

Ulster Pediatric society
Annual conference 2022
Abstracts

Oral presentation Abstracts

COSTNI- Paediatrics, Poverty, Post-Pandemic- preliminary findings.

A McClean, F Donaghy, T Waterfield, N Kirk.

Queens University Belfast (QUB)

Background and Aims

The cost-of-living crisis is a health emergency.¹ Children today have lived through the pandemic and its repercussions on their health and well-being and have entered another crisis continuing to impact their physical and mental health. This study aims to consider the extent of that impact on the health of children in Northern Ireland (N.I) and identify areas where targeted support is required and how it affects the delivery of health care services.

Methods

A parental survey was created via redcap online questionnaire creator. Question content was considered with input from local charities and a review of literature and previous studies. Ethical approval was obtained. Data is anonymous. Primary schools in N.I were invited share the study link with families and it was also shared via social media.

Results

To date 403 parents have completed the survey. Median age 7yrs 3months. 23% receive free school meals. 74 (18%) reported their house cold due to inability to afford heating. 34 (8%) reported their house has damp/mould. 147 (36%) reported that their child experiencing stress/anxiety due to the cost-of-living crisis.

Conclusions

Children in poverty suffer worse health. It is concerning if more families are finding themselves in poverty. The 2017 RCPCH report, 2/3 of clinicians felt poor housing was a significant factor in the ill health of their patients. Cold homes adversely affect child development, can cause, and worsen respiratory conditions.^{2,3} As clinicians we need to be aware of our patient's home environment, how we respond to this and support families in need.

1. D Finch. The cost of living is a health emergency too. <https://www.hsj.co.uk/david-finch/3008723.bio> September 2022.
2. Cassandra Barrett, Alice R Lee, Elissa M Abrams, Sarah J Mayell, Daniel B Hawcutt, Ian P Sinha, *Eat or heat: fuel poverty and childhood respiratory health*. The Lancet Respiratory Medicine, Volume 10, Issue 3, 2022, Page 229,
3. Alice Lee, Ian Sinha, Tammy Boyce, Jessica Allen, Peter Goldblatt (2022) *Fuel poverty, cold homes and health inequalities*. London: Institute of Health Equity.

Author Details: Hannah Dorothy Jane Todd, Jonathan Boyd
Affiliation Details: Southern Trust Community Paediatrics, Lurgan Hospital, Craigavon, UK
Abstract Title: **OPTIMISING COMMUNITY PAEDIATRIC HEALTHCARE DELIVERY IN CEARA, SPECIAL EDUCATIONAL NEEDS (SEN) SCHOOL**

Abstract Text:

Background & Aims:

Complex health is difficult to manage and requires optimisation by community paediatricians.

According to "RCPCH: Covering All Bases 2017" there is disparity in community child health delivery and provision nationwide. Community child health (CCH) is an under-resourced team with 8.5% vacancy at consultant level. Services may be grossly inadequate for those children needing CCH services. The aim was to evaluate the number and demographics of children attending Ceara SEN School, Lurgan and identify if their medical needs are being met.

Methods:

Case records were identified from school enrolment. Inclusion criteria: pupils, Southern

Trust resident, known to community paediatrics. NIECR was reviewed to determine demographics, under regular paediatric review, epilepsy, autism, ADHD, melatonin usage, complex health.

Results:

115 cases were identified, with 60.8% (n=70) pupils under current community paediatric review. 23.2% pupils had epilepsy, 48% Autism, 7% ADHD, 15.4% used melatonin, 41.2% had complex health. 8.3% of pupils had community nurses; 1.9% needed direct nursing input to attend school.

Conclusion:

Considerable CCH work load in Ceara, SEN school (70 pupils required review; only 40 slots per annum). Ensuring pupils are reviewed at the 'right place, right time' allows for continuation of CCH invaluable service provision. Re-introduction of SEN school clinics throughout the Southern Trust will ensure standardised trust-wide healthcare delivery and provision; optimise paediatrician, parent and pupils time, and ensure patient-centred care. A prospective postal questionnaire is being sent to relevant parents in Southern Trust SEN schools, to add qualitative data.

Author Details: Claire Ridvan Parris, Hannah Dorothy Jane Todd, David Graham
Affiliation Details: Southern Trust Community Paediatrics, Lurgan Hospital, Craigavon, UK
Abstract Title: RESPIRATORY HEALTH IN CEREBRAL PALSY

Abstract Text:

Background & Aims:

Respiratory illness is the leading cause of mortality in children with cerebral palsy (CP). A consensus statement published by Gibson *et al* identified 9 risk factors for respiratory disease in CP predisposing to increased 5 year risk of hospital admission with associated morbidity and healthcare burden.

The aim was to evaluate the number and demographics of children in Southern Trust with CP and identify their respiratory risk factors.

Methods:

Case records were identified from the CP Register and Child Development Clinic. Inclusion criteria: age <18 years, resident in Southern Trust, diagnosis of CP.

The CP register provided data regarding GMFCS classification, previous seizures, swallow difficulties and drooling. NIECR was reviewed to determine respiratory hospital admissions, antibiotic use, current seizures, diagnosis and treatment of reflux, frequent snoring and paediatric review within past 18 months.

Results:

114 cases were identified. 70% were reviewed over past 18 months. GMFCS classification: 1 (23%), 2 (30%), 3 (14%), 4 (14%), 5 (19%). 7% had a respiratory admission over past 12 months; all were GMFCS 5 comparatively younger (18% <6year, 5% 6-12year, 5% 12-18year). 25% had swallow difficulties and 28% drooling issues. 17% had seizures in preceding 12 months. 9% had frequent respiratory symptoms. 23% with reflux and 5% snored frequently.

Conclusion:

Children with GMFCS 4/5 have concomitant respiratory risk factors. Children <6 years appear to have greater risk of hospital admission. Introduction of a respiratory checklist for children with GMFCS 4/5 could ensure the modifiable risk factors are optimised; ideally adapted regionally.

OUCH! IMPROVING PAIN MANAGEMENT FOR CHILDREN ATTENDING THE ULSTER HOSPITAL EMERGENCY DEPARTMENT WITH FRACTURES. A QUALITY IMPROVEMENT PROJECT.

Megan O'Doherty¹, Dr Niamh Melby²

Affiliations:

1. Final Year Medical Student, Queen's University Belfast
2. Consultant in Emergency Medicine, Ulster Hospital Dundonald, SEHSCT

Background and aims:

The RCEM/RCPCH joint standards advise clinicians on pain management for children with suspected fractures. In the Ulster Emergency Department, we suspected paediatric pain management did not meet these standards. We undertook a quality improvement project to reduce pain and suffering in children with fractures.

Methods:

We conducted a baseline audit of 51 suitable attendances – exploring triage times, pain scoring, administration of analgesia, re-assessment and discharge advice. We presented these findings, alongside new educational materials at departmental teaching. We then designed posters with guidance for staff, children, and parents and displayed them throughout the department. Three months following the intervention we re-audited a further 58 attendances.

Results:

Substantial improvements towards the RCEM/RCPCH standards were achieved in all measures, with several exceeding targets. The number of children with moderate pain receiving no analgesia reduced by 12%, in severe pain this dropped from 60% to 0%. Whilst percentage triage times increased (due to departmental pressures), the average time for analgesia administration improved from 64 minutes to 37 minutes. There was a 7% increase in pain scoring, 14% reduction in children receiving no analgesia and 16% increase in discharge analgesia advice.

Conclusions

Through visual aids and educational sessions, we demonstrated positive changes in the care for children with fractures. Overall, it has resulted in an improvement in efficient and effective analgesia for children with suspected fractures. Challenges and recommendations were highlighted and will be repeatedly addressed.

Authors:

Charlotte Sloane¹, Alison Bell¹, Katarina Stefkova¹, Maura Scott², Sarah Kapur³, Gemma Stewart³, Marcus Graham⁴, Husnaa Fathima Khan⁴, Julie Lewis⁵

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- 4) Child Health Society, Queen's University Belfast
- 5) Daisy Hill Hospital, Newry, Southern Health and Social Care Trust

Maternal & Neonatal Thyroid: follow-up or let it go?

Warren McCue, David Sweet

Neonatal Unit, Royal Jubilee Maternity Hospital (RJMh), Belfast

Background & Aims

In mothers diagnosed with autoimmune thyroid disorders, in-utero antibody (Ab) transfer can cause transient neonatal hypothyroidism or hyperthyroidism (thyrotoxicosis). Northern Ireland's tertiary NICU guidelines recommend follow-up of babies born to mothers with either autoimmune hyperthyroidism (Grave's) or hypothyroidism (Hashimoto's). Recent literature however suggests that antibody transfer in Hashimoto's is negligible, but local guidelines have not adapted to reflect this. An audit was performed to investigate both local incidence and practice.

Methods

A NIMATS database was created of mothers delivering in RJMH with history of thyroid disorders, and NIECR records of mums and babies reviewed to audit current practice.

Results

661 live babies delivered to 613 mothers with thyroid disorders between 01/11/2017 and 29/02/2020. 120 to mothers with hyperthyroidism, 541 with hypothyroidism. In mothers with hyperthyroidism, 47 babies warranted follow-up yet 77 were reviewed (37 indicated and 40 not). In mothers with hypothyroidism, 422 warranted reviews primarily due to unknown TSH Ab status (unknown in 505 of 541 mothers), yet only 29 were followed up.

In total, 106 babies had follow-up arranged, despite 469 warranting review per guideline. 63 babies had TFTs performed with no significant abnormalities and there were no missed thyrotoxicosis cases identified. 3 of 661 had abnormal heel-pricks.

Conclusion

Audit showed the guideline is not being followed. It recommends follow-up in babies born to Hashimoto's mothers despite current evidence on rarity of complications and lacked clarity regarding which Grave's disease babies warranted follow-up, with some missed or followed-up unnecessarily. A new updated guideline

Title: AUDIT OF THE NEW PAEDIATRIC CARDIAC SERVICE IN THE SOUTHERN HEALTH AND SOCIAL CARE TRUST (SHSCT).

Author: C. Mc Keown, D. Robinson, S. Callaghan
Paediatric Cardiac Service, Craigavon Area Hospital, SHSCT, Northern Ireland

Background and Aims:

From 2015 children in Northern Ireland with congenital heart disease (CHD) who required cardiac surgery had to travel to centres in England for their procedure. To provide a better, holistic care closer to home, the CHD All Island Network was established.

As part of this Network, in 2020 the SHSCT Paediatric Cardiology Outreach Service was commenced. An audit of this new service was conducted to assess current workload, allow service planning and to identify areas for improvement.

Methods:

A 6 month period of outpatient referrals were assessed. Information from the Trust Information department and the Electronic Care Record on each patient was collated including:

- Demographic Data
- Referral information (method, source, date, reason and pre-referral investigations)
- Waiting times
- Investigations, diagnosis, treatment and follow up

Results:

- 125 referrals received reviewed (November 2020-April 2021)
- 56% were from Daisy Hill Hospital (DHH)
- 58% were due to heart murmurs
- 56% had a normal heart or innocent heart murmur
- 14% required tertiary input, 2% of which required cardiac surgery
- 47% were discharged
- Referrals increased from 19 to 27 per month from Dec 2021-Sept 2022.

Conclusions:

The audit identified the need for additional training and guidance to help streamline referrals and in particular the identification of innocent murmurs. The network are now developing a number of clinical guidelines to assist the referral process. The data highlighted the need to increase service capacity to help reduce waiting times. A new monthly clinic is planned in DHH and funding has been agreed for additional Clinical Physiology and medical staff to support the outpatient service.

Poster Symposium Abstracts

A CEREBRAL PALSY CHECKLIST – IMPROVING QUALITY OF CARE PROVIDED TO CHILDREN WITH CHRONIC NEURO-DISABILITY.

C Diamond, C Flanagan, C Glass, S Berry

Background and Aims: In the 2013 RCPCH overview of child deaths, 71% of children who died had a chronic condition, most frequently neurological. Our aim was to review & improve the quality of care provided to children with a chronic neuro-disability, using cerebral palsy (CP) as an example of chronic neuro-disabling condition.

Methods: Using the NCEPOD audit tool, we reviewed 5 areas of clinical care: clinical recording, emergency care planning, respiratory compromise, clinical standards, and transition. Within these 5 areas, we focused on 21 recommendations set out from the NCEPOD 'Each and Every Need' guideline and NICE guideline for patients aged 0-25years with CP. 30 patients with CP (GMFCS I-V) from the Belfast and South-Eastern trusts were randomly selected and their clinical letters reviewed from the preceding 12months, to include correspondence from the paediatric MDT.

Results: 93% of patient's motor impairment and tone description were documented and 100% of patients had a local paediatrician to coordinate care with a recent assessment of pain, feeding and other medical needs. Based on the results, recommendations were made including ensuring detailing GMFCS level, annual dental review, annual consideration of an Emergency Health Care Plan and at least annual assessment of nutritional status.

Conclusions: During busy consultations, it is very difficult to assess all health aspects of a child with CP. To improve overall care quality, an annual medical review checklist for children with CP has been created and made available regionally, with roll out part of a regional quality improvement project.

Improving recognition of Paediatric Hypertension

Catherine Diamond, Rachel Moore, Kathy Mc Bride, Joe Clarke
General Paediatrics
Altnagelvin Hospital
WHSCT

Aim

Hypertension in childhood is under diagnosed and under treated. We aimed to improve the percentage of abnormal blood pressures recognised in the children's department in Altnagelvin Hospital from 50% to 90%.

Background

Paediatric hypertension is common and serious. Blood pressures are notoriously difficult to measure in children and hypertension is under diagnosed. This could lead to an increased risk of adult hypertension and target organ damage in children.

Method

For this quality improvement project, we set a gold standard of all children aged 3-12 years admitted to the children's ward having a blood pressure completed and the measurement plotted on PEWS chart. Data was collected on 5 patients a week for 16 weeks. Interventions were put in place after week 4. An email to nursing staff was circulated providing an explanation, along with reminders in the nurses WhatsApp group and daily diary. Infographics and BP centile charts were circulated around the ward.

Results

There was a notable improvement in admission BPs from 55% to 95%. Admission BPs were maintained above 85% on re-audit. There was a significant improvement on BPs not acted on from 27% to 0%.

Conclusions

Through basic reminders of gold standard guidelines and PDSA cycles we achieved our aim. Education is key when hoping to involve a large cohort of staff. A local guideline was developed and implemented to maintain our significantly improved results. This project shows improvements can be made with excellent teamwork.

Fetal Alcohol Spectrum Disorder- a couple of drinks is ok, right?

Rachel Moore, Jenny Fairfield
Community Paediatrics
Bridgeview House
Gransha Park
WHST

Aims

To evaluate whether children with FASD in our community Paediatric Unit are diagnosed and managed in accordance with SIGN guidance.

Background

The UK prevalence of fetal alcohol syndrome is around 32.4 per 1,000 population. Approximately 41.3% of pregnant woman are estimated to use alcohol in pregnancy. Fetal alcohol exposure can lead to characteristic facial features and significant neurodevelopmental difficulties in later life.

Methods

We reviewed case notes and electronic health records of patients that either had a diagnosis of Fetal Alcohol Spectrum disorder or were felt to be at risk.

Results

26% had a documented alcohol history from the mother and none were felt to be detailed.
47% suffered growth disturbance below 10th centile and 42% were microcephalic.
79% were felt to have features of a neurodevelopmental condition.
31.5% had a developmental delay.
47% had impairment in either: affect regulation, executive function, social/communication skills, attention and memory.
21% had their facial features commented on and 31% were scored as per the Washington system.
10% of patients were provided with written information and none of the patients were signposted to FASD charities.

Conclusions

This audit shows that we could improve on documentation of alcohol history and facial features as per the Washington scoring system. We could also improve on providing written information/charity information. To improve our service we established a peer review MDT slot at monthly local governance meetings. We established a Fetal Alcohol Proforma, including an alcohol history section and Washington scoring. Rulers were provided for palpebral fissure measurements.

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- 4) Child Health Society, Queen's University Belfast
- 5) Daisy Hill Hospital, Newry, Southern Health and Social Care Trust

Title:

IMPROVISE, ADAPT, OVERCOME... THE CHALLENGES OF SUSTAINING NORTHERN IRELAND'S PAEDIATRIC CAREERS CONFERENCE.

Background and aims:

Inspired by the RCPCH '#ChoosePaediatrics' promotion in 2019, we recognised a gap in Paediatric focused career events within Northern Ireland aimed at medical students and foundation year doctors. We set-out to create a readily accessible COVID-friendly platform to highlight Paediatrics as a career.

Methods:

Challenges faced:

- Establishing a new conference without funding
- Advertising and creating buy-in
- Change in organisers
- Taking onboard feedback and applying this for future events
- Timing of conference to avoid holidays, exams, and to fit with organisers availability

We employed the use of PDSA cycles to effectively adapt our conference to the needs of our target audience. We used a collaborative approach between paediatric trainees, medical students from the child health society, and the paediatric head of school. The event was promoted via NIMDTA, the Child Health Society and on social media.

Results:

- 1st conference – 25 attendees, 28% felt it was too long, 72% were very satisfied
- 2nd conference – 5 attendees, 20% felt it was too long, 100% were very satisfied
- 3rd conference – 23 attendees, 100% felt the duration was just right, 100% were very satisfied

Conclusion:

We have just held our 3rd annual conference. With each event having had varying levels of engagement and feedback. From taking on board the feedback from the 1st and 2nd years conferences we have been able to create our most successful event to date.

SAFE NI; A PRACTICAL APPROACH TO SAFEGUARDING TRAINING

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¹ Royal Belfast Hospital for Sick Children, Belfast Health and Social Care Trust

² Antrim Hospital, Northern health and Social Care Trust

Background and Aims

Safeguarding children and young people at risk of harm from abuse and exploitation is a fundamental responsibility of all paediatricians. Feedback following START assessments of the senior paediatric trainees in Northern Ireland highlighted the need for improvement of safeguarding training. The aim was to develop resources to adequately prepare the trainees for practicing child protection within the context of the law in Northern Ireland. Safe NI was developed and designed to provide region-specific training delivered by a multi-professional team of local experts including doctors, dentists, social workers, police and forensic medical officers.

Methods

We developed a blended learning course combining online lectures with a post lecture assessment and an in-person practical day. The practical study day consisted of lectures, role play, simulation and small group discussions. Immediate post course feedback was gathered from the 15 trainees in attendance via anonymous freehand notes.

Results

A total of 18 notes from 15 candidates were collected. Themes identified from the qualitative feedback included how “practical” (n=4) and “interactive” (n=4) it was, along with it being preferred to the previous national mandatory safeguarding course (n=3).

Conclusions

Paediatric trainees found the Safe NI course useful and this supports its introduction as the new mandatory level 3 safeguarding course for trainees in Northern Ireland. We plan to use the suggestions raised in feedback to improve the course and better meet the needs of local paediatricians.

Acknowledgements: Dr JA Maney, Dr D Primrose

PAEDIATRIC PRIMARY CARE HUB: A SERVICE EVALUATION FROM PARENT'S PERSPECTIVE

Eleftheria Ainley, Jonathan Henderson

Paediatric Craigavon Area Hospital, Southern Health and Social Care Trust, Craigavon, Northern Ireland

Background and aims:

Since 2018, our MDT child health primary care Hub runs once a month and consists of three local GP practices attended by GPs, health visitors, nurse practitioners, paediatric and GP trainees led by a paediatric consultant, who work together to meet the needs of the local paediatric population. This integrated service has reduced waiting times and improved patient outcomes as well as interprofessional relationships. We evaluated the impact of integrated care from parent's perspective.

Methods: Retrospective telephone evaluation from parents whose child's case was discussed in the period January 2022 – October 2022.

Results: All patients discussed in the Hub during this period were offered a feedback questionnaire and 34 responses were collected (83% response rate). Most families (80%) that received the letter summarizing the Hub discussions and recommendations found the advice clearly communicated to them. The Hubs were virtual and 66% would have preferred a face-to-face consultation. 88% of respondents felt that discussing the patients at the Hub would give them more confidence in their GP's opinion. Most responders (91%) indicated that they either preferred, or had no preference addressing their child's health concerns at the GP practice rather than the hospital. 97% of respondents said they would recommend the service to friends and family.

Conclusions: Patients gained increased confidence in taking their child to the GP, preferred appointments at the GP practice, and most respondents said they would recommend the service to family and friends.

Acknowledgments: Connecting Care for Children (CC4C), Imperial College Healthcare NHS Trust

Title: Difficult Vascular Access in Children: A new skills course

Presenting author: Sean O'Donnell¹

Co-authors: Eimear McCorry¹, Philip Ross¹, Shane Donnelly², Maria Donnelly³

Institutions: Royal Belfast Hospital for Sick Children, Belfast Health and Social Care Trust,¹ Craigavon Area Hospital, Southern Health & Social Care Trust,² Royal Victoria Hospital, Belfast Health and Social Care Trust³

TITLE (9/20 words):

Difficult Vascular Access in Children: A new skills course

ABSTRACT (244/250 words):

Background:

Taking bloods and obtaining vascular access in paediatric patients can be difficult, even for experienced clinicians. If done poorly, these procedures can cause upset or trauma for patients, families and healthcare workers. Despite this, little formal training exists locally to address the issue.

Aims:

We aimed to create a course to improve paediatric blood taking and clinician competence in obtaining timely, efficient, appropriate intravenous (IV) access with as little stress as possible.

Methods:

- A core team was created including representation from paediatric surgery, paediatrics and anaesthetics.
- The team created a course 'Difficult Vascular Access in Children' (DVAC).
- The course included key skill stations:
 - o optimising cannulation
 - o neonatal venepuncture
 - o capillary bloods
 - o venous access adjuncts
 - o intraosseous insertion
 - o central vascular access devices
 - o midlines
 - o ultrasound-guided IV access.
- Clinical staff from specialties that routinely work with children were invited to attend.
- Pre-course videos were produced and disseminated amongst participants.
- Course faculty were recruited including senior trainees and consultants from paediatric medical, surgical, anaesthetic and emergency medicine specialties.
- Content was delivered through a mixture of tutorials, case discussions and hands on practice with experts.

Conclusion:

The inaugural DVAC course received positive feedback from all candidates. Pre and post-course questionnaires demonstrated increased confidence across all skill areas.

Future:

DVAC course will run multiple times per year with next date in spring 2023. We will use initial and delayed feedback to modify and continue developing the course.