likely to discuss fertility, but later had discussions in the Late Effects service.

Conclusions Oncofertility options are important to convey to AYAs. Communication about fertility should occur repeatedly both before, during and after treatment. Referral to specialist oncofertility services and adequate information for both genders is important pre-treatment, and can be facilitated post-treatment by a Late Effects service.

British Association of Child and Adolescent Public Health

1152

PARENTAL PERCEPTIONS REGARDING THE IMPACT OF HOUSING ON HEALTH

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Background Child poverty rates are increasing in Ireland (24%) and the UK (30%), with children having the highest poverty risk of all ages in Ireland. From 2014–2021 a 211% increase in child homelessness was reported in Ireland, with children accounting for 28% of homeless people in March 2021. Childhood poverty is linked with prematurity, low birth weight, physical and mental ill-health, under-employment, and deprivation.

Objectives To assess parental perception of the impact their housing situation, in particular homelessness, had on their child, and to explore the use of primary and emergency healthcare services.

Methods We performed a cross-sectional survey in a tertiary paediatric emergency department in Dublin, Ireland. A questionnaire was distributed to parents in triage, who were invited to complete it.

Results From 01/11/2020–08/01/2021, 312 questionnaires were completed, with homeless parents (n=14) accounting for 4.5%.

Compared to non-homeless, homeless parents were less likely to be Irish (White Irish: 30.8% vs 78.9%; Irish traveller: 15.4% vs 2%; Black: 23.1% vs 4.1%; Asian: 7.7% vs 4.8%; other White: 0% vs 7.5%; $p<0.001$).

Homeless children had higher median GP attendances in the past 6 months (2 vs 1, $p=0.033$). Compared to non-homeless, homeless parents were more likely to report their housing situation impacted their ability to keep a GP (23.1% vs 1.5%, $p=0.002$), scheduling difficulties as reasons for incomplete vaccination (15.4% vs 1.8%, $p=0.031$), and less likely to be completely vaccinated (71.4% vs 92.4%, $p=0.024$).

Median homelessness duration was 13 months (IQR: 3.8–27), comprising emergency accommodation (85.7%), direct provision (7.1%), and staying with friends (7.1%). Non-homeless living situations comprised home-owners: 50%; renting: 29.9%; government housing: 8.7%; friends: 10.7%; mobile home: 0.7%.

Compared to non-homeless, homeless parents were more likely to report feeling unsafe at home (35.7% vs 3.4%, $p<0.001$), and concern regarding losing their home (46.2% vs 8.3%, $p<0.001$). They were less likely to have cooking

facilities (85.7% vs 98.6%, $p=0.027$), indoor play facilities (35.7% vs 94.4%, $p<0.001$), or outdoor play facilities (42.9% vs 90%, $p<0.001$). 28.6% of parents did not have landlord permission to fit safety equipment, with no differences between homeless and non-homeless parents.

Compared to non-homeless, homeless parents felt their housing situation negatively impacted their child's play (64.3% vs 17.5%, $p<0.001$), social development (71.4% vs 14.1%, $p<0.001$), education (58.3% vs 10.7%, $p<0.001$), physical health (45.5% vs 11.7, $p=0.007$), and mental health (61.5% vs 12.6%, $p<0.001$).

There were no differences in terms of age, medical history, self referrals, presenting complaints, ED attendances, and self-perceived healthcare access.

Conclusions Irish travellers and non-Irish ethnicities were over-represented in homeless parents, consistent with national data.

Compared to non-homeless, homeless parents were more likely to report over-crowding, feeling unsafe at home, and that their living situation impacted their ability to keep at GP. They were less likely to have cooking or safe play facilities, and their children were less likely to be fully vaccinated. They also felt their housing situation negatively impacted their child's play, social development, education, physical, and mental health.

Our study demonstrates the impact of homelessness on all aspects of childhood.

British Society for the History of Paediatrics and Child Health (ePoster presentations only)

1153

RICKETS: 100 YEARS ON FROM MELLANBY'S 'ACCESSORY FACTOR'

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Background This year marks the 100-year anniversary since Sir Edward Mellanby published 'Experimental Rickets', a culmination of 5 years of work investigating the cause of rickets. Preceded by largely qualitative work on the subject, Mellanby was adamant that '*all dietetics problems must ultimately submit to quantitative experiment*'. Mellanby identified that certain fats, in particular cod liver oil, had potent antirachitic properties and concluded '*there seems no longer any doubt that they contain some of the fat-soluble accessory food factor*'. He suggested, in children, the most common cause of rickets was '*a combination of relatively deficient anti-rachitic vitamin and excessive bread*' consequent to austerity during the first world war. McCollum et al supported this the following year, 1922, naming this 'factor' Vitamin D. Mellanby's remarkable and methodical work laid the foundations for a better understanding of rickets and popularised the use of cod liver supplements in subsequent generations of children.

Objectives To explore the historical development of our understanding and treatment of rickets, and the implications of these for current and future practice.

Methods Literature review.

Results In 1922, Harriette Chick of the British medical research council undertook trials involving children at the Vienna Kinderklinik, a paediatric clinic in a region particularly affected by rickets. Here she was able to demonstrate that

rickets appeared curable by both cod liver oil and exposure to sunlight. The link between vitamin D and sunlight exposure remained elusive until two years later when Steenbock and Black were able to demonstrate that ultraviolet irradiation of Vitamin D containing food increased its activity.

With scientific evidence and support, governments justified the commencement of a public health initiative fortifying common foodstuff with vitamin D, resulting in the near eradication of rickets in the USA and Canada. In the UK, mandatory fortification was legislated in 1940 when cases of rickets rose due to widespread malnutrition. Worsening air quality as a result of industrialisation was proposed to be a significant contributor to rickets by limiting exposure to UVB radiation. The introduction of the 1956 Clean Air Act, alongside fortification, is believed to have thus contributed to a reduction in the incidence of rickets. A series of deaths from idiopathic infantile hypercalcaemia in the years following raised concerns of an 'epidemic of hypercalcaemia' and led to a ban in fortification in 1953, with the exception of margarine, cereals and infant formula milk.

Conclusions Today, Public Health England (PHE) advises that children over the age of 5 years require an average of 10 µg of vitamin D a day and should consider daily supplements during autumn and winter. However, with a new rise in the prevalence and incidence of nutritional rickets recently highlighted in the UK, over the last two decades, it brings into question whether we are doing enough to implement the current policy or the policy needs adapting. Future changes may require increasing awareness of the recommendation as well as a broader fortification strategy. Regardless of the approach, paediatricians are likely to play a vital role in reducing the incidence of this entirely preventable condition.

British Association of Perinatal Medicine and Neonatal Society

1154 THE IMPACT OF LESS INVASIVE SURFACTANT ADMINISTRATION ON THE NEED FOR MECHANICAL VENTILATION IN PRETERM INFANTS <31 WEEKS GESTATION

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Background Neonatal respiratory distress syndrome due to surfactant deficiency affects two thirds of preterm infants <33 weeks gestation and is associated with high morbidity and mortality. Traditional methods of surfactant administration, involve intubation and ventilation, which risks mechanical lung damage and the development of bronchopulmonary dysplasia. To reduce this risk, less invasive surfactant administration (LISA) methods have been developed, which utilise non-invasive ventilatory techniques.

The current indications for LISA on our unit include, infants ≥26 weeks gestation (<26 weeks at consultant discretion), with an FiO₂ requirement >0.3 but <0.6, who have regular spontaneous respiratory effort after receiving caffeine and who are on minimal inotropic support.

Objectives To establish how many inborn infants <31 weeks gestation received non-invasive ventilation, with or without LISA and avoided the need for intubation and mechanical ventilation within the first 72 hours of life.

Methods All infants born 22+⁰- 30+⁶ who received survival focused care and were admitted to NICU between 1st January 2019-31st March 2020 were included. Data was obtained using the badgernet system and included gestational age (GA), gender, birth weight, mode(s) of respiratory support within the first 72 hours and, where applicable, method of surfactant administration.

Results 131 inborn infants were identified with gestational ages ranging from 22+⁵- 30+⁵. All infants <24+⁰ (n=10), were intubated and received surfactant within the first two hours of life.

At 24+⁰- 24+⁶ (n=9), 66.7% were intubated and received surfactant within 72hours, 11.1% received LISA and 22.2% remained on non-invasive respiratory support.

At 25+⁰- 25+⁶ (n=7), 71.4% were intubated and received surfactant within 72hours, one of whom had initially received LISA. 28.6% remained on high flow therapy (HFT).

At 26+⁰- 26+⁶ (n=33), 30.3% were intubated and received surfactant as their first line therapy, 39.4% received LISA and 30.3% remained on HFT. LISA prevented intubation in 46% of its recipients.

At 27+⁰- 27+⁶ (n=22), 50% were intubated and received surfactant within the first 72hours, whilst the remaining 50% were successfully managed with LISA (13.6%) or HFT alone (36.4%).

At 28+⁰- 28+⁶ (n=19), 42.1% were intubated and received surfactant as their first line therapy, 31.6% received LISA and 26.3% remained on HFT. LISA prevented intubation in 66.7% of its recipients.

At 29+⁰- 29+⁶ (n=14), 14.3% were intubated and received surfactant, 50% received LISA (85.7% of whom avoided intubation) and 35.7% remained on HFT alone.

At 30+⁰- 30+⁶ (n=17), 29.4% received LISA (preventing intubation in 80% of recipients) and the remaining 70.6% were managed on HFT.

Conclusions The need to intubate and mechanically ventilate preterm infants can be effectively reduced by using LISA methods, provided recipients are carefully selected and the intervention is tailored to the infants individual requirements. Implementing LISA in the delivery suite may further reduce the need for intubation in more mature preterm infants. Further exploration of swaddling and alternative analgesia is also important to minimise failure rates associated with the current procedural sedation.

British Association of General Paediatrics

1155 INTRODUCING DEXMEDETOMIDINE SEDATION TO A DISTRICT GENERAL HOSPITAL

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Background Sedation may be needed to avoid motion artefact in children undergoing MRI scans. It is preferable to a general