trend for improvement between the first and second sessions. However, differences of markers of NR performance were not statistically significant.

Conclusions We detected frequent deficiencies in NR skills and no significant improvement after exposure to a single HFS NR session. In order to achieve sustained improvement in NR skills, further practice and skills-based curricula may be necessary.

1543 THE RISK LEVEL OF CANCER AMONGST ADULTS WHO WERE EXPOSED TO SECOND-HAND SMOKE AT CHILDHOOD

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Objective To ascertain the level of risk of cancer amongst adults severely exposed to environmental tobacco smoke at childhood.

Methods We conducted this study among 1,280 adults who were diagnosed for lung cancer for a period of 6 years from 2005–2011. We checked hospital records at childhood for frequent hospitalization related to tobacco effects like middle ear infections, pneumonia, bronchitis and worsened asthma conditions.

Results We were able to show the relationship between exposure to environmental tobacco smoke during childhood and cancer risk. Out of the total number of participants, 2.5% percent (32 adults) had been exposed to environmental tobacco smoke (ETS) at childhood. We found that the overall cancer risk was greater for individuals with exposures to environmental tobacco smoke during both childhood and adulthood than for individuals with exposure during only one period. When specific cancer sites or types were considered, it was found that leukemia and lymphoma among adults were significantly related to exposure to maternal passive smoke before 10 years of age.

Conclusion Results of epidemiologic studies including this one provide evidence that exposure of children to environmental tobacco smoke is associated with increased rates of lower respiratory illness and increased rates of middle ear effusion, asthma, and sudden infant death syndrome. Exposure during childhood to environmental tobacco smoke may also be associated with development of cancer during adulthood.

1544 SOCIOECONOMIC STATUS LOWER LEVELS OF PARENTAL KNOWLEDGE ABOUT CHILD ABUSE, NEGLECT, EXPERIENCES AND DISCIPLINE METHODS USED

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Aim The purpose of this study is families with low socioeconomic status to determine level of knowledge about child abuse and neglect, experiences, disciplinary methods used by children of families and the factors affecting them.

Materials and Methods Children's Clinic admitted that the level of income below the poverty line in 1043 was the child's parent survey. Sociodemographic characteristics, parents' level of knowledge about child abuse-neglect, and about their own childhood experiences, their thoughts and behaviors were recorded in the survey.

Results 17.7% of the parents' have received information about child abuse-neglect, 43.2% has suffered neglect, and 37.6% has suffered abuse. We asked "How do you watch on an attitude of an experienced in the case of abuse" 68.6% of parents said 'consult official institutions', 31.4% of parents said 'family should be deal with a problem or saved within family'. 68.5% of the parents' said does not threaten, 22.3% of families said threatened emotionally then 2.0% of families said threatened with physical punishment.

With the increase of education level of parents an increase in the rate of parents who said 'I don't threatened'. We asked to parents 'How to punish your children?' 47.0% of families said not to punish.

Conclusion The majority of neglect and abuse suffered by the parents and they think that they deserve punishment was the same group of children. Emotional and physical abuse in our society children are still being used as an education and disciplinary methods.

1545 THE USE OF DRUG MANIPULATION TO OBTAIN DOSES REQUIRED IN PAEDIATRIC PRACTICE: A SYSTEMATIC REVIEW

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Background and Aims To determine whether there is an evidence base for drug manipulation to obtain the required dose, a common feature of paediatric clinical practice.

Methods Systematic review, including studies that considered the dose accuracy of manipulated medicines of any dosage form, evidence of safety or harm, bioavailability, patient experience, tolerability, contamination and comparison of methods of manipulation.

Results 43 studies were eligible for inclusion, 42 of which involved tablets being cut, split, crushed or dispersed. The remaining one study involved the manipulation of suppositories of one drug. No eligible studies concerning manipulation of oral capsules or liquids, rectal enemas, nebuliser solutions, injections or transdermal patches were identified. Seventeen of the tablet studies considered dose accuracy using weight and/or drug content. In studies that considered weight using adapted pharmacopoeial specifications, the percentage of halved tablets meeting these specifications ranged from 33% to 93%. Nine studies investigated bioavailability outcomes following the manipulations of five delayed release formulations. In all nine studies all of the dosage form was administered. Only one study was identified where drugs were manipulated to obtain a proportion of the dosage form, and that proportion administered. The eight studies that considered patient experience found that having to manipulate the tablets did not have a negative impact on adherence. Of the 43 studies only two studies reported investigating children.

Conclusion This review yielded limited evidence to support manipulation of medicines. The results cannot be extrapolated between dosage forms, methods of manipulation or between different brands of preparation.

1546 CONGENITAL HYPOTHYROIDISM: A REVIEW OF THE RISK FACTORS

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Objective Higher prevalence of CH among Iranian population necessitates review of risk factors and distribution of these factors among whole populations.

Method In Guilan province during years 2006 to 2010, neonatal screening for TSH was measured in 3–5 days after birth. All neonate with TSH level ≥ 5 mu/l refer to endocrinologist and serum TSH,

T3, T4 were measured. Base on public health data and profiles, total number of newborns, gestational age, method of delivery, birth season and birth weight in whole population and for each of CH patients in addition of these data, their TSH measurements have been recorded.

Results During 5 years, 119701 neonates were screened and CH was confirmed in 10.8% (221) of the referral cases (prevalence = 1:542). No significant statistical difference was seen between gender, birth season among CH patients and source population. Low birth weight (31% vs 4.9% - p value < 0.01), Postdate delivery (1.4% vs 0.2% - p value < 0.01) and macrosomia (were more prevalent in CH. Odds of congenital hypothyroidism in a post-date delivery was 6.9 times of a term delivery. In low birth weight neonates odds of CH was 3.2 times of normal birth weight. Rate of NVD were higher in CH patients rather than source population (39.2% vs 29.2% - p value = 0.01).

Conclusion LBW, postdate delivery and macrosomia are risk factors of congenital hypothyroidism.

1547 CAN WE COMPARE INDICATORS OF IODINE DEFICIENCY DISORDER IN NEONATE WITH SCHOOL- AGED CHILDREN?

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Objective To compare indicator of IDD in newborns with school age children.

Methods From 2006 to 2010, 119701 newborns were screened by measurement of blood TSH level by heel prick. The neonates who had blood TSH>5 mu/l were recalled for more evaluation. In addition in same period of time, urine iodine were examined in 1200 school aged children and the severity of IDD were classified by WHO, UNICEF, I CCIDD criteria.

Results Between 2006–2010 a total of 9251, 23529, 27427, 29511, 29983 newborns were screened respectively and about %1/7, %1/4, %2/1, %1/8, %1/9 of screened neonates with TSH level equal or greater than 5 mu/l were recalled for more evaluation. Finally the incidence rate of Congenital hypothyroidism was 1/625. The result of urine iodine level in level in school aged children were 270/2, 200/4, 200/1, 200, 200/2 mcg/l respectively.

Conclusion If the WHO urine iodine criteria for school aged, and children WHO neonate TSH criteria were applied, Guilan province would be classified as having none IDD.

1548 THE EFFECT OF QUALITY IMPROVEMENT INITIATIVES AS MEASURED BY NURSES' PERCEPTIONS IN A DEPARTMENT OF CHILDREN AND ADOLESCENTS

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Introduction In the context of a medium-sized Department of Pediatrics in Norway, a recent increase in the number of eligible patients including critically ill ones, has called for changes in the way clinical staff assesses and communicates around children in danger of clinical deterioration.

Aim We developed an educational plan for better recognition of and communication around critically ill children. The aim of the study was to investigate the methods nurses use in detecting clinical deterioration in a child, as well as their conceptions about communication prior to and one year after implementation of educational

activities focused on the airways-breathing-circulation-disability-exposure (ABCDE)-algorithm and of the identify-situation-background-assessment-recommendation (ISBAR) communication tool (later referred to as “intervention”).

Methodology The answers to two open-ended questions about nurses' pre-conceptions about assessment and communication, respectively from 66 nurses pre-intervention; and 48 nurses one year after intervention were analysed by content analysis.

Results Approximately half of the nurses reported to use the ABCDE-algorithm both prior to and after structured courses in this way of making assessments. Nurses often experience problems with communicating their concerns about deteriorating children to the physicians. Only 15% of nurses reported that this had improved after intervention. The fraction of nurses reporting concerns about communication was 29.5% pre- and 31.3% post-intervention.

Conclusion Despite efforts to make clinical staff assess and communicate more structured and similar, we could not prove an effect in our questionnaires. This may indicate that even harder and intensified actions including interprofessional ones over a longer time span are needed.

1549 SUN RELATED KNOWLEDGE AND ATTITUDES IN PRIMARY STUDENTS IN GREECE

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Background Childhood exposure to ultraviolet light increases the skin of skin cancer including melanoma.

Aim The aim of this study was to describe the sun-related knowledge and attitudes of primary schoolchildren in an urban area of Greece.

Methods A randomly selected sample of 2163 students (8–12 years old) from primary schools in an urban area of Greece was surveyed regarding their sun-related, knowledge and attitudes. SPSS 17.0 software was used for analysis with an alpha level set at $p \leq 0.05$.

Results 72% of the children were living in coastal urban areas and 15.8% didn't have Greek citizenship. General knowledge level of the students was satisfactory, 3.0 (± 0.9), but only a small percentage (27.1%) knew about efficient sun protection factor. Approximately 50% of children reported that they wore a hat and 72% used sunscreen to prevent themselves from getting sunburnt. Children who lived near the sea had a better behaviour to sun protection activities but older students had worse attitudes than elder ones and they had more sunburns too. Also, Greek children had better attitudes against other ethnicities. 31% of the pupils referred at least one sunburn at the last summer. In correlations, girls have more careful behaviour from boys and those children who do not use frequently sunscreen reported sunburn more often.

Conclusions Pupils of all ages need encouragement to protect their skin, to use sunscreens correctly and be aware of alternative sun-protection methods. Future health education needs to make pupils, parents and school staff aware sun exposure is not innocent.

1550 PHOTOTHERAPY AND DNA CHANGES IN FULL TERM NEONATES WITH HYPERBILIRUBINEMIA

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