titers increased as birth weight and gestational age increased ($p < 0.05$). AntiHBs titers were not different between the healthy term and sick term infants ($p > 0.05$). Overall seroconversion rate was 97.3% (preterm 95.6%, term 98.05%). In four infants (2 preterm, 2 term) seroconversion were not sustained. Antibody response were not effected from the presumed risk factors such as fresh frozen plasma, IVIG, exchange transfusion, other blood products transfusions. Inflammatory processes such as sepsis, pneumonia, preterm rupture of membranes had no effect on the titers either. As a conclusion preventable levels of antiHBs were achieved in preterm and sick term infants with the schedule routinely used. We concluded that presumed risk factors and transfusion of blood products did not have negative effect on immune response to Hepatitis B vaccine.

1838 REVIEW OF NEONATES BORN IN BELFAST TRUST IDENTIFIED WITH RISK FACTOR(S) FOR TUBERCULOSIS BUT DID NOT RECEIVE BCG VACCINATION

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Aims Data from the Public Health Agency (PHA) for 2009–10 identified 70 infants from the Belfast Trust who had been identified with a risk factor for Tuberculosis (TB) as not receiving the BCG vaccination prior to discharge-theoretically missing 16% of this population (total with risk factor 438).

Given the rise in TB, with figures in 2009 from the Health Protection Agency (HPA) identifying 9,040 cases in the UK, our aim was to review the data to clarify why these infants were being missed.

Methods We reviewed the neonatal notes for those infants who did not get the BCG vaccination despite a positive risk factor, categorising as per results section. We further reviewed the data for parental refusal to analyse documentation.

Results Unable to access 7% of charts.

Parental refusal 23%, received vaccination 17%, deferred for medical reason 17%, no identifiable risk factor in hospital 12%, medical decision not required 10%, missed 7%, transferred prior to discharge 4%, transcription error 3%.

Parental refusal group –50% clarified the risk factor, 29% documented risks vs benefits explained, 43% offered follow-up advice and 35% documented written info given.

Conclusions 1.1% were truly missed (5/438).

Parental refusal was the largest category for not receiving vaccination and had poor documentation to explain why. We identified a breakdown in how data is transported to PHA/or recorded in PHA.

We recommended education for staff, highlighting the need for proper documentation. We also recommended a review of how information was passed to the PHA.

1839 THE ROLE OF CFU OF BCG VACCINE IN TUBERCULIN SKIN REACTION

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In view of the importance of tuberculosis in some countries BCG vaccination is highly effective in preventing the development of tuberculosis immediately at birth. The aim of this study is evaluation of BCG by PPD.

Method In this study, the inoculum of live BCG organisms in vaccinated infants at birth was evaluated and the correlation between amount of CFU and PPD reaction were examined at 3 months of age. For this purpose, 854 newborn infants in health centers affiliated to *Shaheed Beheshti University of Medical Sciences* were studied at the age of 3 months. Tuberculin skin tests were performed in the pasteur Institute and other health centers. After 72 hours, PPD induration diameter was measured. The comparison of the results with chi - square test showed there is a significant correlation between the two variables (size of PPD reaction and live organisms of BCG vaccination).

Results After evaluating live organisms in BCG vaccination, it was concluded that the amount of live organisms in many vaccines is more than 3 million while others are less. The following have been obtained as a result of assessment of PPD reaction in vaccinated infants: those vaccinated by live organisms, more than 3 million 93.4% showed PPD positive reaction in vaccinated infants but less than 3 million 69.2% showed PPD positive reaction.

Conclusion Thus, the number of live organisms in vaccination can play an effective role in the size of tuberculin skin reaction.

1840 OUTBREAKS, OUTCRIES, OUTLIERS: WHO RESPONDS TO MEASLES ELIMINATION GOALS IN THE EUROPEAN REGION WITH INNOVATIVE BEHAVIOUR CHANGE TOOLS

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Background and Aims Measles outbreaks in the World Health Organisation (WHO)'s European Region continue to threaten the achievement of the 2015 elimination goal. Over 37,000 measles cases were reported in 2011 alone. *Failure to vaccinate* is the principal obstacle to optimal national and sub-national immunity. In a context where *loss of public confidence* in vaccination is often cited, experts deplore the presence of vaccination **outliers** and **outcries** of anti-vaccine lobbyists.

Generating demand for vaccination is a pivotal strategy for elimination. However, the traditional "one-size fits all" approach to immunisation communications no longer meets current needs. WHO's aim is to offer a toolkit for Member States to design effective targeted vaccination demand generation campaigns.

Methods A review of literature on vaccination behaviours shows that reasons for not vaccinating are multiple and complex. Drawing on international best practices in health behaviour change communications and social marketing, WHO Regional Office for Europe has developed an adaptable, innovative conceptual framework and tools to help countries

1. understand and identify environmental opportunity, supportive ability and personal motivation determinants of vaccination behaviours,
2. target susceptible populations and
3. tailor evidence-based programmes to increase uptake of vaccination.

Results and conclusions Building Member States' capacity to profile and tailor responses to susceptible populations will result in higher vaccination coverage and accelerate progress towards eliminating measles in the European Region. The approach and tools will be piloted in two Member States in 2012. Further, they will be implemented by WHO in partnership with Ministries of Health from 2013 on.

1841 A FOUR-YEAR RETROSPECTIVE STUDY OF THE SAFETY AND EFFICACY OF PALIVIZUMAB IN HIGH RISK INFANTS

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R Abusamra, M Schofield, C Minasian. *Department of Paediatrics & Adolescent Medicine, University College London Hospitals, London, UK***Aim** A four year retrospective review of safety and efficacy of Palivizumab in the prophylaxis of respiratory syncytial virus (RSV) in high risk infants.**Background** RSV is the leading viral pathogen responsible for hospitalization with lower respiratory tract infection in high risk infants. A previous study reported a 55% reduction in RSV related hospitalizations with passive immunoprophylaxis with Palivizumab¹.**Methods** A retrospective study of all high risk infants requiring Palivizumab between 2006 and 2010. Inclusion criteria included children under 2 years with chronic lung disease on home oxygen, those with congenital immunodeficiency and infants under 6 months with confirmed congenital heart disease. Children received intramuscular injections of Palivizumab every 28 days during the RSV season (October-March). Data was collected on demographics, underlying diagnosis, side-effects and confirmed RSV infection. A cost analysis was also performed.**Results** Records on 61 patients were examined. 15 children did not meet the study criteria. Data on RSV infection was available for 52/61 patients. Of these children, none of those who received a complete course of prophylaxis developed RSV infection. Reported side-effects were mild with the exception of one child with a seizure disorder who had an increase in fit frequency. Having dedicated clinics for administering Palivizumab, allowed sharing of opened vials between patients and more effective utilization of clinic staff and resources.**Conclusions** RSV prophylaxis is safe and effective in preventing RSV infection in high risk infants. Further strategies have been used to reduce drug costs and improve cost-effectiveness.**1842 EFFECT OF NEURONAL EXPRESSION OF HENT1 AND CAFFEINE ON CEREBRAL BLOOD FLOW AND CORTICAL STROKE IN MICE**

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^{1,2}H Soylu, ¹D Zhang, ³R Buist, ^{1,3,4}M Martin, ¹BC Albensi, ¹FE Parkinson. ¹Pharmacology & Therapeutics; ²Neonatology/Pediatrics; ³Radiology, University of Manitoba; ⁴Physics, University of Winnipeg, Winnipeg, MB, Canada**Background** Adenosine has neuromodulatory effects in animal stroke models. We previously showed that human equilibrative nucleoside transporter 1 (hENT1) over expression decreases extracellular adenosine action. Caffeine is adenosine receptor antagonist.**Objective** To compare the effect of ENT1 over expression on cerebral blood flow (CBF) and subsequent ischemic damage in hENT1 transgenic (Tg) and wild type (Wt) mice following intra-cortical injection of endothelin-1 (ET-1) and giving intraperitoneal (IP) caffeine prior to the ischemic stroke event.**Design/methods** 8–10 week old CD1 and Tg mice were stratified as Group A (n = 25), received unilateral single cortical injection of ET-1 and Group B (n=20) received 25 mg/kg IP caffeine prior to ET-1 injection. CBF was measured at 4 hours and 48 hours and stroke size was measured at 48 hours by MRI.**Results** At 4 hours ipsilateral CBF decreased significantly (p<0.01), which was more prominent in Tg mice and was still evident at 48 hours. ET-1 produced greater infarct size in Tg (9±1.1 mm³) than Wt (5.4±0.8 mm³) mice without given caffeine. However, there was no difference in infarct size between Tg (6.2±1 mm³) and Wt (6.7±1 mm³) mice in caffeine injected group.**Conclusions** This study showed that hENT1 over expression is associated with increased cerebral infarct size. This genotype

difference was not observed in mice received caffeine. These data are consistent with our previous findings that hENT1 Tg mice have reduced basal adenosine levels and reduced ischemia evoked increases in adenosine as compared to Wt mice.

1843 HIGH FREQUENCY OSCILLATION AND PRONE POSITION IN THE EXPERIMENTAL MODEL OF ARDS - CHANGES OF PRESSURE HEMODYNAMIC PARAMETERS

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J Žurek, P Košut, P Dominik, M Klimovič, M Šeda, M Fedora. *Department of Anesthesia and Intensive Care, School of Medicine, Masaryk University, Brno, Czech Republic***Background and Aims** High frequency oscillation (HFO) and prone position ventilation have their places in the treatment of an inhomogeneous pulmonary pathology of ARDS. Possible benefits of early used HFO include improved ventilation and oxygenation, reduced risk of ventilator induced lung injury development, lower plasmatic levels of pro-inflammatory cytokines, and therefore reduced mortality of ARDS patients. Prone position ventilation improves oxygenation, but without an impact on mortality or length of hospitalization. Aim of this study was to compare the pressure hemodynamic parameters in experimental models of ARDS ventilated in prone position or by HFO.**Methods** Total of 16 experimental piglets were randomised into 2 groups of 8 piglets: PP group ventilated conventionally in prone (18 hours) and supine (6 hours) position, HFO group ventilated 24 hours in supine position with HFO. Mean arterial pressure (MAP), central venous pressure (CVP), mean pulmonary artery pressure (mPAP) and pulmonary capillary wedged pressure (PCWP) were measured invasively, indexed systemic (SVRI) and pulmonary (PVRI) vascular resistances were calculated.**Results** MAP is lower in HFO group than in PP (3 hours: p=0,001; 6 hours: p=0,016; 9 hours: 0,007; 12 hours: 0,041). mPAP is higher in PP group (3 hours: p=0,001), as well as PVRI (1 hour: p=0,003) and SVRI (9 hours: 0,027). CVP and PCWP values show no differences between groups.**Conclusions** Early used HFO lowers PVRI in first hours of ARDS, PP has milder impact on systemic pressures - combination of both procedures can be beneficial.**Grant Acknowledgment** IGA MZČR NS 11100-4**1844 OUTCOME OF EXTREME PREMATURITY: A REVIEW OF RECENT DATA**

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C Bellieni, G Buonocore. *Pediatrics and Obstetrics, University of Siena, Siena, Italy***Aim** To review the most recent data on the outcome of very premature babies (22–25 weeks gestational age - GA).**Material and Methods** We performed a PubMed search using as key words the following “extremely preterm baby” and “outcome”. We did not utilise the studies where outcomes were not given in relationship with the exact gestational age at birth. We utilised the studies that reported either survival or health as the examined outcomes.**Results** We retrieved 33 papers, 6 of which fulfilled the search criteria. Survival for babies born at 22, 23, 24 and 25 weeks range 27–64, 7–64, 25–79 and 46–89 respectively. Other outcomes are more detailed: the outcomes improve with the GA, and varies according with the type of disability we analyzed. Discussion: several studies are based on few cases, and therefore they have limited value, but some have a huge population and the data they give are very useful and new.**Conclusion** With respect to previous data based on populations of babies born in the last century, the present data show an improvement in both survival and neurologic outcome, though both remain severe. Current guidelines on resuscitation should be reviewed accordingly.