

to address both parent and infant needs. Careful preparation for discharge and good follow-up arrangement after discharge may reduce these risks. Comprehensive discharge planning includes assessment of the neonate's readiness for discharge and preparedness of families to care of their infant at home.

**Objectives** Applying the concept of Family centered care increasingly offers families opportunity to participate in caregiving and decision making throughout their hospital stay, gradually building their confidence and competence.

We aimed to improve the family participation in discharge process and reduce the percentage of cases being discharged post 4 hours from decision of discharge from 49% (our base line preintervention) to less than 20% in 12–18 months and reduce the readmission (in <72 hrs) rates to zero.

**Methods** A task force was formed to develop a comprehensive discharge readiness checklist. Discharge checklist contained various components to tick and sign by a team member/parent starting from 2 weeks prior to discharge till the day of discharge. It was reviewed daily during the ward rounds. As per the checklist parents were educated about medications, basic life support training, warning signs and symptoms of illness etc.

This checklist was continuously audited with PDSA cycles and interventions introduced to correct the problems resulting in delayed/incomplete discharges.

Parents were given a discharge folder that included all teaching handouts, medication sheets, growth charts, supplies, follow-up appointments with confirmed dates, relevant phone contacts and a copy of the discharge summary.

**Results** We achieved >95% compliance with the discharge process checklist and a reduction in delayed discharges from 49% to 2%. we also achieved zero readmission rates

**Conclusions** Discharge process requires a multi-disciplinary approach. Development of a comprehensive discharge planning toolkit facilitated the discharge process. This tool kit also enabled us in early identification of chronic cases nearing discharge.

We recommend that NICU should form a discharge facilitation task force and develop a discharge checklist/toolkit according to their available resources. This will not only facilitate timely discharges but also has a positive impact on staff and parental satisfaction, bed occupancy rates, cost savings, and better patient flow. We believe this process makes parents a stakeholder in the care of the baby. We will be happy for any unit to contact us for further information and guidance.

### 73 THE ROLE OF FECAL CALPROTECTIN IN PREDICTING ACTIVITY OF INFLAMMATORY BOWEL DISEASE IN PEDIATRIC AGE GROUP IN DUBAI HOSPITAL, UAE: 2012- 2016

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**Background** Inflammatory bowel disease (IBD) is affecting patients at increasingly younger ages. Endoscopy (upper/lower) with histopathology remains to be the gold standard for the diagnosis. Biochemical markers, as endoscopy is sort of challenging in children, were more and more evaluated in order to define children with high likelihood of needing such invasive procedure. Fecal calprotectin (FC) is raised in patients with IBD. However, it is also raised in other causes of

intestinal inflammation. On top of that Studies evaluating FC during the initial investigation of children with suspected IBD have been limited, especially with regard to their small patient groups.

**Objectives** We aimed to evaluate the diagnostic accuracy of FC in diagnosing IBD patients in comparison with those who had other (non IBD) GIT stressors. Also to define a level at which FC can be safely relied on to distinguish between both.

**Methods** Using a retrospective case-control design all podiatric patients (<14 years) who underwent endoscopy in the period between January, 2012 to May 2016 were reviewed. All IBD and non-IBD patients who had a FC measurement available before or within 6 months of endoscopic evaluation were examined and FC results were obtained. FC was measured using the PhiCal Test. SPSS version 23 for windows were used to statistically analyse the results.

**Results** A total of 138 patients (45 IBD and 93 non-IBD controls) met the inclusion criteria. The median FC at diagnosis for IBD group was 1360 mg/L IQR: (556.5 -4085 mg/L), compared to median FC of 91 mg/L IQR: (34.5–277.5 mg/L) in the control group (P. value = 0.2653). There was no significant difference between different types of IBD (Pvalue = 0.24). Significant difference was noticed between the 2 groups when FC was taken at levels  $\geq 850$  mg/L with sensitivity 66.7% (95% CI: 51.1–80) and specificity 87.1% (95% CI: 78.6–93.2)

**Conclusions** This study validates FC as a highly sensitive marker for gut inflammation in general when low cut-off levels are taken. However it is poorly specific for IBD with significant result being only observed at relatively high cut-off values. Thus, FC can safely rule out IBD yet further investigations are needed when FC are above normal.

### 75 REVERSAL OF STUNTING IN HOLISTIC HEALTHCARE- EDUCATION PROGRAMME IN ODISHA STATE, INDIA

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**Background** Stunted childhood growth is a global problem, and is a major cause of morbidity and mortality. Its causes are complex and multi-factorial, reflecting chronic undernutrition during crucial periods of growth and development in early life. Its consequences are evident at the individual, family and societal level, and can extend into future generations.

A child has stunting if their height-for-age z-score (HAZ) is below 2 standard deviations (SD) from the median of the World Health Organisation (WHO) Child Growth Standards. Until recently it was thought that children could not recover from stunting after the age of 2 years, but this has been refuted by several studies.

**Objectives** We aimed to investigate the impact on children's height and weight, following enrolment in a free programme offering holistic healthcare, education and play, in Odisha state, India.

**Methods** We conducted a retrospective observational study analysing anthropometric data for children who are enrolled in the Love the One (LTO) programme in Odisha, India. LTO provides a holistic approach to education, healthcare and childcare for poor and deprived children. Children's height and weight were collected at admission to the programme, and annually thereafter for 5 years, and converted to a centile

for age according to the WHO Child Growth Standards. Mean height and weight centiles were calculated, and paired T-test used to compare measurements at admission and at yearly intervals.

**Results** 288 children were included, of which 137 (47.2% were male). The median age at admission was 3 years (range 0–12 years).

Mean centiles for height and weight on admission were 16.1 and 12.7 respectively. Height and weight centiles significantly increased after 1, 2 and 3 years in the programme. There was also a non-statistically significant increase at 4 to 5 years, explained by the smaller numbers of children who had been enrolled in the programme for longer periods of time. At admission, 41.8% of children were stunted. This fell to 23.9% after 1 year, 17.2% after 2 years, and 16.5% after 3 years. The greatest impact on reduction in stunting was seen in children who were admitted to the programme at age 3–4 years; and the least impact was seen in those admitted at more than 5 years old.

**Conclusions** Children admitted to the LTO programme show a significant increase in both height and weight centiles after 1, 2 and 3 years. Furthermore, 60.5% of children who had stunted growth on admission showed reversal of their stunting after 3 years. This reversal of stunting was most evident in children admitted before the age of 5 years, implying that interventions are most effective if they occur at an early age.

This study provides further evidence that stunting can be reversed, and that efforts should be made to improve the nutritional status of children of all ages. It demonstrates the impact that a holistic approach to education, healthcare and childcare, working within communities and families, can have on children's growth.

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## EFFECTS OF SCREEN TIME ON SLEEP IN CHILDREN AND ADOLESCENTS: A SYSTEMATIC REVIEW

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**Background** Children and teenagers are spending increasing amounts of time on screen based media; in contrast, total sleep duration has been declining in the last two decades. Researchers around the world continue to examine the association between screen time and sleep, with the last updated systematic review occurred in 2015.

**Objectives** Given the extensive use of screen-based media and the high prevalence of poor sleep amongst children and teenagers, our aim was to provide an update to the previous systematic literature reviews on the effects of time spent using screens on various sleep outcomes, adopting similar criteria for inclusion.

**Methods** A systematic search of peer-reviewed articles was conducted using OVID MEDLINE and EMBASE. The search parameters included papers up to March 2019, with no initial cut-off date.

We included all studies that used the following inclusion criteria:

1. Cohort of children or adolescents between the age of 5 and 17;
2. Examined the associations between any type of screen time and sleep outcomes, including sleep timing, sleep onset

- latency, sleep duration, sleep quality, daytime lethargy or sleepiness or any other reported outcomes related to sleep;
3. Published in the English language.

**Results** 99 studies were reviewed: 80% were cross-sectional studies, 16% were prospective studies and 3% were clinical trials. Studies included children and adolescents from countries around the world. 87% of the studies showed at least one adverse sleep outcome with screen use. 43 out of 56 (77%) studies reported significant negative impacts on sleep outcomes with television (TV) watching; Five studies showed that the mere presence of a television set in the room itself was associated with shorter sleep duration. 49 out of 53 studies reported negative effects on sleep with the use of interactive media; Amongst all technology types, social networking sites or video games at bedtime on weekdays appeared to have the greatest negative impact on sleep duration, after adjustment for a range of potential confounders. 90% of the studies related mobile device exposure to negative sleep outcomes; Sleep disturbances or insomnia-related symptoms were measured in 13 studies, with 11 reporting significant association with the use of mobile devices. Articles that either combined multiple screens into one measure or did not specify the screen type when examining its effect on sleep outcomes were categorised into unspecified screen use; 25 out of 27 studies (93%) found an adverse correlation with at least one sleep outcome with exposure to unspecified screens. Interestingly, parental control had a moderating effect on the relationship between bedtime and screen exposure.

**Conclusions** Current evidence suggests that an increased amount of screen exposure leads to adverse sleep outcome in children and adolescents. Unspecified screen use (93%), interactive media exposure (92%) and mobile devices use (90%) were consistently related to poor sleep outcomes. Future research is necessary to quantify a safe amount of screen exposure and determine if there is a causality link between screen time and sleep in children and adolescents.

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## DESIGNING A WORKABLE REFLECTIVE PRACTICE GROUP FOR THE ACUTE PAEDIATRIC TEAM

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**Background** 'Acute take' is rarely synonymous with 'relaxing day at work' for a health care professional. Although many of us thoroughly enjoy the challenges, we know that the digestion of the shifts may be hard and the processing, of often complex interactions, difficult. There are high standards that we place on ourselves, and finding this energy in itself can be tough.

The terms 'wellbeing', 'resilience' and 'self-reflection' involve personal processes, often evolving over time. Whilst we build our strength and learning of these nuanced skills there is increasing evidence that a safe space and a supportive network of colleagues is paramount to a healthy work relationship.

We built facilitated time into the work schedule for our team to reflect, allowing space to help one process cases and build on their own 'emotional training'.

**Objectives** To establish a workable format which facilitated reflection on difficult emotional clinical events and interactions