interpretation or subsequent management. Dentists were concerned regarding a lack of clear protocol, and the sensitive nature of discussing weight. Thus, few routinely measured BMI or acted on abnormal results. Dentists would benefit from inclusion of BMI calculation and interpretation into the undergraduate curriculum, with additional training for practicing SPDs. The development of a local protocol to manage children with abnormal BMI would further support this.

G427(P) RETROSPECTIVE AUDIT OF NUTRITIONAL STATUS ASSESSMENT AND MANAGEMENT OF LOW BONE MINERAL DENSITY IN CHILDREN AND YOUNG PEOPLE WITH CEREBRAL PALSY: ARE WE ADHERING TO NICE GUIDELINES?

SW Foong, M Gadde, D Higham, S Appleby, R Sharma. *Ryegate Children's Centre, Sheffield Children's Hospital, Sheffield, UK*

10.1136/archdischild-2018-rcpch.416

Background Children and young people (CYP) with Cerebral Palsy (CP) are at risk of nutritional problems. Up to 90% experience difficulties in chewing or swallowing, and/or eating or drinking independently.

It has been recognised that these children at risk of nutritional problems have an increased risk of bone demineralization and low-impact fractures.

Feeding impairment also correlates with the severity of motor deficit (GMFCS level IV – V). Studies show that those within this category were 5.7 times more likely to have lower bone mineral density (LBMD) than GMFCS level I-III.

The recent NICE guidelines have made recommendations that CYP with CP have regular reviews of their nutritional status and LBMD should be assessed and adequately managed.

Aim To ascertain (as per the NICE guidelines)

- Whether CYP with CP (GMFCS level IV–V) seen in a tertiary neurodisability service are having regular reviews of their nutritional status.
- Whether LBMD is being assessed adequately.

Method Retrospective case note analysis of CYP with CP (level IV–V) attending between March 2015– February 2017

Results 24 children with GMFCS IV–V, CP, were identified. The male to female ratio was 11:13

- 96% had their weight measured
- 92% had their height measured
- 75% had a nutritional review performed
- 70% were referred to dieticians/for alternative methods of feeding.
- 62.5% of individuals had their dietary intake of vitamin D/ calcium assessed at clinic
- 17% had investigations performed

Discussion Our findings showed that we are not achieving optimum results in mandatory areas such as measuring weight and height. Barriers identified were lack of equipment and training in mobilising a wheel chair bound child.

Other areas for improvement include the need to perform regular nutritional reviews, with ongoing referrals if deemed necessary.

A proforma/checklist for the service is currently being developed in order to aid clinic reviews, and a further audit will be performed in a year.

G428(P) THE INFLUENCE OF TECHNOLOGY ON OBESITY IN CHILDREN AND ADOLESCENTS THREATS TO, AND OPPORTUNITIES FOR, HEALTH IN OUR DIGITAL WORLD

¹LA Murphy, ²SJ Blackstock. ¹Centre for Primary Care and Public Health, Barts Health NHS Trust, London, UK; ²Department of Public Health, Imperial College London, London, UK

10.1136/archdischild-2018-rcpch.417

Aims There has been a focus on increasingly 'sedentary lifestyles' as a driver of rising child and adolescent obesity. The use of technology amongst young people has been often purported as a major contributor to this behaviour change. We examined technology through multiple lens, looking at the threats it brings, and how we can harness potential opportunities in the prevention and intervention of obesity.

Methods A literature review was performed using PubMed and the Cochrane Library databases, using various combinations of search terms including 'child', 'adolescent', 'overweight', 'obesity', 'BMI', 'BMI-z', 'technology', 'screen time', 'television', 'ehealth', 'mhealth', 'exergaming', 'gamification' and 'wearables.'

Results Cross-sectional and longitudinal studies have identified a correlation between 'screen time' and increased likelihood that a child will be overweight or obese, as well as reduced physical activity and increased consumption of high energy and/or low nutrition quality foods. Multimedia food marketing has been shown to have a negative influence on children's food choices and perceptions of nutrition. However, technologies can be manipulated for health promotion and to encourage behaviour change.

Technology can be integrated into existing programmes, making them more accessible, sustainable and individualised. Such integrated models have allowed both patients and professionals to track nutrition and lifestyle behaviours to identify opportunities for intervention and improve communication between these groups. Three systematic reviews identified 'mhealth' and 'ehealth' interventions in children, with none from low and middle-income countries. Diverse modalities exist, with mixed evidence behind their efficacy by physical activity, diet quality or body mass index (BMI) measures. A tailored approach is needed for different age groups or for family focused programmes, with variations in content required to ensure continued engagement. There has been a rapid expansion in the use of commercial 'apps', however little is known regarding the quality of these tools. One review assessing 383 apps identified a lack of evidenced-based methods, scientific evaluation, or healthcare professional involvement in design.

Conclusion There is limited robust evidence regarding the role of technology in childhood obesity. Guidelines and policy regarding 'screen time' and the use of technology is important to support healthcare professionals giving advice regarding healthy lifestyle measures.

G429(P) 'THROUGH THE WINDOW – A LITERATURE REVIEW OF FALLS'

A Lawford, F Finlay. *Community Child Health, Bath and North East Somerset Community Health and Care Services, Bath, UK*

10.1136/archdischild-2018-rcpch.418

Aims Two children were admitted following accidental falls from windows. This prompted us to review the literature regarding this important paediatric public health issue.

Methods A literature review encompassing ‘falls from windows +children’ between 1990–2017 was performed.

Results Demographics

- Falls are the most common cause of accidental injury to children, and one of the commonest causes of death in children >1 year
- Every year 4,000 children in the UK <15 years are injured falling from windows
- Boys are 2–3x more likely to fall than girls
- 73.3% children hospitalised are <5 years
- Black children are 3x more likely to fall than non-black children
- Closely linked with social deprivation – poor quality housing, overcrowding and inadequate supervision are contributing factors
- Most frequently happen in the spring, summer, during holidays and weekends
- 68% falls occurred at home – in one study the bed had been placed close to an open window in 83% cases

Injuries

- Most common pathology following a fall of at least 1 m is head trauma (63%), 17.3% having multiple trauma
- Severe head injuries carry a high risk of mortality, particularly in younger children
- The mortality rate for falls from windows is 4.7%, compared to 0.07% for other falls
- 87% of victims fell from the third floor or lower

Prevention

- Education and publicity campaigns
- Window catches, guards and restrictors to stop windows opening >10 cm
- Move beds/furniture away from windows
- Building legislation to safeguard high windows
- Opportunistic advice on fall prevention prior to discharge from hospital

Conclusion Falls from windows are one of the top five injuries in the <5's. Many of the risks are predictable and amenable to simple interventions.

In the UK falls from windows are persistent with social inequalities placing poorer children at greater risk, demonstrating that preventive strategies are suboptimal.

Paediatricians have a duty to act as injury prevention advocates; to identify needs, raise awareness and influence action for enhanced child safety measures. The morbidity from falls from windows warrants acknowledgement with robust multifactorial prevention strategies to promote the safety and well-being of children.

G430(P)

RECOGNITION AND RESPONSE TO PAEDIATRIC OBESITY IN THE GENERAL OUTPATIENT POPULATION: ARE WE MISSING A KEY OPPORTUNITY?

AM McClean, K Orr, P Anderson, L Brown, J Simpson, J Holmes, B O'Connor, M Anandarajan. *Paediatrics, Ulster Hospital, Dundonald, Belfast, UK*

10.1136/archdischild-2018-rcpch.419

Aims Obesity negatively impacts physical health, mental well-being and shortens life expectancy.¹ Reducing childhood obesity rates will save lives.² Despite this, children are only routinely screened for obesity twice (4–5 years and 10–11 years) through the National Child Measurement Programme (NCMP).³ Additional opportunities to identify overweight/obese children cannot be missed.

This study aims to explore the prevalence of overweight/obese children in the outpatient population of a district general hospital (DGH) and assess the recognition of these children by paediatricians.

Methods This pilot study began with an audit of growth parameters for 87 children (2–16 years) attending paediatric outpatient/ambulatory clinics during one week in September 2017. Retrospective body mass index (BMI) centile plotting enabled identification of overweight (≥ 91 st but < 98 th centile), obese (≥ 98 th centile) and severely obese (> 99.6 th centile) children. Clinic letters were reviewed to check if children were recognised as overweight/obese during medical consultations.

Collaboration with the Public Health Agency (PHA) facilitated comparison with NCMP data.

Results 100% children were weighed but 14% (12/87) had no height documented. BMI centiles were plotted for the remaining 75 children (56%-male, 44%-female). 28% were overweight/obese which compared similarly to NCMP data showing 27% overweight/obese 10–11 year olds in the trust's geographical area.⁴ Our study had more obese children at 15% (including 4% severely obese) compared to NCMP data at 6.6%.

Only 3 patients had a BMI plotted and consequently diagnosed as obese (all severely obese). 86% of overweight/obese children (presenting with constipation, asthma, enuresis etc) were not actually recognised as overweight/obese during the consultation.

Conclusions Our paediatric outpatient population has an alarmingly high prevalence of obese/overweight children, yet this problem is poorly recognised. Subsequent questionnaires indicated strong staff support for height/weight/BMI centile plotting for every child to improve obesity detection. Therefore, universal BMI plotting (utilising the RCPCH growth app) is being implemented as a quality improvement drive. Telephone information-gathering exercises revealed fellow DGHs reporting similar challenges with paediatric obesity recognition. Our pilot has grown into a regional obesity awareness project. We are collaborating with dietitians, physiotherapists and the PHA to create a multicentre, multidisciplinary paediatric obesity awareness e-learning package for staff.

REFERENCES

1. Cabinet Office, Department of Health, HM Treasury, and Prime Minister's Office. Childhood obesity: A plan for action. <https://www.gov.uk/government/publications/childhood-obesity-a-plan-for-action> (Accessed: 17 October 2017).
2. Public Health Agency, Northern Ireland. *Tackling childhood obesity*. <http://www.publichealth.hscni.net/directorate-public-health/health-and-social-wellbeing-improvement/tackling-childhood-obesity> (Accessed: 17 October 2017).
3. Public Health England. *National child measurement programme*. <https://www.gov.uk/government/collections/national-child-measurement-programme> (Accessed: 17 October 2017).
4. Northern Ireland Statistics and Research Agency. *Overweight and Obese Children by Trust area- 2012*. <http://www.ninis2.nisra.gov.uk/public/PivotGrid.aspx?ds=8209&lh=73&yn=2010-2012&sk=134&sn=Health+and+Social+Care> (Accessed: 17 October 2017).