chronic dysphonia in young people are sparse.

There is currently no clear profile of the chronically voice disordered adolescent population nor reported evidence as to those factors that may increase the risk of negative impact arising from a chronic voice disorder.

Our study evaluated whether the perceived impact of chronic organic dysphonia, primarily of structural and neurological aetiology, changes across adolescence and aimed to identify other factors such as gender, vocal aetiology, vocal tract discomfort, perceptual voice features, and voice severity, that might impact trends.

Data was collected retrospectively from the health records of 67 subjects from the historic voice caseload of a Speech and Language Therapy Service within a tertiary children's hospital. Subjects ranged from 10 - 18 years and their data extracted from the first recorded contact. Regression analyses were used to evaluate the impact of age and other factors on self-perceived psychosocial impact, measured by the Voice Handicap Index.

Results indicate that age can predict self-perceived psychosocial impact of chronic organic dysphonia for the majority of adolescents. The factors of gender, vocal tract discomfort and asthenic voice quality further impact self-perceived psychosocial impact. Interestingly, overall perceptual voice severity was not a predictor of perceived psychosocial impact and in itself should therefore not be used to guide decisions around the need for intervention. Further research is much needed in this field.

### 20 DEVELOPMENT OF A DIGITAL GUIDE FOR FAMILIES OF PATIENTS ON THE GOSH PAEDIATRIC INTENSIVE CARE UNIT

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Paediatric Intensive Care Units (PICUs) can be very stressful environments for families of sick children. PICU has more restrictions than general wards, and activities such as visiting hours can be very different from other areas of the hospital. Currently, information is available to families in paper form and displayed around the unit. However, we would like to revolutionise our communication strategy to make information available digitally in the form of a mobile app, allowing families to engage with this information more flexibly.

As part of a joint collaboration between GOSH and UCL computer science (CS) through the industry exchange network, a mobile app that delivers information to parents was developed using Ionic. A web application, which allows clinical teams to manage content, was developed using NodeJS with a MySQL database.

The mobile app delivers a broad range of information about the PICU ward, including information on access, staff groups, and equipment used. In addition, a FAQ section is included that was developed in partnership with patients and families. The submission of Feedback is also possible via the app; this allows users to submit questions, or comments, on the content and information. This mobile app is an example of how the Hospital might develop new ways of communicating important information to patients and families using our services.

### 21 DEVELOPMENT OF A DIGITAL SELF-CARE MANAGEMENT APPLICATION FOR CHILDREN WITH UVEITIS: UVEITIS PATIENT PASSPORT

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Childhood uveitis is a chronic, sight threatening inflammatory eye condition. There are a complex range of different disorders within the collective term of uveitis. Children can have associated systemic inflammatory disorders, and are treated with systemic chemotherapies which need frequent monitoring. For many, the uveitis continues to be active in adulthood. Care for children with uveitis is multi-centre and multi-disciplinary. A child's primary care team may be located in a geographically distant location, acting as an obstacle to informing teams at local hospitals, particularly when children present acutely with problems associated with their eye disease, systemic disease or treatment.

It can also be a challenge to educate young people about their disease, which is vital to support transition. A paper based 'Uveitis Passport' existed to support self-care for adults with uveitis. This paper based personal record was well received, but was not designed for use in children and young people. We have undertaken a project to create a digital mobile app specifically aimed at children to support them, and their families, to take control of their condition.

In collaboration with UCL computer science, through the industry exchange network, researchers at GOSH and UCL GOS Institute of Child Health developed a mobile app to support Uveitis self-management. The adult 'passport' content was modified with the support of children and families. The

application front-end was developed in Ionic. The back-end consists of an internal SQLite Database that provides the mobile app with direct read and write access to the data, stored locally in a single file.

The mobile app developed allows patients to record important information about their condition. The app will support patient self-management, and empower patients when accessing services outside of their normal care team. This app could be modified to support a variety of childhood chronic conditions.

## 22 DIGITALISATION OF MYEYES, A VISION RELATED PATIENT REPORTED OUTCOME MEASURE

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Childhood visual impairment (VI) has significant impact on the child and with far-reaching consequences for the child's social and educational experiences and future career prospects.

The VQoL\_CYP and FVQ\_CYP are validated patient-reported outcome measures (PROMs) which capture vision-related quality of life (VQoL) and functional vision (FV) and are designed for use by children and young people living with VI, to capture children's own perspectives of the impact of VI. They are currently used as paper based questionnaires in research and routine clinic practice. However, clinicians and families would benefit from digitalising the process, allowing patients to complete questionnaires electronically with data automatically collected into a database for analysis.

In collaboration with UCL computer science, through the industry exchange network, researchers at GOSH and UCL GOS Institute of Child Health developed a proof of concept app was created to deploy both instruments digitally (collectively, 'MyEyes'), complete with a database for analysis. The web application was developed using Django with a PostgreSQL database. The mobile app was developed using Ionic.

The digitalisation of the questionnaires has the potential to improve the child's experience of self-completion. Deployment via a mobile app allows patients to complete questionnaires at sequential time-points, in-between normal clinic visits, thus providing clinicians with more information about their eye condition over time.

To gain feedback on the technology, patients and families will now test the prototype mobile app. This project demonstrates how PROMs can be digitalised, supporting a more efficient collection process for important patient-generated data. This prototype could serve as an example of how other PROMs in use at the hospital could be deployed digitally.

## 23 RAPID DESIGN AND DEPLOYMENT OF AN ADULT CRITICAL CARE TRANSPORT TEAM – THE LAUNCH OF BIG CATS

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The Children's Acute Transport service (CATS) is a stand-alone paediatric critical care transport service in the north thames region. In April 2020, demand for adult intensive care beds exceeded surge capacity in some North Central London (NCL), units which led to an urgent need to transfer COVID-19+ve adults between units.

A newly formed adult critical care transport service in the NCL region became overwhelmed with requests and CATS were asked to assist. Big CATS was launched within 48 hours, activated 16 times and offered a 7 day a week daytime service without denuding paediatric capacity.

## 24 MONITORING BONE HEALTH IN CHILDREN AND YOUNG PEOPLE WITH COELIAC DISEASE – A CLINICAL AUDIT

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**Introduction** Monitoring of bone health via bone density in coeliac disease (CD) using dual-energy X-ray absorptiometry (DEXA) in childhood is recognised in clinical practice, however there is variance in frequency of monitoring. At Great Ormond Street Hospital (GOSH) the coeliac protocol is to perform a DEXA after diagnosis. National guidelines are non-specific about the paediatric population. This audit explored whether children with CD are meeting current guidance of DEXA scan monitoring at GOSH and whether those who have had DEXA scans had a change in their management.

**Methods** Retrospective clinical audit, registered with the research and development team. Data collected via electronic patient records (EPR) April 2020 on all patients seen in the dietetic led coeliac clinic.

**Results** 31 patients in dietetic led coeliac clinic. Median age at diagnosis was three years. 87% patients had a DEXA scan, of which 81% of were normal. Scans were performed a median 3.5 years after diagnosis. 2/5 patients with abnormal DEXA had tTGA's of 8–12.5U/ml. BMAD z-scores were completed in 78% of patients with mean -0.27. Serum levels of vitamin D were >25 nmol/L in 100% patients but 45 nmol-60 nmol/L in children with abnormal DEXA. No child had faltering growth at time of DEXA.

**Conclusions** As children are being diagnosed early, and there is a reversal in low bone mineral density on a gluten free diet, there are fewer indications to measure DEXA routinely. DEXA should therefore be only reserved for 'at risk' groups. Vitamin D supplementation of 10 ug daily and annual monitoring should be routinely advised.

## 25 IDENTIFYING EFFECTIVE WAYS TO COMMUNICATE HEALTHCARE SCIENCE CAREERS TO SECONDARY SCHOOL STUDENTS

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Engaging with secondary school students to raise awareness of the careers available in healthcare science is a vital step in recruitment and development of the future workforce. In order for healthcare science careers events to be successful, it