

## POST EVENT BRIEFING

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# Using evidence to improve child health: Moving from research to impact



# About the Children's Health and Maternity Programme

The NIHR Applied Research Collaboration (ARC) Children's Health and Maternity Programme is a national initiative focused on finding effective ways to implement evidence-based interventions to improve children's and maternity services across England.

Led by ARC South West Peninsula and ARC Yorkshire and Humber, the collaboration builds on the ARC network's existing expertise and assets in child and maternal health research to understand how research can contribute to meaningful change.

Four key implementation projects were prioritised as part of the programme:

- ESMI-III: The Effectiveness and Implementation of Maternal Mental Health Services
- BRUSH (optimising toothBrushing pROgrammes in nURseries and ScHools)
- ADaPT: Trauma-focused Cognitive Behavioural Therapy for children in care
- Evaluating models of health-based mateRnlty Violence Advisor (RIVA) provision in maternity services

The research programme has been developed in collaboration with the following ARCs: North East and North Cumbria, North Thames, North West Coast, Northwest London, South London, West and West Midlands.

Find out more about the programme and the project outputs at: <https://arc-swp.nihr.ac.uk/research/projects/childrens-health-and-maternity-programme/>

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# From research to real world impact

## Foreword

Improving the physical and mental health of children and pregnant women has never been more critical. Evidence shows how formative childhood is in shaping a child's health, wellbeing and future opportunities – starting from when they're in the womb.

Research within the child and maternal health field is playing a vital role in shining a light on areas where improvements can be made and highlighting innovative solutions that are making a real difference to the lives of women and children across the country.

The NIHR Applied Research Collaborations (ARCs) are leading the way in research within these areas. The scale and scope of this work was showcased at an event in June 2025 at the British Library in London hosted by the NIHR Children's Health and Maternity National Priority Programme. The event featured cutting-edge research, lived experience insights, and collaborative discussions around maternity care, neonatal care, mental health, special educational needs, and the importance of public involvement in health research.

Researchers, clinicians, policymakers and members of the public made up the 120-strong audience who heard from clinical and academic experts, including NIHR's Scientific Director for Research Infrastructure, Professor Marian Knight MBE, who opened the day's agenda.

We were honoured to have Baroness Anne Longfield CBE provide the keynote address, delivering an impassioned speech about the urgent need to improve health and wellbeing outcomes for children and young people. The day featured spotlights on numerous ARC research projects from across the country, panel discussions and poster exhibitions on a diverse range of topics - from supporting

“Funding research that really makes an impact and drives down inequalities is a key part of the NIHR's mission. It was a real privilege to open the 'Using Evidence to Change Child Health: Moving from Research to Impact' summer showcase, and to see how collaboration across research, clinical practice, policy, and lived experience has made a real difference to the lives of children and families. Days like this, where diverse voices unite around the shared goal of impact, are vital if we're to build more equitable, effective systems of care for the youngest and most vulnerable.”

**Professor Marian Knight MBE, FMedSci, Professor of Maternal and Child Population Health, Honorary Consultant in Public Health, Director, National Perinatal Epidemiology Unit**

“The 'Using Evidence to Change Child Health: Moving from Research to Impact' event was an inspiring opportunity to bring together evidence, ideas and lived experience to address the urgent challenges facing children's health today. The discussions highlighted both the scale of the problems – from rising mental health needs to deepening inequalities – and the wealth of innovation and commitment across research and practice. If we are to achieve the healthiest generation of children and young people, we must harness this momentum, prioritise prevention and early intervention, and ensure children are placed at the heart of health and policy making. This event was an important step in that journey.”

**Baroness Anne Longfield CBE, Founder of Centre for Young Lives**

toothbrushing programmes to reduce tooth decay in young children (BRUSH), to trauma focused Cognitive Behavioural Therapy for children in care (ADaPT), to evaluating models of health-based maternity violence advisor provision in maternity services (RIVA), and evaluating the effectiveness and implementation of maternal mental health services (ESMI III).

Our intention was to create a space for meaningful discussions between researchers, practitioners, and the communities their work is designed to serve, and to share knowledge and experiences across the research community to ultimately improve child health.

We feel strongly that this intention was achieved and we plan to build on the momentum of the day by strengthening our collaborations and partnerships to scale work nationally, and align efforts across regions to create a coordinated and lasting impact on the health and wellbeing of children and families.

This briefing document provides an overview of the session abstracts presented at the event and the posters displayed.

We would like to thank our cross-ARC team of event organisers: Gretchen Bjornstad, Sarah Laidler, Marie Hunt, Molly Butler, Kate Robinson, Charlotte Endacott, Divine Dantis, Isabelle Hawksworth, Jemma Phillips, Beccy Summers, and Naomi Morley.



**Professor Vashti Berry, Co-Lead for the NIHR Children's Health and Maternity Programme**



**Professor Stuart Logan, Co-Lead for the NIHR Children's Health and Maternity Programme**

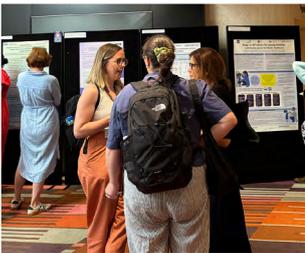


**Professor John Wright, Co-Lead for the NIHR Children's Health and Maternity Programme**



**Sally Bridges, Co-Lead for the NIHR Children's Health and Maternity Programme**

# Event in action



# Session abstracts

## Innovations in care during pregnancy and birth

### KEY

#### NIHR core strategic themes

- ★ Impact
- Inclusion
- ▲ Innovation
- ◻ Investment

#### Government's three strategic shifts

- Hospital to Community
- ⬡ Treatment to Prevention
- ◆ Analogue to Digital

- ⬡ Treatment to Prevention
- ★ Impact

### Expanding group care into the postnatal period: an evaluation of Pregnancy and Parenting Circles

Octavia Wiseman, Research Fellow, City St George's University of London

Group antenatal care ('Pregnancy Circles' in the UK) combines clinical care, information-sharing and community-building. In Pregnancy Circles, 6-12 women/birthing people due around the same time receive all their care in a group which meets for 2-hour sessions, following NICE guidelines, facilitated by two midwives providing continuity. Participants are taught to check their own blood pressure and participate in facilitated discussions. Brief one-to-one checks happen in the group space. Group antenatal care, which has been trialled across 14 NHS Trusts in England, is clinically safe, enhances satisfaction with care and can improve outcomes high-risk groups. Building on this research, an extended model called Pregnancy and Parenting Circles (PPC) was developed and implemented as part of normal care across Herts and West Essex. In this model, midwives work alongside health visitors and family support workers to deliver antenatal and three postnatal sessions (at 8, 12 and 16 weeks post-birth). PPC integrates the statutory 6-8 week check and covers topics such as safe sleeping, baby care, relationships, mental health, immunisations, preconception care and family planning. The model offers a rare opportunity for inter-disciplinary working as well as enhanced postnatal support. We will present our evaluation of the implementation of PPC, exploring the barriers and opportunities as well as stakeholder's perceptions of how the model might benefit families, professionals and services.



- ⬡ Treatment to Prevention
- ★ Impact

### Evaluating models of healthcare-based Independent Domestic Violence Advisor (IDVA) provision within maternity services – the RIVA study

Dr Kylee Trevillion, Senior Lecturer, King's College London and Deputy Director of the NIHR Mental Health Policy Research Unit

Background and Aims: Healthcare-based Independent Domestic Violence Advisors (hIDVAs) are evidence-based programmes that provide emotional and practical support to service users experiencing domestic abuse. hIDVAs are found to improve health outcomes for service users and are increasingly delivered across a range of healthcare settings. However, it is unclear where and how hIDVAs are implemented across maternity services and the key facilitators and barriers to their implementation. The RIVA research programme addresses these evidence gaps by identifying ongoing learnings across NHS Trusts which implement hIDVAs, and evidencing how hIDVA programmes achieve positive service changes to staff practice and service user outcomes. The RIVA programme comprised 3 studies:

1. national mapping of hIDVA programmes across English NHS Trusts;
2. world café event to generate evidence for the successful implementation of hIDVA models,
3. case study evaluations of 5 NHS Trusts with hIDVA programmes to examine their implementation strategies and to generate good practice guidance on successful implementation of hIDVAs.

Findings: This presentation will outline key implementation research findings from the research studies. Findings summarised include describing key facilitators and barriers to implementation of hIDVAs, such as: (1) hIDVA staff working directly from the Trust; (2) clear governance and middle- and senior-management support; (3) emotional support for hIDVAs and staff; (4) insecure funding, and (4) issues tracking outcomes of hIDVA interventions.



Treatment to Prevention



Innovation

## Improving quality of antenatal care in preterm births: implementation and impact of the National PReCePT Programme in England

Hannah Edwards, Senior Research Associate, University of Bristol

We evaluated the effectiveness and cost-effectiveness of the National PReCePT Programme (NPP) in improving use of antenatal magnesium sulphate (MgSO<sub>4</sub>) for neuroprotection in preterm births.

Since 2015, UK guidelines have recommended MgSO<sub>4</sub> for mothers in preterm labour to reduce cerebral palsy risk, but uptake was slow. In 2018, the NPP aimed to improve this, with earlier evaluations showing positive results. We aimed to find out if these improvements had sustained over time.

This quasi-experimental longitudinal study used data from the National Neonatal Research Database for babies born <30 weeks' gestation. Results showed MgSO<sub>4</sub> uptake increasing from 65.8% in 2017 to 85.5% in 2022, with the NPP linked to a 5.8 percentage point improvement in MgSO<sub>4</sub> uptake (95%CI 2.69 to 8.86, p<0.001). It had a Net Monetary Benefit of £597,000 and was 89% likely to be cost-effective. The NPP improved care, likely benefitting babies, their families, and society.



Hospital to Community



Impact

## Maternal Mental Health Services Study: Findings from a national realist evaluation of Early Implementer and Fast Follower sites

Dr Abigail Easter, Reader in Perinatal Mental Health, King's College London

Background: Maternal Mental Health Services (MMHS) were introduced in 33 Early Implementer and Fast Follower sites across England to improve access to psychological support for women experiencing post-traumatic stress disorder (PTSD) following birth trauma, perinatal loss (including parent-infant separation due to safeguarding), and tokophobia.

Methods: The ESMI-III (Effectiveness and Implementation of Maternal Mental Health Services) is a realist-informed evaluation aiming to: 1) Identify early barriers and facilitators to implementation, 2) Understand what works, for whom, and under what circumstances, and 3) Develop and pilot workforce development interventions

The study was undertaken in three phases:

1. Mapping service provision and challenges: Organisational mapping and focus groups with 25 multidisciplinary professionals across sites.
2. Organisational case studies: Realist interviews with service users (n=47), staff (n=15), and stakeholders (n=6) in four selected MMHS.
3. Development and implementation of training:
  - o Giving HOPE: Cross-sector training for staff supporting women at risk of separation at birth. Piloted in three MMHS and local partnerships.
  - o INDIGO-POPPY: A programme to prevent work-related PTSD in maternity staff, implemented in one MMHS with 101 midwives.

Results: Phase 1 revealed significant variation in service models and challenges such as lack of national consensus, logistical challenges in providing integrated care, and demand exceeding capacity. Phase 2 identified enablers of access and outcomes, including flexible stepped care and single points of access. Phase 3 showed that Giving HOPE improved staff knowledge, skills, and confidence in providing care for women at risk of separation from their baby close to birth due to safeguarding concerns.

Conclusion: ESMI-III enhanced understanding of effective MMHS delivery. Recommendations include the need for local investment, national guidance and oversight to ensure equitable, sustainable services for women affected by birth trauma, perinatal loss, and bereavement.



## Session abstracts

### Innovations in paediatric and mental healthcare



#### Neonatal Oral Antibiotics at Home (NOAH): From Evidence to Impact in Managing Suspected Early-Onset Infection in Newborns

Dr Harriet Aughey, Paediatric Consultant, Royal Devon University Healthcare NHS Foundation Trust and PenARC Knowledge Mobilisation Fellow

NOAH is an innovative, evidence-based care pathway enabling term newborns with suspected early-onset infection (EOI) to complete antibiotic treatment at home with oral medication after initial IV therapy. Developed by the Royal Devon neonatal team in partnership with Health Innovation South West and PenARC, NOAH responds to growing evidence supporting early switch to oral antibiotics in selected well infants.

The pilot launched in June 2024 at the Royal Devon and Exeter Hospital with strict clinical criteria guide eligibility. Parents are trained to administer oral antibiotics, with structured follow-up to ensure safety and adherence.

Over six months, 27 babies were managed through NOAH, saving an estimated 145 bed days and £66,500 annually. There were no increased readmissions versus a matched cohort. Parent feedback highlighted improved bonding, reduced stress, and better breastfeeding outcomes and staff reported confidence in the pathway.

Now adopted as standard care in Exeter, NOAH is being scaled across the South West Neonatal Network, supported by a shared dataset and ongoing evaluation. A systematic evidence review and economic analysis are underway to support national implementation. NOAH exemplifies the translation of research into impactful, family-centred, and scalable innovation in neonatal care.



#### The Pharmacogenetics to Avoid Loss of Hearing (PALOH) Study

Dr John McDermott, NIHR Clinical Lecturer, University of Manchester

Background: Aminoglycosides are commonly prescribed antibiotics used for the treatment of neonatal sepsis. The MT-RNR1 m.1555A>G variant predisposes to profound aminoglycoside-induced ototoxicity (AIO). Current genotyping approaches take several days, which is unfeasible in acute settings.

Objective: We aimed to develop a rapid point-of-care test (POCT) for the m.1555A>G variant before implementation of this technology in the acute neonatal setting to guide antibiotic prescribing and avoid AIO.

Design, Setting, and Participants: A pragmatic prospective implementation trial recruited neonates admitted to 2 large neonatal intensive care units in the UK. Neonates were tested for the m.1555A>G variant via the rapid POCT on admission to the neonatal intensive care unit.

Results: The rapid MT-RNR1 POCT was able to genotype the m.1555A>G variant in 26 minutes. Over an 11-month recruitment window, recruiting 751 babies, three participants with the m.1555A>G variant were identified, all of whom avoided aminoglycoside antibiotics and the need for cochlear implantation.

Conclusion: The MT-RNR1 POCT was integrated into routine care without disrupting normal clinical practice. This approach identified the m.1555A>G variant in a practice-changing time frame, and wide adoption could significantly reduce the burden of AIO. The system underwent the first NICE Early Value Assessment (EVA), and is currently being tested further across the UK at 14 sites as part of PALOH-UK.





## Looking after sick children at home – the Bradford ACE service (Hospitals at Home model and Enhanced Paediatric Nursing Skills (EPNS)

**Dr Ben Hughes, Paediatric Trainee, Yorkshire and Humber, and Dr Mathew Mathai, Consultant Paediatrician and lead for Ambulatory Care, Bradford Teaching Hospitals NHS Foundation Trust**

The Ambulatory Care Experience (ACE) service in Bradford demonstrates how Hospital at Home models can transform paediatric care delivery. Despite evidence suggesting 90% of children's urgent care could be managed in community settings, adoption remains inconsistent, partly due to limited effectiveness data.

Bradford's ACE service has collected robust data over seven years, demonstrating significant safety and outcome benefits. The service saves approximately 1,000 bed days annually with increasing year-on-year efficiency, while maintaining zero serious adverse events across nine pathways, with expansion into complex respiratory care through pilot programs.

Central to ACE's success is the Enhanced Paediatric Nursing Skills (EPNS) course, developed with the University of Bradford. This RCN-accredited, Masters-level course upskills nurses in enhanced assessments within robust escalation structures. Since 2020, EPNS has been oversubscribed and has now merged with Bradford Improvement Academy, incorporating coaching mentality and research methodology. The freely-available sister course, EPNS4Surge, has attracted over 11,000 healthcare professional enrolments.

NIHR Applied Research Collaboration Yorkshire & Humber supports this work through three approaches: facilitating knowledge mobilisation to spread the Bradford model to other organisations; utilising ACE's extensive dataset for research on effectiveness, safety, and cost-efficiency; and developing EPNS into a sustainable gold-standard training program through licensing agreements with other deaneries.

Benefits span multiple stakeholders: families receive high-quality care at home, reducing trauma; healthcare providers access evidence-based training; NHS Trusts experience reduced bed occupancy; and the wider system benefits from lower readmission rates and improved efficiency.

Key implementation lessons include establishing rigorous data collection, prioritising safety protocols, developing standardised training alongside service development, and engaging stakeholders across care boundaries.

Future plans encompass comprehensive dataset analysis for research publications, developing implementation resources for NHS trusts, expanding training partnerships, and conducting health economic analysis to strengthen wider adoption business cases. The ACE model and EPNS course demonstrate exceptional potential to transform paediatric healthcare delivery across the NHS.



Treatment to Prevention



Inclusion

## Y-Health: a mixed-methods prospective study looking at the physical health of young people admitted to CAMHS inpatient units in the UK

**Dr Rebekah Carney, Clinical Research Fellow and Trial Manger at Greater Manchester West Mental Health NHS Foundation Trust**

People with serious mental illness experience physical health inequalities leading to poor physical health outcomes and a 15–20-year premature mortality rate. Young people on inpatient units are more at risk, for reasons such as environmental restrictions, and increased likelihood of receiving psychotropic medication. However, little is known about the onset and trajectory of poor physical health.

We aimed to recruit young people upon admission to a CAMHS inpatient unit and assess them over 6-months. We aimed to gather information about physical health, mental health, and adverse health behaviours. We planned to assess people at baseline (within 6-weeks of admission), 3-months and 6-months post admission. The study took place in CAMHS inpatient units at Greater Manchester Mental Health NHS Foundation Trust, Leeds York Partnership NHS Foundation Trust, and Humber Teaching NHS Foundation Trust. Admissions were screened for eligibility by a researcher or their clinical teams.

People younger than 14, who had severe anorexia, who were unable to provide informed consent or had been on the unit for longer than 6 weeks were ineligible. A range of physical health assessments, mental health questionnaires and behavioural assessments were asked at baseline, after 3-months and after 6-months. Participants were also invited to a separate interview about their experiences of physical health care and monitoring whilst in hospital.

## Getting best-evidenced mental health support to care-experienced young people: the ADaPT Project

**Professor Rachel Hiller, Professor of Child & Adolescent Mental Health, University College London and Co-Director, UK Trauma Council and Dr Rosie McGuire, Research Associate, University College London**

Rates of PTSD are up to 12 times higher in care-experienced young people (CEYP) compared to their peers. Trauma-focused CBTs (tf-CBTs) are the best-evidenced treatment for youth with PTSD, yet, in practice, CEYP often struggle to access this treatment.

We worked alongside services to understand barriers and facilitators of implementing best-evidenced psychotherapies, specifically tf-CBTs, for CEYP. This was an active, open implementation trial that recruited 28 mental health teams across England, including general CAMHS, targeted CAMHS for CEYP and social care-based teams. From these teams, participants were 243 mental health professionals, from a wide variety of professional backgrounds. Following recruitment and training in Cognitive Therapy for PTSD (a specific type

of tf-CBTs), teams participated in rolling three monthly focus groups and individual interviews, to understand what helped and hindered implementation. The research team also developed and provided additional trainings and resources in response to the needs identified by services in their discussion of barriers to implementation – these are now freely available on our website ([childtraumaresources.com](http://childtraumaresources.com)). Data was analysed using a framework analysis conducted using CFIR 2.0 to better understand the key factors affecting implementation.

Results showed that almost half of the teams were able to implement, but only one quarter with CEYP, specifically. Universal barriers that were discussed by almost all teams highlighted the complexities of the young person and their network. However, unique factors that differentiated teams who did and did not implement included commissioning practices, the culture of the team, leadership engagement and style, and the development of supervision structures.

Findings offer key considerations for mental health teams, service leads, commissioners and policy-makers to enhance delivery of best-evidenced mental health treatments, like tf-CBTs, for CEYP. Particularly as CEYP seem to face additional barriers which vastly vary between regions, potentially resulting from biases at various stages within the system.



# Session abstracts

## Innovations in public health and special educational needs



Inclusion

### Health Outcomes for Young People in Education - the HOPE study: evaluation of provision for special educational needs in English primary schools on health and education outcomes

Professor Ruth Gilbert, Professor of Clinical Epidemiology, University College London

Background: Rising demand and costs of provision for special educational needs and disability (SEND) requires evidence on inequalities and effectiveness of provision.

Methods: We followed children from birth to age 11 and analysed risk factors for SEND. Using target trial emulation, we estimated impacts of SEND within health subgroups on hospital admissions, school absences and attainment.

Results: We analysed sub cohorts drawn from 3.8 million children born 2004 to 2013, of whom 30% had SEND by age 11. Male gender, having a health condition, social disadvantage, and low attainment at age 5, increased the likelihood of SEND, but few health subgroups were highly predictive for SEND. Gradual increase in SEND through primary school was associated with delayed provision for children in deprived neighbourhoods and under provision by voluntary schools. Impact analyses found that SEND reduced unauthorised absences, made no difference to hospital admissions, and reduced attainment. Qualitative findings indicated benefits of early and responsive SEN provision and harms of delays.

Discussion: Health conditions only partially predict SEND provision. Other social, behavioural and severity factors affect selective assignment of SEND, but are not measured in administrative data. The weak or no evidence of benefits of SEND provision is consistent with other observational studies and contrasts with randomised controlled trials of positive effects on reading and maths.



Inclusion

### Self-harm incidence among children and young people 2019-2023: Time series analysis of electronic health records in Greater Manchester, England

Dr Louise Hussey, Research Fellow, University of Manchester

Objectives: We aimed to examine trends in self-harm incidence amongst 10-24-year-olds between Jan 2019-Dec 2023.

Methods: We conducted time-series analyses of all incident episodes of self-harm among 10-24-year-olds using electronic health records. The observation period was split into four phases: pre-pandemic (1/2019-2/2020); pandemic phase 1 (3/2020-6/2021); pandemic phase 2 (7/2021- 12/2022) and post-pandemic (1-/2023-12/2023). Rate ratios by sex, age, ethnicity, and deprivation were modelled using negative binomial regression.

Findings: Self-harm incidence rates decreased significantly in the post-pandemic phase, compared to the pre-pandemic period (males-IRR 0.72; females-IRR 0.85). In females, this followed increased rates, rising by 18% in pandemic phase 2 (IRR 1.18). In males, rates decreased throughout the study period. Incidence rates were lowest for 10-12-year-olds. However, the greatest increase was observed in this age group, with rates in pandemic phase 2 being almost twice that seen pre-pandemic for females (IRR 1.91). The change in rates among females was also most marked in the least deprived neighbourhoods, rising by more than fifty percent (IRR 1.54) in pandemic phase 2.

Conclusions: Our results indicate a decrease in self-harm incidence during 2023. Analysis by age group showed the greatest increase in rates in 10-12-year-olds. Further research is needed to confirm these findings, and to identify the mechanisms driving these trends.



## Optimising toothBrushing pRogrammes in nUrseries and ScHools – BRUSH

**Professor Peter Day, Professor of Children's Oral Health and Consultant in Paediatric Dentistry, University of Leeds and Professor Zoe Marshman, Professor in Dental Public Health and Honorary Consultant in Dental Public Health, University of Sheffield**

A quarter of five-year-old children in England have tooth decay, increasing to 50% in deprived areas. Decay causes pain, affecting what children eat, their speech, quality of life and educational attendance. In England, treatment of decay is the most common reason why young children are admitted to hospital, costing the NHS over £40 million every year.

One key behaviour for preventing tooth decay is toothbrushing with a fluoride toothpaste. To supplement behaviours at home, early years toothbrushing programmes have been recommended. These supervised daily toothbrushing programmes are effective in reducing tooth decay and are cost effective. However, there is considerable variation in how they are implemented.

What have we done? This project is working with a range of stakeholders to learn how best to implement these programmes and how to increase their uptake and success in the longer term. We are using a variety of methods underpinned by implementation science to undertake this work, including:

- A series of three surveys with Local Authorities across England to investigate the provision of supervised toothbrushing programmes in nurseries and schools.
- Geographical mapping of toothbrushing programmes with variables including deprivation, levels of tooth decay in children, hospital admissions for tooth extraction, dental access and early-years education data.
- Qualitative interviews with 159 key stakeholders - policymakers, oral health providers, nursery/school staff, parents and children - to explore in-depth the barriers and facilitators to implementing supervised toothbrushing programmes.
- Co-design of an implementation toolkit for supervised toothbrushing programmes. The toolkit has been published online and the resources included are freely available ([www.supervisedtoothbrushing.com](http://www.supervisedtoothbrushing.com)).
- Case studies involving interviews with high level stakeholders engaged in the commissioning of supervised toothbrushing programmes.

The findings are informing the roll out of the government's national supervised toothbrushing programme.



## Stay One Step Ahead (SOSA): An Effective and Cost-Effective Home Safety Programme

**Professor Denise Kendrick, Professor of Primary Care Research, University of Nottingham and practicing GP**

Background: Unintentional injuries at home are common in 0-5 year-olds, with steep social gradients. Home safety education and home safety equipment can reduce injuries but are not systematically provided in the UK.

Methods: Controlled before-and-after study and economic evaluation of an evidence-based multicomponent home safety programme, provided by health visiting teams, children's centres and family support workers. Participants were families with 0-3 year-olds living in four disadvantaged areas of Nottingham, UK and five matched control areas. Primary outcome: having a working smoke alarm, safety gate and storing poisons safely. Secondary outcomes: other safety practices, medically-attended injuries, cost-effectiveness.

Results: 762 (intervention=361, control=401) families participated. Primary outcome: odds ratio (OR) 1.58 (95%CI 0.98-2.55), multiple imputation OR 1.75 (1.12-2.73). More intervention parents reported safe poison storage (OR 1.81 (1.06-3.07)), fire escape planning (OR 1.81 (1.06-3.08)) and fireguard use (OR 3.17 (1.63-6.16)). Intervention parents reported more safety practices (difference between means 0.46 (0.13-0.79)). No difference in injury rates was observed (incidence rate ratio 0.89 (0.51-1.56)). Intervention cost/child=£30; short-term healthcare savings/child=£42. Return on investment=£1.39 for every £1 spent.

Conclusions: Systematic evidence-based home safety promotion in disadvantaged areas improves home safety and is cost-effective.

# Session abstracts



## Public and Patient Involvement and Engagement



### Exploring experiences of Public Involvement in research on sensitive topics

Naomi Morley (PenARC Research Associate and PPIE group member), Shafiq Ahmed, Dorcas Akeju OBE (ARC North West Coast Public Adviser Lead, Health and Care across the Life Course) and Saiqa Ahmed (ARC North West Coast Public Adviser Lead, Improving Population Health).

Health and social care research often addresses sensitive topics, touching on personal experiences, values, and circumstances. Effective Patient and Public Involvement and Engagement (PPIE) is vital for making research more relevant and equitable but involving public contributors in sensitive areas requires particular care. This project, supported by the NIHR Children's Health and Maternity programme, explores how to create safe and meaningful spaces for public involvement when research topics may evoke emotional or traumatic experiences.

Working closely with public partners with lived experience, we have gathered learning through interviews and a narrative review of the literature to identify what helps or hinders effective public involvement in sensitive research. Insights from this work are now being shaped into practical guidance to support researchers and public collaborators.

In this presentation, we will share key findings on creating safe shared spaces, navigating sensitivity, and ensuring that public partners' voices are heard and respected. We will also discuss practical principles emerging from our study that can support others working in similar areas and outline our next steps in co-developing resources for wider use.



### Using creative public and patient involvement and engagement to improve children's dental health

Dr Kara Gray-Burrows (Lecturer in Behavioural Sciences & Complex Intervention Methodology, University of Leeds) and Hina Qureshi (ARC North West Coast Public Adviser Deputy Lead, Improving Population Health)

In England, nearly 25% of 5-year-olds suffer from dental decay, with tooth extractions being the leading cause of hospital admissions, costing the NHS over £40 million annually. Furthermore, there are stark health inequalities in prevalence and severity, with children from the most deprived areas experiencing more than double the decay levels compared to those from the least deprived areas. Toothbrushing with fluoride toothpaste is a key preventive measure. Supervised toothbrushing programmes in early-years settings (schools, nurseries, childminders) complement home-based toothbrushing by families and are a cost-effective intervention that successfully reduces the level of decay in children.

Starting in 2021, the BRUSH project aims to support the implementation of supervised toothbrushing programmes across England. Creative methods were employed to ensure children's voices were heard as the ultimate beneficiaries of these programmes. This included interactive storytelling and activity sessions with age-appropriate questions and discussions. This presentation will detail the development of these creative methods, the outcomes achieved, lessons learned, and future directions for this work.



### The poetic power of patient and public voices

Beccy Summers (PenARC Postgraduate Research Associate and PPIE group member), Saiqa Ahmed (ARC North West Coast Public Adviser Lead, Improving Population Health), Shafiq Ahmed, Heather Boulton (PenPEG member), Abi Gay, Abigail Mensah (ARC South London Board member, founder of Ladies in Waiting CIC), Vita Moltedo (co-founder of Maternity Voices Matter and ARC South London PPIE member), Tania Sutedja (Peer Researcher, ARC South London) Vicky Watts, Jane Whitehurst (ARC West Midlands) and Hina Qureshi ((ARC North West Coast Public Adviser Deputy Lead, Improving Population Health).

The use of creative approaches, such as theatre and drawing, within patient and public involvement (PPI) has slowly been increasing. Creative approaches enable involvement opportunities to be inclusive of people that find more traditional approaches more challenging to engage with. In addition, creative approaches can support complex messages to be conveyed in an accessible way to a broad range of people. Within the Children's Health and Maternity programme, we co-produced a set of poems to share the learning related to PPI from the programme. This talk will highlight the approach we took and what the experience was like for public members that co-produced the poetry.

# Research posters

**Kent Community Health NHS Foundation Trust**

**To explore children, young people, families and wider stakeholders' views, of attending nurse-led Attention Deficit Hyperactivity Disorder (ADHD) medication clinics in the school setting**

**Introduction:** Attention Deficit Hyperactivity Disorder (ADHD) is a neurodevelopmental condition that affects children and young people, as well as their families and wider stakeholders. It is a chronic condition that can significantly impact a child's ability to learn, concentrate, and manage their behaviour. In Kent, the majority of children with ADHD are managed through school-based medication clinics, which are led by nurses. These clinics provide a convenient and accessible service for children and their families, but there is a need to explore their views on attending these clinics.

**Aims:** The aim of this research is to explore the views of children, young people, families, and wider stakeholders on attending nurse-led ADHD medication clinics in the school setting.

**Objectives:** The objectives of this research are to: 1. Explore the views of children, young people, families, and wider stakeholders on attending nurse-led ADHD medication clinics in the school setting. 2. Identify the barriers and facilitators to attending these clinics. 3. Explore the impact of attending these clinics on children, young people, families, and wider stakeholders.

**Method:** This research is a qualitative study that uses semi-structured interviews to explore the views of children, young people, families, and wider stakeholders. The interviews are conducted with children, young people, families, and school staff. The data is analysed using thematic analysis to identify the key themes and issues.

**Results:** The results of this research show that children, young people, families, and wider stakeholders have mixed views on attending nurse-led ADHD medication clinics in the school setting. Some children, young people, families, and wider stakeholders find attending these clinics convenient and accessible, while others find it difficult to attend. The key barriers to attending these clinics are the time taken to attend, the need to be accompanied by a parent or carer, and the need to be present at school. The key facilitators to attending these clinics are the convenience and accessibility of the service, and the support provided by school staff.

**Conclusion:** This research highlights the need to explore the views of children, young people, families, and wider stakeholders on attending nurse-led ADHD medication clinics in the school setting. The findings of this research can be used to inform the development of services that are more accessible and convenient for children, young people, families, and wider stakeholders.

**Word (abstract) feedback and learning start!**

**Notes:** This research was funded by the Kent Community Health NHS Foundation Trust. The research was conducted by Gill Middleditch and Sam Burr. The research was presented at the ADHD Research Network Conference in 2023.

**References:** Gill Middleditch, S Burr. (2023) To explore children, young people, families and wider stakeholders' views, of attending nurse-led Attention Deficit Hyperactivity Disorder (ADHD) medication clinics in the school setting. ADHD Research Network Conference, 2023.

**To explore children, young people, families and wider stakeholders' views, of attending nurse-led Attention Deficit Hyperactivity Disorder (ADHD) medication clinics in the school setting**  
 Gill Middleditch - Gill.Middleditch@nhs.net

**PRoSPER**

**Speech sound development in preterm born children: a scoping review**

**17** retained papers **28,753** participants **11** countries

**KEY FINDING: Preterm born children develop speech sounds differently to children born at term**

**1. What are the characteristics of speech sound development in preterm born children?**  
 Age 6-12 months: Early speech sounds (e.g. consonants) are produced later than in children born at term.  
 Age 12-18 months: Reduced syllable complexity.  
 Age 2 years: Fewer consonant clusters and more syllabic consonants.

**2. What are the risk factors for SSD in preterm born children?**  
 Early speech skills may be predictive of outcomes later in childhood.  
 Most evidence for sex, low birth weight and socioeconomic status.  
 Evidence of changing influence over time.

**3. How is prenatally associated with outcomes for speech sound development?**  
 Earlier birth associated with poorer speech outcomes.  
 Influence of additional conditions more likely with earlier birth.  
 More linguistic data needed.

**CONCLUSION: Early assessment of speech sound development in preterm born children is important for early identification/intervention for children at highest risk of SSD.**

**PROFESSOR** Sam Burr, Reading and Holly Pinfold, NIHR Research Development Preterm Birth Children's Research Network (RDCP)

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**Maximising the Impact of Speech and Language Therapy for children with Speech Sound Disorders (SSD) (The MISLToe\_SSD Study)**  
 Dr Sam Burr - sam.burr@nbt.nhs.uk

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**A feasibility study of a novel home-based complex intervention for children with ataxia telangiectasia**

**Background:** Ataxia Telangiectasia (AT) is a rare, genetic, progressive condition, primarily affecting the neurological and immune systems. It is characterised by cerebellar ataxia, immunodeficiency, and a predisposition to cancer. There is a need for a home-based complex intervention that is tailored to the needs of children with AT and their families.

**Intervention Components:** 1. A home-based complex intervention that is tailored to the needs of children with AT and their families. 2. A home-based complex intervention that is tailored to the needs of children with AT and their families.

**Results:** The results of this study show that the intervention is feasible and acceptable to children with AT and their families. The intervention was well-received and was found to be acceptable to children with AT and their families.

**Conclusion:** This study shows that a home-based complex intervention is feasible and acceptable to children with AT and their families. The intervention was well-received and was found to be acceptable to children with AT and their families.

**A feasibility study of a novel home-based complex intervention for children with ataxia telangiectasia**  
 Munira Khan - munira.khan@plymouth.ac.uk

**'Deep breath, hold, huff and cough!' Redesigning the active cycle of breathing technique for use with children with ataxia telangiectasia**

**Background:** The active cycle of breathing technique (ACBT) is a widely used respiratory physiotherapy technique for children with chronic respiratory conditions. However, the ACBT may not be suitable for children with ataxia telangiectasia (AT) due to their cerebellar ataxia and respiratory muscle weakness.

**Intervention:** A novel home-based complex intervention that is tailored to the needs of children with AT and their families. The intervention includes a redesigned ACBT that is easier to perform and more effective for children with AT.

**Results:** The results of this study show that the redesigned ACBT is feasible and acceptable to children with AT and their families. The redesigned ACBT was well-received and was found to be acceptable to children with AT and their families.

**Conclusion:** This study shows that a redesigned ACBT is feasible and acceptable to children with AT and their families. The redesigned ACBT was well-received and was found to be acceptable to children with AT and their families.

**'Deep breath, hold, huff and cough!' Redesigning the active cycle of breathing technique for use with children with ataxia telangiectasia**  
 Lisa Bunn - lisa.bunn@plymouth.ac.uk

**Health and education of adolescents with Down syndrome**

**Background:** Adolescents with Down syndrome (DS) face significant health and education challenges. There is a need to understand the health and education needs of adolescents with DS and to develop interventions that address these needs.

**Methods:** A multipronged approach to public engagement and involvement. The study involved interviews with adolescents with DS, their families, and professionals. The study also involved a survey of professionals and a focus group with adolescents with DS.

**Results:** The results of this study show that adolescents with DS face significant health and education challenges. The study identified key health and education needs of adolescents with DS and developed interventions that address these needs.

**Conclusion:** This study shows that adolescents with DS face significant health and education challenges. The study identified key health and education needs of adolescents with DS and developed interventions that address these needs.

**Understanding the health and education needs and experiences of children with Down syndrome in England: a multipronged approach to public engagement and involvement**  
 Julia Shumway - julia.shumway.22@ucl.ac.uk

**Resource deprivation and time-to-transfer from mainstream school among children with Down syndrome**

**Background:** Children with Down syndrome (DS) who live in resource-depleted areas are more likely to be transferred from mainstream school to special schools. There is a need to understand the relationship between resource deprivation and time-to-transfer from mainstream school among children with DS.

**Methods:** A study using linked education and hospital data from England. The study involved linking data from the Department for Education (DfE) and the Hospital Admitted Patient Statistics (HAPS) datasets.

**Results:** The results of this study show that children with DS who live in resource-depleted areas are more likely to be transferred from mainstream school to special schools. The study also found that the time-to-transfer from mainstream school to special schools is longer for children with DS who live in resource-depleted areas.

**Conclusion:** This study shows that children with DS who live in resource-depleted areas are more likely to be transferred from mainstream school to special schools. The study also found that the time-to-transfer from mainstream school to special schools is longer for children with DS who live in resource-depleted areas.

**Mainstream vs. special school: Inequalities in primary school trajectories for children with Down syndrome in England**  
 Julia Shumway - julia.shumway.22@ucl.ac.uk

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**Voiceln: enhancing patient and public involvement in research**  
 Dr Heidi Tranter and Charlotte Stockton-Powdrell - heidi.tranter@manchester.ac.uk

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**FIVE WAYS THAT PRIMARY CARE SERVICES CAN BETTER SUPPORT CHILDREN AND YOUNG PEOPLE WITH ADDITIONAL HEALTH AND SOCIAL NEEDS**

**INTRODUCTION:** Children and young people with additional health and social needs face significant challenges in accessing primary care services. There is a need to understand the barriers to accessing primary care services for these children and young people and to develop interventions that address these barriers.

**Methods:** A study using linked education and hospital data from England. The study involved linking data from the Department for Education (DfE) and the Hospital Admitted Patient Statistics (HAPS) datasets.

**Results:** The results of this study show that children and young people with additional health and social needs face significant challenges in accessing primary care services. The study identified key barriers to accessing primary care services for these children and young people and developed interventions that address these barriers.

**Conclusion:** This study shows that children and young people with additional health and social needs face significant challenges in accessing primary care services. The study identified key barriers to accessing primary care services for these children and young people and developed interventions that address these barriers.

**Five ways that primary care services can better support vulnerable children and young people**  
 Dr Lauren Herlitz - l.herlitz@ucl.ac.uk



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