

may have been identified incidentally, compared to previous years (56% vs. 75%), possibly indicating reduced ad-hoc presentations as a result of the pandemic, although this difference was not significant. No evidence for nosocomial or community clustering of cases was found.

Whole genome sequencing identified serotype III ST-17 as the dominant GBS strain. However, isolates were genomically diverse with no evidence of an outbreak of a hyper-virulent strain. All sequenced isolates carried the *mreA* gene conferring macrolide resistance.

**Conclusions** An increase in LOGBS cases in our low-risk term-infant population was noted during 2020, with high rates of iGBS strains showing macrolide resistance. No clear evidence for an outbreak of a virulent strain, or impacts of the COVID-19 pandemic was found.

## British Paediatric Respiratory Society

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### UNCOVERING THE ROLE OF A TELEHEALTH DEVICE IN PROVIDING QUALITY CARE FOR CHILDREN AND YOUNG PEOPLE WITH CHRONIC RESPIRATORY CONDITIONS REMOTELY

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**Background** Innovation that improves the quality of care children and young people (CYP) receive is a major theme of the RCPCH 2040 vision. Paediatricians are being challenged to move beyond the virtual consultation adopted during the COVID-19 pandemic and utilise new technology to monitor, care for and treat CYP; empowering them to access services in a way that achieves this.

Bradford Teaching Hospitals NHS Foundation Trust (BTHFT) is the first NHS site in the UK to pilot the use of a handheld Telehealth device called TytoCare. The device enables healthcare professionals, CYP or their carers to link with clinicians remotely, in real time or offline, to enable examination of the heart, lungs, skin, ears and throat.

**Objectives** Our pilot aimed to assess the usability and potential benefit of TytoCare in CYP with chronic respiratory conditions like cystic fibrosis and primary ciliary dyskinesia to reduce face to face reviews by health care professionals, acute admissions and the burden of illness for these CYP and their families.

#### Methods

1. Stakeholder engagement with the BTHFT Executive, Paediatric Respiratory multi-disciplinary team, Informatics, Information Governance Department, Clinical Engineering and the TytoCare Company.
2. Workflow design:
  - a. Professional workflow: a device was utilised by our respiratory specialist nurse when a review from a senior doctor, other speciality or other allied health care professional was needed.
  - b. Patient workflow: families were chosen according to where the clinical team felt there would be greatest

benefit The device was used within an individualised care plan to assess acute or routine review with a member of the team from home.

3. Feedback on the usability, workflow and key outcomes was gathered at various stages of the project:
  - a. A feedback survey completed by the healthcare professional after each consult.
  - b. Data was collected via the TytoCare system for each consultation.
  - c. End of pilot surveys were completed by staff and families.

**Results** 48 consultations were undertaken using TytoCare during the pilot. We had healthcare professional feedback for 46 of them reporting the following impact: 100% of consultations felt to provide reassurance to families, 98% had a positive impact on the CYP. Two hospital assessments, 3 inpatient admissions, 13 face to face clinic appointments, 4 home visits, 23 face to face physiotherapy reviews and approximately 329miles were saved.

**Conclusions** In this pilot the TytoCare device was found to be easy to use by professionals and carers and to be reliable and effective in providing safe and quality care for a select group of CYP at home. The pilot highlighted the impact technology can have in reducing the burden of chronic illness for families. It also demonstrated that technology could be used successfully to improve access to care for some of our most vulnerable families.

## International Child Health Group

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### DESIGNING A GLOBAL HEALTH PARTNERSHIP EVALUATION

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**Background** Birmingham Women's and Children's Hospital (BWC)- Malawi Partnership is a global health partnership (GHP) established in 2004 as an educational link between paediatric departments at BWC and Queen Elizabeth Central Hospital (QECH), Malawi. Regular monitoring and evaluation of GHPs is key for assessing relevance, effectiveness, efficiency, impact and sustainability.

**Objectives** Design a global health partnership evaluation in accordance with internationally accepted standards to accurately capture the impact of the BWC-Malawi Partnership.

**Methods** An evaluation strategy was co-developed between BWC and QECH. The evaluation methodology was designed to assess contribution of the Partnership in accordance with its vision of improving child health sustainably through education and training. Domains for assessment were based on established determinants of effectiveness for GHPs<sup>1 2</sup> and included shared vision and goals, commitment to joint learning, sustainable, accountable, respectful, reciprocal and responsible.

A mixed-methods approach was adopted using quantitative questionnaires, semi-structured interviews and focus groups at both sites. Questions were written in consultation with the

QECH team to ensure they were appropriate to the local context and to reduce communication barriers. Questions focused on specific Partnership education and training activities including bi-directional exchanges, specialty teaching visits and the Paediatric Assessment Skills (PAS) course.

Operational planning involved input from both organisations, scheduling interviews to ensure representative numbers from all multi-professional staff groups, avoiding disruption to clinical care and ensuring interview techniques were empathetic and allowed equitable access to all voices. Practical measures included recruiting an evaluation team with previous knowledge of the partnership, timely advertising of the evaluation, organising rooms and timetabling staff for interviews, sourcing equipment, arranging travel itinerary and accommodation.

**Results** A quantitative questionnaire consisting of nine closed-answer and Likert scale questions was devised, as well as thirteen questions for the semi-structured individual interviews, to complete in fifteen minutes. Mock interviews were conducted to test for understanding and time management.

Due to the COVID-19 pandemic, a digital questionnaire method of evaluation was used for interviewing BWC.

All aspects of the design and implementation was completed in time for the evaluation. Designing the evaluation and organising the strategic, operational and practical aspects of the evaluation took two months to complete.

**Conclusions** Evaluation is essential for effectiveness, credibility and accountability of GHP. Planning and perfecting the details of the evaluation to be context specific, capture key components of partnership interventions, address equity, collaboration and governance, requires considerable investment of time and manpower from both partners. Partnerships should take this into account while planning evaluations to ensure success of the process and sustainability of the partnership. Advance design of evaluation instruments and processes which are specific and relevant to the partnership circumstances is crucial for the collection of reliable information.

## REFERENCES

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## British Society of Paediatric Endocrinology and Diabetes

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### THYROID DYSFUNCTION AT DIAGNOSIS OF TYPE 1 DIABETES IN CHILDREN AND YOUNG PEOPLE-CAN WE SAVE SOME PRICKS AND COSTS?

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**Background** The NICE guidelines for Type 1 diabetes mellitus (T1DM) in children and young people (CYP) recommends testing for thyroid function at diagnosis and annually thereafter. We observed that there appeared to be a significant number of newly diagnosed CYP, who had initial abnormal thyroid function tests, necessitating repeat blood tests,

sometimes more than once and were eventually found to have normal thyroid function tests. We therefore decided to establish the incidence of true thyroid dysfunction in our newly diagnosed CYP with T1DM population.

**Objectives** To determine the incidence of abnormal thyroid function tests along with positive Thyroid Peroxidase (TPO) antibodies at diagnosis and whether this required treatment within the first year of diagnosis.

**Methods** Two district general hospitals collaborated for data collection. We collected data from 2017–2019 of newly diagnosed T1DM CYP, aged up to 18 years, with, at minimum, follow up data of a year. We analysed the abnormal thyroid function test results and TPO antibody status at diagnosis, and whether this was a reflection of true thyroid dysfunction on repeat testing within a year of diagnosis.

**Results** In total there were 90 patients diagnosed with T1DM over the period of 3 years. 31% of children had abnormal thyroid function results at the time of diagnosis of T1DM. Thyroid function results from the time of diagnosis were not available in 13% of patients. 6.7% of all newly diagnosed had a positive TPO antibody level. When comparing the incidence of abnormal thyroid function with the incidence of DKA, it was noticeable that children presenting in DKA had a higher proportion of abnormal thyroid function tests (14/32), compared to those not presenting in DKA (14/58) – 44% vs 24%. During the study period, only one child eventually was started on levothyroxine, for confirmed hypothyroidism within a year of diagnosis and had both abnormal thyroid function tests and positive TPO antibodies at diagnosis.

**Conclusions** While this is a small study, this does raise the possibility that CYP, especially those presenting in DKA at the time of diagnosis of T1DM, have transient abnormal thyroid function, attributed to the sick euthyroid syndrome. Hence, we raise the question, should we avoid unnecessary thyroid function tests at diagnosis and only do interval thyroid function tests in those who have high TPO antibodies at diagnosis? This also has cost saving implications due to the greater number of tests required at diagnosis and subsequent repeat if abnormal. We hope to use this pilot study to demonstrate the higher incidence of transient abnormal thyroid function tests in CYP with newly diagnosed T1DM. We are in the process of collecting further data to determine if our results are replicated in a larger population across the region, within the other Paediatric diabetes centres. If we obtain similar findings across the region, it will provide evidence for further review and consideration of a wider policy change in terms of timing of initial screening for associated thyroid disease in children and young people with T1DM.

## Quality Improvement and Patient Safety

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### IN THE SEEK FOR A BETTER HANDOVER- AUDITING THE CASE AT EVELINA LONDON CHILDREN'S HOSPITAL

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**Background** Sometimes handover sheet gets to be chaotic and not adequately updated. As a result, it can be time-consuming