Only a small percentage of T1D Adolescents achieved Target HbA1c as per NICE (5%) and ISPAD (11%) guidelines.

Complications of DKA and severe hypoglycemia episodes were less pronounced in those on CSII in our cohort during the study period.

British Society of Paediatric Gastroenterology, Hepatology and Nutrition

492 IMPACT OF GASTROSTOMY ON GROWTH IN CHILDREN: A SYSTEMATIC REVIEW

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Background Gastrostomy placement in children is invasive and costly, both in terms of finance and impact on the child and their family. The primary goal of inserting a gastrostomy is usually to support the child's nutrition and ensure adequate growth is maintained.

Objectives We performed a systematic review to evaluate the effectiveness of a gastrostomy on improving physical growth in children.

Methods Medline and Embase databases were searched following PRISMA guidelines. The inclusion criteria for articles were studies: reporting the use of gastrostomy to support nutrition, reporting at least one anthropomorphic outcome measure, and reporting outcomes in children exclusively under 19 years of age. Exclusion criteria were studies: containing fewer than five subjects, reporting systematic reviews, meta-analyses or qualitative findings. Screening of studies identified by the search strategy was carried out independently by two reviewers, and consensus achieved with any discrepancies. Data were extracted using a standardised proforma.

Results Thirty studies were included in the systematic review – 19 retrospective, 9 prospective, 1 both prospective and retrospective and 1 cross-sectional. No relevant randomised controlled trials were found. Studies included encompassed 1618 children from 18 countries. Although most common indications for a paediatric gastrostomy were covered by the studies included, many studies focussed on a single condition, chiefly cerebral palsy or cystic fibrosis. The majority of studies reported an increase in weight. This was most marked in the first 6 months following gastrostomy tube placement, and in children under 3 years old. Changes in body mass index (BMI) tended to follow a similar trajectory. Conversely, there was considerable variation in effect on height between studies, with only 7/12 studies (58%) showing a significant increase in height post gastrostomy-placement. Other anthropometric measures of growth were infrequently reported.

Conclusions There is good evidence that gastrostomy-tube feeding is effective in improving weight gain in children. However, evidence for improvement in other measures of growth following gastrostomy insertion is weaker. Care needs to be taken to ensure adequate overall growth and avoiding obesity in children with a gastrostomy. There is some evidence to support early gastrostomy placement with catch up growth appearing better in younger children. Further work is needed

to investigate the effect of gastrostomy feeding on broader anthropometric measures including height, skinfold thickness and head circumference. This will provide a clearer understanding of how gastrostomy feeding impacts a child's overall growth, and how this compares with other interventions to improve nutritional status.

493 A SYSTEMATIC REVIEW OF SOCIAL OUTCOMES IN PATIENTS WITH BILIARY ATRESIA

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Background Biliary atresia is an inflammatory obliterative cholangiopathy which presents in early infancy with obstructive jaundice. It is the most common indication for liver transplant in childhood. Following improved medical outcomes for children with biliary atresia, a new clinical and research focus is on promoting long-term well-being and quality of life. However, information on social outcomes, including markers of societal integration such as education, employment, and family outcomes, are inconsistently documented in existing studies, and have never previously been systematically reviewed.

Objectives We aimed to systematically review the social outcomes of patients with biliary atresia (BA) including education, employment, family and social functioning outcomes.

Methods A systematic review of four databases (Medline, Embase, Global Health, Maternity and Infant Care Database) was conducted in April 2020, supplemented by reference searching, with NHLBI scoring for quality appraisal. Each abstract and full text was independently reviewed by two researchers, and quality appraisal was independently conducted by two researchers. The protocol was registered on PROSPERO (CRD42020178846).

Results 55 studies met inclusion criteria (39 cohort, 11 cross-sectional, five case-control), including 5,156 participants from 16 countries. BA post liver transplant (LT) (18 studies), native liver survival (NLS) (16 studies), mixed LT/NLS (16 studies) and 5 of other cohorts (e.g. listed for LT) were incorporated. Study outcomes included; education (n=39), employment (n=19), pregnancy (n=24), and social functioning (n=25). Patients with BA had lower school functioning scores than controls, with no difference when comparing those with and without LT. The need for additional educational support ranged between 2% and 48% of children. Adult patients with BA were employed at high rates (range 60–100%), with no difference between post-LT and NLS cohorts when compared in 1 study. Successful pregnancies were reported in 19 studies, with mostly small sample sizes. In 6/7 NLS studies mentioning pregnancy, complications included derangement in liver function and variceal bleeding secondary to portal hypertension. Social functioning scores did not significantly differ from healthy controls when compared in 7/9 studies.

Conclusions Existing evidence on social outcomes for children and adolescents with BA is predominantly from non-controlled, single centre studies and based on parental surveys. The current findings suggest that school functioning is lower compared to peer groups and not influenced by having a

liver transplant. Employment outcomes are encouraging and pregnancy considered an at-risk period. These findings provide justification for routine psychosocial assessment of these patients during follow up and larger multi-centre collaborations in order to develop the evidence base for future patients.

British Paediatric Allergy Immunity and Infection Group

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AVOIDING UNNECESSARY WAITING TIMES AND HUMAN RESOURCES- A LOOK INTO SUPERVISED FEEDING WITHIN OUR OUTPATIENT DEPARTMENT

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Background Over the last 30 years, the prevalence of food allergy has risen. It remains a disease that impacts significantly on the quality of life of children and their families. It has been established that timely reintroduction of allergenic foods is essential to confirm tolerance. In low risk patients, this can be done by supervised feeding. Supervised feeds also help in allergy diagnosis in patients with suspected food allergy.

Compared to an oral food challenge, which involves food given in incremental doses and observations performed during and 2 hours after, a calculated amount of food is given within 30 minutes and the child observed for an hour thereafter. Bed space, manpower and time are precious commodities within our DGH paediatric assessment unit, perhaps even more so now in the time of covid. Performing supervised feeding in an outpatient setting compared to food challenges in eligible patients allows for the patient to avoid unnecessary time spent in hospital and also a more efficient use of available resources.

Objectives Our set objectives were to compare supervised feeds with food challenges and determine to what degree supervised feeds in the outpatient setting could be successful, also to know what allergens were commonly tested and to confirm whether supervised feeds were less time consuming and required less staffing resources

Methods A retrospective analysis was performed on outpatient data over a period of 6 months. Any missing data was accounted for from discharge summaries. The amount of nursing staff required per patient and average time taken between food challenges and supervised feeds were also calculated.

Results 81% of patients aged 1–15 passed their supervised feeds, of which a majority had an allergy to peanuts. Reasons for failure was determined in over 65% of those who failed the supervised feeds. The common food allergen in the failed feed was peanut. The average time needed was within 1–2 hours for their supervised feeds and required a nursing ratio of 1 in 4 compared to 1 in 2 required for a food challenge.

Conclusions Overall, our supervised feeding was successful and safe for this patient set. By performing supervised feeding in the outpatient setting, the assessment unit was freed up in terms of bed space and staff members for the care of acutely unwell children. Furthermore, less time was spent overall in

hospital thereby minimising the risk of patient distress or even harm. Supervised feeding in an outpatient setting could thereby provide a way of alleviating pressure on acute assessment units by avoiding unnecessary waiting times and utilising human resources appropriately.

Association of Paediatric Palliative Medicine

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CLINICIANS' EMOTIONAL RESPONSES TO PALLIATIVE CARE CASES IN THE NEONATAL TRANSPORT SETTING

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Background There are 15 regional neonatal transport teams in the UK. These relatively small teams of neonatal nurses, doctors, and ambulance drivers are involved in stabilising their region's sickest babies and in the emergency and elective transfer of babies between hospitals. They also move babies for palliative care purposes to hospices, home, and, occasionally, to other destinations of the family's choosing. Given this remit, they are regularly exposed to neonatal death in both the emergency and planned palliative care context. Literature evidence shows that experiencing neonatal palliative care and perinatal death in the inpatient environment affects the psychological well-being of the staff involved. However, the impact of neonatal palliative cases on clinicians working in the unique neonatal transport environment is not documented.

Objectives This project aimed to assess the emotional responses of the Acute Neonatal Transfer Service (ANTS) team to being involved in neonatal palliative care cases.

Methods Through electronic record and notes review, we identified palliative cases undertaken by the ANTS team between January 2018 and March 2020. We surveyed the transport nurses and doctors involved through anonymous electronic questionnaire sent by email. Questions addressed their emotional response, most difficult aspect of the case, and what could be done to improve their experience of similar cases in the future. We analysed the free text answers for themes

Results We identified 11 planned palliative transfers and five emergency redirection of care cases in the 26-month period. We received 14 clinician responses to our questionnaire, a 70% response rate. In-keeping with the wider literature, we found that negative emotions including anxiety and sadness were common amongst team members involved in palliative cases. Sources of difficulty for transport team clinicians included decision-making, supporting parents, suppressing their own emotions, and leaving the baby. Surprisingly, positive emotions were also expressed including the feeling of being privileged to have been involved in the case and having done a good job.

Conclusions Palliative care cases impact emotionally on neonatal transport clinicians and there are certain aspects of the case that can be particularly difficult. Additional training on managing palliative care in neonatal transport, time for debrief following the case, and psychology support for the team are strategies that could help support the ANTS team through these challenging cases in the future.