Abstracts

Symptoms. Statistical analyses performed with paired t-test & chi-square test; \( p<0.05 \) considered significant.

**Results** Sixty-two children (34 female, ages: 2–16yrs, mean: 7yrs) completed home-based TES successfully. Symptoms improved significantly in 56/62 (90%) STC children with gastrointestinal transit index improved after TES (Table 1). The 2 children who stopped laxative prior to TES had symptom improvement without further laxative use. Only 6 children (10%) required appendicostomy for antegrade enemas.

### Table 1

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Pre-TES</th>
<th>Post-TES</th>
<th>( p )-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soiling (days/week)</td>
<td>4.6±2.4</td>
<td>0.7±1.1</td>
<td>&lt;0.0001 (paired t-test)</td>
</tr>
<tr>
<td>Defecation (baseliner action/week)</td>
<td>1.6±1.6</td>
<td>3.5±1.9</td>
<td>&lt;0.0001 (paired t-test)</td>
</tr>
<tr>
<td>Abdominal pain (days/week)</td>
<td>1.7±1.9</td>
<td>0.2±0.5</td>
<td>&lt;0.0001 (paired t-test)</td>
</tr>
<tr>
<td>Laxative use</td>
<td>No laxative - 2 On laxative - 60</td>
<td>Stopped laxative - 15 Reduced laxative - 30 Same laxative - 15 Remained with no laxative - 2</td>
<td>&lt;0.01 (Pearson Chi-square)</td>
</tr>
<tr>
<td>Gastrointestinal transit index</td>
<td>10.8±1.6</td>
<td>11.6±1.6</td>
<td>&lt;0.002 (paired t-test)</td>
</tr>
</tbody>
</table>

**Conclusion** Home-based TES is non-invasive. It is a promising treatment for STC children with avoidance of surgery and reduced laxative use with improved symptoms in most children. Success required clinician training and close patient contact.

**142** COMMUNITY-BASED FOLLOW-UP WITH/WITHOUT FOOD SUPPLEMENTATION AND/OR PSYCHOSOCIAL STIMULATION IN THE MANAGEMENT OF CHILDREN WITH MODERATE ACUTE MALNUTRITION IN BANGLADESH
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**Background and aims** Moderate acute malnutrition (MAM) ([WLL: < -2 to -3]) is a major health problem in Bangladesh and other low-income countries. This study was conducted to assess the effect of community-based follow-up care, with/without food supplementation and/or psychosocial stimulation, as an alternative to current hospital-based follow-up care of children with MAM.

**Methods** 227 children with MAM aged 6–24 months were randomly assigned to one of five regimens:

1. fortnightly follow-up care (FFC) at the icddr, B’s outpatient department, including growth monitoring, health education, and micro-nutrient supplementation (H-C, n=49);
2. FFC at community follow-up unit [established in the existing primary health care centers close to the residence of the child] but received the same regimen as H-C (C-C, n=58);
3. as per C-C plus cereal-based supplementary food (SF) (C-SF, n=49);
4. as per C-C plus psychosocial stimulation (PS) (C-PS, n=43); or
5. as per C-C plus both SF+PS (C-SF+PS, n=38).

**Results** Baseline characteristics were similar among the groups. Follow-up attendance and gain in weight and length were greater in groups C-SF, C-SF+PS, and C-PS than C-C, and these indicators were observed least in H-C. Children in the H-C group more often suffered from diarrhea and fever than others. Children who attended at least five of the total six scheduled follow-up visits gained more in weight, length than those who attended fewer.

**Conclusions** Community-based service delivery, especially including supplementary food with or without psychosocial stimulation, permits better rehabilitation of greater numbers of children with MAM compared to current hospital outpatients-based care.

**143** PRIMARY CARE EXPERIENCES AND HEALTH-RELATED QUALITY OF LIFE AMONG CHILDREN IN LOWER INCOME FAMILIES IN THE U.S
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**Purpose** This study examines whether patient-reported indicators of primary care quality are associated with measures of health related quality of life and reported school engagement among children in lower-income families.

**Methods** Data on 3,258 children ages 2–18 years are from a cross-sectional survey of parents of children affiliated with a county-level insurance program in California. Primary care quality was assessed using the Parents’ Perception of Primary Care and was associated with health-related quality of life (measured using the Pediatric Quality of Life Inventory–PedsQL) overall and in four domains (physical, emotional, social, and school/daycare) and four measures of school engagement. We conducted multivariable linear and logistic regressions, adjusting for demographics, insurance, and setting of medical care.

**Results** A higher total primary care score was associated with a higher total PedsQL score and scores in four subdomains (total beta \( B=1.77 \), physical \( B=1.71 \), social \( B=1.86 \), emotional \( B=2.22 \), and school/daycare \( B=1.69 \), all \( p<0.001 \). It was also associated with missing fewer than three school days due to illness (odds ratio \( OR=1.12 \), 95 percent confidence intervals \( CI: 1.05, 1.19 \)), excellent/above average school performance overall \( OR=1.10 \), 95 percent CI: 1.08, 1.17) and performance in reading \( OR=1.10 \), 95 percent CI: 1.03, 1.16). This study examines whether patient-reported indicators of primary care quality are associated with measures of health related quality of life and reported school engagement among children in lower-income families.

**Conclusions** Patient-reported primary care quality indicators are favorably associated with HRQOL and measures of school engagement among children in low-income families.

**144** PRIMARY HEALTH CARE PHYSICIANS’ WILLINGNESS AND PERCEIVED BARRIERS TOWARDS CONDUCTING RESEARCH
doii:10.1136/archdischild-2012-302724.0144

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**Background and aims** Health research supports health systems in the delivery of better, fairer and more equitable health care to people. Saudi Arabia government has acknowledged the importance of research to improve the patient outcome. Accordingly, conducting research has been promoted by Saudi commission for Health Specialization and a great increase in research fund was recognized. However, still has little of a research in Saudi Arabia compared to other countries. This research is conducted to assess the primary health care physicians willingness and the perceived barriers toward conducting research.

**Methods** This cross sectional study was conducted among all primary health care physician in Jeddah city. A self administered questionnaire was used to investigate their willingness and perceived barriers toward conducting research.

**Results** Of the respondents 87.1% reported that they are willing to conduct research and 91.7% with 95% felt that it is Important to
conduct research in the primary health care sitting. Many barriers to conduct research were identified: the three most highly rated barriers were no access to research fund, limited training in research methodology and limited support. Barriers found to be significantly associated with research willingness were limited time, no access to the fund and lack of experience in conducting research.

Conclusions The study shows that PHC physicians are willing and have a positive attitude towards primary health care research but face many obstacles. The key obstacles are limited time, no access to fund, and lack of experience.

145 STRUCTURED LIGHT PLETHYSMOGRAPHY, A NON INVASIVE, NON CONTACT METHOD OF RECORDING RESPIRATORY FUNCTION

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Structured light plethysmography (SLP) technology utilises PC gaming/movie techniques to scan a patient with visible light, capture an image, measure movement in the image and produce accurate, real time data on changes in respiration. A checker board pattern of light is projected from a light projector onto the chest of an individual. Movements of the grid are viewed by two digital cameras, digitalised, and processed to form a 3D model and can be interrogated to assess lung function. The system has been tested in normal adults and children, adults with COPD, and children with cystic fibrosis.

Most recently it has been used to measure respiratory patterns in healthy infants, within 24 hours of birth, those born prematurely with and without chronic lung disease (CLD). The infants are not sedated, but simply placed, bare chested, within the field of vision of the Thora3DI (Pneumacare™, Cambridge UK). There is no physical contact with the infant. This has not just one, but repeated data collection over short periods of time, on oxygen dependent infants with severe CLD, without changes in oxygen requirement or periods of clinical instability. Information on respiratory rate, tidal volume and the relationship between chest and abdominal volume change have been assessed, and will be included in this presentation.

Dr. Richard Iles is a Consultant in Respiratory Paediatrics, and founder and shareholder of PneumaCare Ltd, the company that produces the Thora3DI.

146 LUNG VOLUME IN VERY PRETERM INFANTS WITH EARLY RESPIRATORY DISTRESS SYNDROME (RDS) RECEIVING NASAL CONTINUOUS POSITIVE AIRWAY PRESSURE (CPAP)

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Background and aims Whether variations in end-expiratory lung volume (EELV) occur in stable infants receiving nasal CPAP is unknown. This study aimed to describe global and regional volumetric behaviour over periods of hypopnoea (<20 breaths/min over 15-secs) in preterm infants <18 hours of age receiving nasal CPAP.

Methods Twenty infants <32 weeks receiving CPAP were studied whilst supine. Clinicians set CPAP level at mean(SD) 6(1) cmH2O in FiO2 0.25(0.03). Relative ΔEELV and tidal volume (VT) [respiratory inductive plethysmography] and regional ΔEELV [electrical impedance tomography] were measured. 20-secs of data were analysed preceding and following episodes of hypopnoea and ΔEELV and ΔVT determined (expressed as average VT units at baseline). Breath-to-breath phase angles (θ) and labored breathing index (LBI) were calculated post-hoc.

Results Ten episodes of hypopnoea lasting mean(SD) 26(11)s were analyzed in 10 infants mean(SD) GA 29(1) weeks and BW 1119(417)g. EELV and VT, fell significantly from baseline by median(range) 0.3(–1.1, 0.5) and 0.2 (0.3)VT units(p<0.05) during episodes of hypopnoea. Both non-dependant and dependant halves of the chest contributed equally to global loss in EELV during hypopnoea. During recovery, the non-dependant semi-thorax recovered median (range)70 (9,100)% and dependant 65 (4,100)% of the loss of EELV in those regions respectively. No changes were seen in HR, oxygen saturations, FiO2, LBI and thoraco-abdominal asynchrony during these episodes.