

- a significantly greater proportion of children with BPD compared with those preterm children without BPD had a clinically important reduction in their mean percentage predicted FEV1
- Exercise capacity is not completely normal, but the differences are more subtle than expected.
- Ct scans show linear and triangular opacities, gas trapping and mosaic perfusion, emphysema especially in severe BPD, which represent subjects with old and new BPD.

Perhaps the most important question for clinicians in the audience is “can we do anything to prevent long term sequelae and if not what should I do to explore the long term sequelae in the most efficient way?” At the end of the talk, it will be clear that preventive possibilities are scarce. However in order to improve long-term respiratory outcome and health-related quality of life of all preterm infants, efforts should be aimed at

- preventing harmful viral lower respiratory infections during the first year of life
- Reducing cigarette smoke exposure
- Parental education that may increase awareness of disease

The EFCNI White Paper on Maternal and Newborn Health and Aftercare Services states that a worldwide network of long-term follow-up research into preterm children is needed. Long-term follow-up research into societal participation of adolescents born preterm should take place. The results can be used to develop interventions for teenagers born preterm to support them in their course of life towards adulthood; for example, by assigning job or life coaches. Research of long-term medical and social treatment of preterm children is needed and also guidelines for treatment and counseling by neonatologists, paediatricians, general physicians, well baby clinics and teachers should be developed.

## 126 RANDOMIZED CONTROLLED TRIAL OF DAY-CARE AND HOSPITALIZED MANAGEMENT OF SEVERE PNEUMONIA WITH SEVERE ACUTE MALNUTRITION IN CHILDREN IN BANGLADESH

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**Background and aims** Severe childhood pneumonia and severe acute malnutrition (SAM) require hospitalized management but inadequate pediatric beds limits hospital-care in Bangladesh. As two prospective observational studies showed that day-care facility-based management of severe pneumonia and SAM were successful as alternatives to hospitalization, a RCT was conducted.

**Methods** A randomized hospital (ICHSH) versus day-care (The Radda Clinic equipped with oxygen, suction, pulse oximeter, nebulizer, glucometer) comparative study was carried out to evaluate the safety and effectiveness of day-care model. Children aged 2–59 months having severe pneumonia with SAM were randomized to day-care or hospital-care. Parents brought children at 08:00 at day-care clinic and back home at 17:00 daily after receiving antibiotics, diet, micronutrients and oxygen. For hospital-care, children received similar 24-hour treatment with antibiotics, diet, micronutrients and oxygen daily. Both day-care and hospital management continued daily until improvement and discharged.

**Results** In total, 340 children were randomized to either day-care or hospital-care management. Successful management was possible in 136/170 [80% (95% CI 73.4–85.3%)] day-care children and 144/170 [84.7% (95% CI 78.5–89.3%)] hospital-care children. Of remaining 34 day-care children, 29 [17.1% (95% CI 12.1–23.4%)] were referred to hospital and 5 [2.9% (95% CI 1.3–6.7%)] discontinued treatment. Of remaining 26 hospital-care children, 18 [10.6%

(95% CI 6.8–16.1%)] were referred to specialized hospitals and 6 [3.5% (95% CI 1.6–7.5%)] discontinued treatment.

**Conclusion** Children with severe pneumonia with SAM could be treated safely and effectively on a day-care basis at established day-care clinics, similar to hospital management, if required logistic support is available.

## 127 TRENDS IN SMOKING IN PREGNANCY IN THE NETHERLANDS (2001–2010)

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**Background and aims** Smoking in pregnancy significantly increases the risk of preterm birth and fetal growth restriction. Pregnant women are encouraged to quit smoking. Smoking in general is discouraged by antismoking laws. In the present study, we describe trends in smoking in pregnancy in the Netherlands for 2001–2010.

**Methods** National surveys in 2001, 2002, 2003, 2005, 2007, and 2010. In well baby clinics, questionnaires were handed out to mothers with infants  $\leq 6$  months.

**Results** Out of a total number of 28,720 questionnaires, 16,358 (57%) were returned. Between 2001 and 2010, prevalence of smoking in pregnancy dropped by half; from 13.0% in 2001 to 6.3% in 2010 ( $P_{\text{trend}} < 0.001$ ). The odds of being a smoker was 6.3 (95%CI 5.3–7.4) for mothers with a low education level, and 3.0 (95% CI 2.5–3.5) for mothers with a medium education level, as compared to mothers with high education level. Independently of their educational level, mothers smoked on average five cigarettes per day while pregnant.

We observed a sharp decrease in prevalence of smoking in pregnancy from 2003 to 2005 among women with a medium or a high education level. An almost continuous, downward trend was seen among mothers with a low level education. The 2003–2005 decrease coincided with the implementation of antismoking laws in the Netherlands.

**Conclusions** Between 2001 and 2010, prevalence of smoking in pregnancy dropped by half. But still, in 2010, 6.3% of Dutch pregnant women were smokers, exposing about 11,000 unborn children per year to significantly increased health risks.

## 128 INTRAPERITONEAL ADMINISTRATION OF CYTIDINE 5'-DIPHOSPHOCHOLINE (CDP-CHOLINE) REDUCES HYPEROXIC LUNG INJURY IN A NEONATAL RAT MODEL OF BRONCHOPULMONARY DYSPLASIA

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**Purpose** The purpose of this study was to evaluate the preventive effect of CDP-choline treatment on hyperoxic lung injury, inflammation and apoptosis in a neonatal rat model of bronchopulmonary dysplasia BPD.

**Methods** A total of 30 newborn pups were arranged in control, hyperoxia, and hyperoxia+CDP-choline groups. Immediately after birth, pups in the control group were kept in room air containing 21% O<sub>2</sub> and received daily saline injections, while those in hyperoxia and hyperoxia+CDP-choline groups were exposed to 95% O<sub>2</sub> and received daily injections of saline and CDP-choline (300 mg/kg), respectively, throughout postnatal day 10 (P10). Histopathological scoring, radial alveolar count, lamellar body protein expression, fibrosis, proinflammatory cytokine levels, oxidant/antioxidant enzyme activities, malondialdehyde content and apoptosis were evaluated on lung samples obtained at P10.