or SD (1.49%, p=0.999) groups. In the Cox proportional analysis, hazard ratios of time to first RSVH in CF were similar to MD (p=0.272) and SD infants (p=0.422).
Conclusions This is the largest report of CF infants who have received palivizumab world-wide. Despite RI rate differences, RSVH rates appear similar to those in MD and SD.

264 IMPACT ANALYSIS OF AN EVIDENCE BASED GUIDELINE ON URINARY TRACT INFECTION (UTI) IN CHILDREN: DETERMINANTS OF IMPLEMENTATION

doi:10.1136/archdischild-2012-302724.0264

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Background To improve reliable diagnosing UTI in young, non-toilet trained children, a diagnostic strategy of the Nice guideline was nationally introduced in the Netherlands. This study aims to determine the impact of this new diagnostic strategy in clinical practice. We evaluated determinants of successful implementation.
Methods We conducted a cross-sectional observational study, with observations before and after implementation. We prospectively collected data from healthy children aged 1 month- 2 years, presenting with fever at the emergency room at Sophia Children's Hospital in 2008 and 2010–2011. Primary outcome measure: assessment of children suspected with UTI according to the guideline and determinants of implementation. Secondary outcomes: number of contaminated cultures, hospitalisation and antibiotic treatment. Outcome measures are assessed by mean (95%CI). Differences before and after implementation were tested using Chi-squared test. Effects of determinants were evaluated using regression analysis.
Results The preintervention group consisted of 207 children (male 64.3%, median age 0.98 years (interquartile range IQR0.77), the postintervention group 194 children (male 55.2%, median age 1.06 year (IQR0.78). Correctly diagnosed UTI increased from 41 (19.8%; 95% CI:14.3–25.3) in the the preintervention group to 101 (52.1%; 95%CI:45.0–59.2) in the postintervention group(p-value< 0.0001). Doctor's experience, shift or triage urgency did not influence compliance to the guideline. Secondary outcome measures did not significantly differ between the pre- and post-intervention group.
Conclusion Implementation of the guideline has lead to a significant higher frequency of correct assessment of UTI in young children. We could not identify determinants at patient, process or professional level with significant influence on successful implementation.

265 DIFFERENCE BETWEEN ENTEROVIRUS AND HUMAN PARECHOVIRUS INFECTIONS IN YOUNG CHILDREN WITH SEPSIS-LIKE ILLNESS

doi:10.1136/archdischild-2012-302724.0265

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Introduction Enterovirus (EV) or Human Parechovirus (HPeV) infections are common causes of sepsis-like illness in young children. We investigated differences in incidence, clinical characteristics and management of EV and HPeV infections among young children with sepsis-like illness.
Methods In 2008 158 children under 36 months of age presenting with sepsis-like symptoms at the Juliana Children's Hospital in The Hague, the Netherlands, were evaluated in a prospective observational study. All received a sepsis work up including white cell count, CRP, blood culture and urine screening. Cerebrospinal fluid (CSF) was collected on clinical indication. EV or HPeV DNA was detected by PCR in plasma and/or CSF. Urine cultures were performed when urine screening was positive. 10 children with urinary tract infection were excluded. Data of the remaining 148 children were analysed.
Results EV/HPeV PCR was performed in 122/148 children: 45 (37%) were EV positive and 22 (18%) HPeV positive. The most prominent difference between children with EV and HPeV was age. HPeV was solely diagnosed in children under 126 days of age. Clinical characteristics at presentation did not differ. Children with HPeV had lower leukocyte counts and lower CRP values. No difference in clinical management was found between EV and HPeV positive children.
Conclusion Sepsis-like illness due to EV and HPeV infection is common in young children, and appeared in 37% and 18% of cases respectively. HPeV occurs in younger children and causes less elevation of infectious parameters than EV infection. All other clinical characteristics are similar. Clinical management does not differ.

266 THE ASSOCIATION BETWEEN RESPIRATORY TRACT *UREAPLASMA UREALYTICUM* COLONIZATION AND SEVERE RETINOPATHY OF PREMATURITY IN PRETERM INFANTS ≤ 1250 G

doi:10.1136/archdischild-2012-302724.0266

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Background and Aim To evaluate the association between respiratory tract *Ureaplasma urealyticum (Uu)* colonization and development of retinopathy of prematurity (ROP) requiring treatment.
Methods The infants with birthweight ≤1250 g born in a third level neonatal intensive care unit between March 2009 and May 2010 were prospectively identified. Nasopharyngeal swabs for *Uu* colonization were taken in postnatal first 3 days. Culture positive patients were reevaluated on the 12th day by nasopharyngeal swabs for *Uu*. The primary outcome was to define whether there was an association between respiratory tract *Uu* colonization and severe ROP requiring treatment. Independent samples t-test or Mann whitney U test was used to compare continuous variables and Chi square test or Fisher's exact test for categorical variables. Multivariate (backward) logistic regression analysis was performed to simultaneously measure the influence of the independent variables with ROP as the dependent variable.
Results Twenty-five (12.1%) infants developed severe ROP requiring treatment among 206 infants who underwent ROP screening. Mean birthweight and gestational age of total cohort were 1013±159 g and 27.9±1.6 weeks, respectively. Multivariate analysis demonstrated that birthweight (OR: 0.64 (95% CI 0.47–0.88); p=0.006), duration of mechanical ventilation (OR: 1.17 (95% CI 1.06–1.28); p=0.001), premature rupture of membrane >18 h (OR: 3.83 (95% CI 1.2–12.2); p=0.02) and Uu positivity in both cultures (OR: 5.02 (95% CI 1.8–13.9); p=0.002) were independent risk factors for the development of severe ROP requiring treatment.
Conclusions Respiratory tract colonization with *Uu* was independently associated with severe ROP requiring treatment.

267 PROMOTING EARLY-LIFE IMMUNE DEVELOPMENT BY PERINATAL ADMINISTRATION OF PROBIOTICS TO PREGNANT/LACTATING MICE: OPTIMAL TIME WINDOW FOR INTERVENTION

doi:10.1136/archdischild-2012-302724.0267

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Background and Aims Transmission of immune competence from mothers to newborns is crucial for optimal development of neonate immune system. Maternal perinatal probiotics supplementation having been observed to be able to modulate this process, the goal of the present study was to investigate the importance of the time window of probiotics intervention (pregnancy/lactation) on early-life immune maturation and response to immunization.
Methods Pregnant C57/BL6 mice were supplemented with *Bifidobacterium lactis* CNCM I-3446, $2.5x10^8$ CFU/day, during either end of gestation and lactation, end of gestation only or lactation only. Maltodextrin was given during both periods (placebo) or in replacement of probiotics when not administered. Immune maturation was assessed by measuring natural mucosal IgA production (ELISPOTs) at weaning and 6 weeks later. Pups were mucosally immunized at weaning, and again four weeks later, with live attenuated *Salmonella typhimurium* ΔaroA. Two weeks after the second immunization, specific antibody responses in serum were analyzed.
Results All probiotic regimens significantly enhanced natural IgA production in pups in comparison to placebo, an effect observable up to the end of study, 6 weeks post-weaning. Supplementation during end of pregnancy and lactation, or lactation only provided significantly highest values. Specific antibody titers tended to be potentiated by all three regimens in pups responding to immunization, with highest values being obtained after supplementation during both periods.
Conclusions This study further supports the benefit of maternal perinatal intervention with probiotics on neonatal immune maturation, moreover emphasizing that supplementation during both pregnancy and lactation is needed to achieve overall optimal effects.

268 SEROTYPE AND ANTIMICROBIAL SUSCEPTIBILITY DISTRIBUTION OF INVASIVE *STREPTOCOCCUS PNEUMONIAE* ISOLATED FROM CHILDREN IN TURKEY

doi:10.1136/archdischild-2012-302724.0268

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Streptococcus pneumoniae is a major cause of invasive infections. The aim of this study was to evaluate the serotype and antimicrobial susceptibility of invasive pneumococci isolated at 14 different centers in Turkey between January 2011–April 2012. Totally 79 clinical isolates from invasive infections were investigated, which were isolated from cerebrospinal fluid (CSF) (33, 42%), blood (31, 39%) and the other sterile body fluids (15, 19%). Susceptibility to penicillin, cefotaxime and erythromycin was determined by E-test (bioMerieux, France) according to CLSI standards. Latex agglutination method was used for determination of serogroups. Serotypes were determined by the capsular swelling (Quellung reaction) method (Denmark, Statens Serum Institute). It was found that most common serotypes among 79 strains were 19 F (12, 15%), 6 A (7, 9%), 23 F (5, 6%), 6 B (4, 5%), 19 A (4, 5%) and 3 (4, 5%). For all invasive pneumococcal diseases, during the first 2 years of age, the potential coverage rates of PCV7, PCV10, and PCV13 were 47.8%, 56.5%, and 82.6%, respectively; meanwhile 40.5%, 44.3%, and 63.3% for the pediatrics age group (0–18). Serotypes 19F, 6A, 19A, 23F, 6B, 14 and 3 were predominate. All pneumococcal conjugate vaccine formulations cover these serotypes with the exception of serotype 19A which is covered only by PCV13. Serotype 19A has steadily increased in prevalence and become increasingly resistant to common antibiotic classes. Rational antibiotic use and vaccination of infants with pneumococcal conjugate vaccines should be considered as essential strategies for prevention of pediatric invasive infections in Turkey.

269 SHIFTING SEROPOSITIVITY FOR HEPATITIS A IN CHILDREN IN ISTANBUL, TURKEY FROM 1996 TO 2011

doi:10.1136/archdischild-2012-302724.0269

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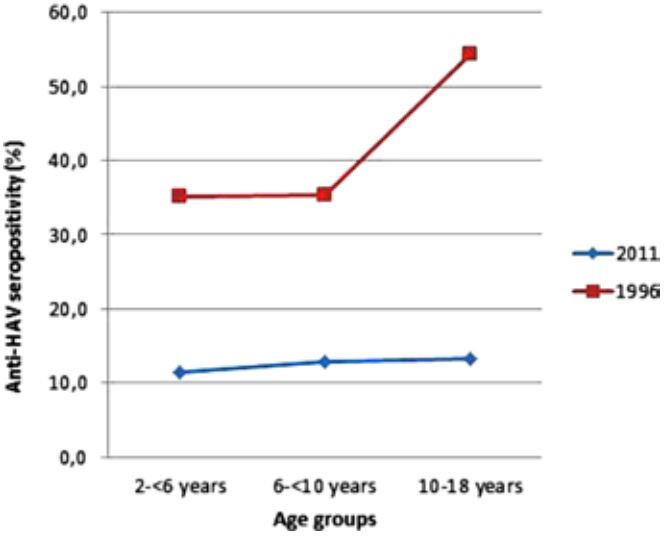
Background Hepatitis A virus (HAV) is transmitted by the fecal-oral route, and the epidemiology of HAV is associated with hygiene and socioeconomic status. However, due to improvements in living conditions, there is an epidemiological shift in HAV infection.
Methods In this study, we investigated the seropositivity for HAV in children aged between 2 and 18 years. In addition, we compared the results with previously reported seropositivity data from the same center in Uskudar, Istanbul, Turkey, from 1996.
Results The mean age of the 400 children was 7.9±3.7 years (range: 2–18). Of the 400 serum samples collected, all were tested for anti-HAV IgG, and 50 (12.5%) were positive. The rates of anti-HAV seropositivity within the age groups of 2-< 6, 6-< 10 and 10–18 years were determined. The seropositivity increased with increasing age: 11.5% in the 2- to < 6-year-old group and 13.2% in the 10- to 18-year-old group.
Conclusions There was a significant decline in the overall seropositivity for anti-HAV between 1996 and 2011 (p<0.001), and the pediatric age group has a high risk of HAV infection.



Abstract 269 Figure 1 Shifting seropositivity for Hepatitis A

In 1996, the overall seropositivity was 41.3%. In the 1996 study, the seropositivity was 35.2% in 2- to < 6-year-old age group, 35.3% in the 6- to < 10-year-old age group and 54.3% in children older than 10 years. Given the serological shift over time, greater susceptibility and a persistent risk of exposure to HAV suggest that outbreaks are possible.

270 H1N1 PANDEMIC: COMPARISON OF THE CLINIC PRESENTATION BETWEEN CANADA AND FRANCE IN CRITICALLY ILL CHILDREN

doi:10.1136/archdischild-2012-302724.0270