



# POSTER SESSION I





P - I/1

## **SURVEY OF MATERNAL PHENYLKETONURIA (PKU) AS A TERATOGEN**

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**Background:** PKU is a relatively common disorder and is detected by neonatal screening in nearly one of every 6000 births in Ukraine. It is undisputed that poorly controlled PKU in women is a cause of fetal mal-development, particularly of the nervous system.

**Method:** We initiated an inquiry among health professionals and families caring for patients with PKU to learn about female patients, their reproductive history and pregnancy outcomes.

**Results:** Preliminary summary based on information about 118 female PKU patients from 5 regions in Ukraine shows that 70% are intellectually deficient and that 5 delivered children diagnosed as having PKU embryopathy.

**Conclusion:** Further pursuit of this inquiry is warranted and already suggests that current PKU screening programs and early treatment regimes should be expanded by a national registry of female patients to better administer family planning services, provide anti-conceptive or other alternatives as well as to promote strict PKU control before conception and during gestation.



## P - I/2

### EPIDEMIOLOGY OF URINARY SYSTEM MALFORMATIONS IN NEWBORNS

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The examination included 688 newborns, 328 girls and 360 boys. An examined group consisted of 334 newborns with a diagnosed congenital urinary system defect (Q60-Q64 according to ICD 10). Those newborns were born from January 2001 to December 2005. A control group consisted of 354 healthy newborns chosen by random selection without repetition from 2837 newborns which were born at the same period of time. There was analysed the potential influence of demographic, social and financial situation on the occurrence of urinary system defects and the types of those defects according to ICD 10. Relations and differences between the groups of variables were evaluated with the use of simple analysis method, which is available in Statistica 7.1. software.

Results: Urinary system defects occurred more often in boys (OR=1.57, 95% CI 1.15-2.15, p=0.003), in newborns from rural areas (examined group: 25.2% vs controlled group:10.2%, p<0.001), in children whose mothers had infections during gestation (OR=1.43, 95% CI 0.94-2.17, p=0.07, with EPH gestosis (OR=0.94, 95% CI 0.24-1.0, p=0.04), in children born as the second or third child (OR=1.88, 95% CI 1.37-2.58, p<0.001) and in multiple pregnancies (OR=0.53, 95% CI 0.26-1.04, p=0.05) the occurrence of those defects is also related to mothers' age (27.6 vs 28.4, p=0.03) and birth weight (2845.8 g vs 3054.3 g, p=0.004). There is a relation between the type of the defect and mothers' age (p=0.005), length of gestation (p=0.004), birth weight (p=0.0001), succession of gestation (p<0.001), succession of labour (p=0.04). Sex of the newborn, residency, occurrence of congenital defect in family, infections, EPH gestosis, urinary tract infections in gestations and parents' education did not have a statistically significant effect on the type of urinary system defect.



P - 1/3

## PRENATAL ULTRASOUND TO DETECT EFFECTS OF IN UTERO ALCOHOL EXPOSURE

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**Background:** Fetal Alcohol Spectrum Disorders (FASD) are among the most pervasive childhood developmental disorders worldwide. Earlier recognition of affected pregnancies can contribute to efforts aimed at reducing maternal drinking throughout the remainder of pregnancy, and in identification of high risk infants who should be targeted for early postnatal intervention. However, few studies have examined the utility of prenatal ultrasound in identification of alcohol-affected pregnancies.

**Methods:** We screened pregnant women in two oblasts in Ukraine over a two year period and recruited 84 women who reported binge and/or frequent drinking early in pregnancy and a comparison group of 82 women who reported little to no alcohol consumption during early pregnancy. We performed second and third trimester ultrasound evaluation of fetal growth and specific fetal brain measures. We compared ultrasound measures between the two groups to identify those measures that differed significantly on the basis of alcohol consumption.

**Results:** Using second-trimester ultrasounds, alcohol-exposed fetuses had shorter mean femur length, as well as shorter mean caval-cavariol and frontothalamic distance relative to comparison fetuses, after controlling for maternal smoking ( $p < 0.05$ ). The significant finding of shorter frontothalamic distance persisted in third trimester ultrasound measurements. In addition, mean orbital diameter and biparietal diameter measurements were significantly smaller in the alcohol-exposed group relative to comparison fetuses in third trimester ultrasounds, after controlling for maternal smoking ( $p < 0.05$ ).

**Conclusions:** Significant differences in selected somatic and brain measurements suggest that these markers may be further explored for clinical utility in prenatal detection of alcohol-affected children.

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**P - I/4**

**SPINA BIFIDA PREVALENCE AMONG CHILDREN IN TEN REGIONS  
OF THE UNITED STATES**

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**Objectives:** Although studies have examined the prevalence of spina bifida (SB) among births, little is known about the SB prevalence among children and adolescents. We estimated the prevalence of SB among children in 10 regions of the United States and investigated variations by age group, region, race/ethnicity, sex, and lesion level.

**Methods:** Infants born with SB were ascertained by 10 population-based birth defects monitoring programs located in Arkansas, metropolitan Atlanta (five central counties), California (eleven counties), Colorado, Iowa, New York (New York city excluded), North Carolina, Oklahoma, Texas and Utah. Linkages with the National Death Index and state vital records were used to determine vital status as of 2002. Using the U.S. Census population estimates, we examined trends of prevalence among children with SB during 1990-2002 and estimated prevalence among children with SB 0-19 year of age as of July 2002. Point prevalence ratios (PR) and 95% confidence intervals (CI) were estimated by age group (0-3, 4-7, 8-11, 12-15, 16-19 years of age), region, race/ethnicity, sex, and lesion level (cervicothoracic, lumbosacral).

**Results:** The overall SB prevalence at birth was 2.8 per 10,000 live births, decreasing over time during 1990-2002 in 10 regions of the U.S. The overall SB prevalence among children showed a slight decreasing trend among all age groups during the same time period. In July 2002, the SB prevalence among children 0-19 year of age was 3.07 per 10,000 population in 10 regions of the U.S. but varied by region. Among children 0-19 year of age, non-Hispanic blacks had a lower SB prevalence (PR=0.62, CI=0.54-0.70) while Hispanics had a higher SB prevalence (PR=1.13, CI=1.05-1.22) compared with non-Hispanic whites. Prevalence among children and adolescents was higher among females (PR=1.12, CI=1.05-1.20) and among children with lumbosacral lesions (PR=6.36, CI=5.60-7.22).

**Conclusions:** The prevalence of SB among children varies by regions, race/ethnicity, sex, and SB lesion site suggesting possible variations in prevalence at birth and/or in survival by these characteristics. Information on age-group specific prevalence estimates could be useful in assessing the resources needed to treat each age group more effectively in defined communities.



P - I/5

## **MUSCULOSKELETAL DEFECTS IN CHILDREN OF 43 MOTHERS WHO ATTEMPTED SUICIDE WITH NITRAZEPAM DURING PREGNANCY**

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**Objective:** To study the teratogenic effects of very large doses of nitrazepam.

**Study design:** Pregnant women who attempted suicide were identified in toxicological inpatients clinic, Budapest. The occurrence of congenital abnormalities, pregnancy age, and births weight of exposed children born to self-poisoned mothers who was compared with their sibs as controls.

**Results:** 1,044 pregnant who attempted suicide during pregnancy with drugs, 107 (10.3%) used nitrazepam and 43 delivered live-born. The mean dose of nitrazepam was 204 mg. Of 43 exposed children, 13 (30.2%) were affected with congenital abnormalities, mainly musculoskeletal defects, while of their 29 sib controls, 3 (10.3%) (OR with 95% CI: 2.6, 1.0-7.3). The mean pregnancy age was shorter.

**Conclusion:** The very large doses of nitrazepam used for suicide attempt during pregnancy resulted in a very high rate of musculoskeletal defects which may be connected with the disruption of protein metabolism in fetal mesenchyma.



## P - I/6

### NEURAL TUBE DEFECTS – RETROSPECTIVE ANALYSIS

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**Objectives:** The aim of the work was to compare different factors in the period preceding pregnancy and during pregnancy involved in different types of defects. The circumstances surrounding the birth of an affected child or a prenatal diagnosis of the defect have also been analyzed. The moment of genetic counseling session as well as the influence of giving birth to a child with NTD on the procreational plans of the family was also considered.

**Materials and methods:** The researched group consisted of 122 families with children with NTD. Data was gathered based on the surveys filled in by parents, information charts of patient from genetic outpatient clinic and case histories of children hospitalized at pediatric and surgical wards.

**Results:** In the studied group there were 44 children with anencephaly, 9 children with encephalocele and 69 children with spina bifida. All children with anencephaly were stillborn or died soon after the birth. In a group of children with encephalocele 5 (55.5%) survived 1 year and 3 (33.3%) 5 years. Among patients with spina bifida 36 (52.1%) survived 1 year and 33 (47.8%) 5 years. 112 (91.8%) women after giving birth to an affected child or after prenatal diagnosis of NTD have been referred for genetic counselling. 37 (33.1%) women have got genetic counselling before next pregnancy. 18 (15.2%) women took a folic acid before next pregnancy.

In majority of families that the birth of an affected child has not influenced relationships in the family, whereas it caused change in lifestyle and worsening of the financial conditions. 110 women after giving the birth to an affected child decided to have another child again. Women who gave birth to children with anencephaly made the decision of the next pregnancy sooner. The type of defect did not have a great influence on the number of children born after the affected child. In 6 families NTD recurred.

**Conclusions:** Only every third woman received genetic counselling session before next pregnancy. The counselling given too late makes the proper prophylaxis with folic acid before next pregnancy impossible. In the researched group the recurrence risk of NTDs was 3.59%.





P - I/7

**ANTIEPILEPTIC DRUG USE, FOLIC ACID SUPPLEMENTATION,  
AND CONGENITAL ABNORMALITIES -  
A POPULATIONS BASED CASE-CONTROL STUDY**

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**Objective:** To investigate whether folic acid supplementation in early pregnancy modifies the association between maternal use of carbamazepine (CBZ), phenobarbital (PB), phenytoin (PTH), or primidone (PRI) and the prevalence of congenital abnormalities in the offspring.

**Methods:** The Hungarian Case-Control Surveillance of Congenital Abnormalities (HCCSCA) (1980-1996) containing information on children from the Hungarian Congenital Abnormality Registry and the Hungarian National Birth Registry. The study includes children with congenital abnormalities (cases; n = 20,792) and unaffected children (controls; n = 38,151).

**Main outcome measures:** Congenital abnormalities at birth after exposure to CBZ, PB, PHT, or PRI, in second and or third gestational months stratified on folic acid supplementation.

**Results:** Compared with children unexposed to antiepileptic drugs and folic acid, the odds ratio (OR) of congenital abnormalities was 1.47 (95% CI: 1.13-1.90) in children exposed to antiepileptic drugs and no folic acid supplementation. For children exposed to antiepileptic drugs with folic acid supplementation the OR was 1.27 (95% CI: 0.85-1.89).

**Conclusions:** Our data indicate that folic acid supplementation in the second and or third gestational months decreases the risk of congenital abnormalities in children exposed to antiepileptic drugs during prenatal life, but more data are needed to reach a conclusion.



**P - I/8**

**AMNIOTIC BAND SEQUENCE WITH AND WITHOUT BODY WALL COMPLEX:  
CLINICAL CHARACTERISTICS SUGGEST TWO DISTINCT DISEASE ENTITIES**

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Amniotic Band Sequence (ABS) is a disruption sequence caused by fibrous bands emerging as a result of amniotic rupture in the first trimester of gestation. Our comparative study aims to assess whether there is a difference in the clinical pattern of congenital limb and internal organ anomalies between ABS with body wall complex (ABS-BWC) and ABS without BWC (ABS-L). Among 1,706,639 births surveilled between 1998 and 2006, 50 infants with ABS diagnosis were reported to the Polish Registry of Congenital Malformations (PRCM). The information on 3 infants was incomplete, thus only 47 cases were analyzed. These were classified into ABS-L (38 infants) and ABS-BWC (9 infants) groups. The ABS-BWC cases were more frequently affected by various congenital malformations (overall  $p < 0.0001$ ), and in particular by urogenital malformations ( $p = 0.003$ ). In both groups limb reduction defects occurred in about 80% of cases, however, more serious limb defects (amelia) predominated in the ABS-BWC group ( $p = 0.008$ ). Although there was no distinct pattern of limb defects in ABS-BWC, the ABS-L group had higher frequency of hand and upper limb involvement. This observation suggests that amniotic band adhesion in ABS-L may be taking place at a later development stage. Although limited by a small sample size, our study contributes to the growing evidence that both ABS entities represent two nosologically distinct conditions.



P - 1/9

## **CRANIOSPINAL MALFORMATIONS IN A TWELVE-YEAR FETOPATHOLOGICAL STUDY; THE EFFICACY OF ULTRASONOGRAPHY IN VIEW OF FETOPATHOLOGICAL INVESTIGATIONS**

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**Background:** Craniospinal malformations represent a heterogeneous group of congenital malformations by their morphology and etiology alike. Certain craniospinal malformations could be diagnosed as early as the dawn of ultrasonography and this group of malformations has been in the focus of attention ever since.

**Aims:** The aim of the authors was to review the main characteristics of craniospinal malformations, as well as to evaluate the efficacy of ultrasonography based on autopsy examinations of twelve years.

**Study design:** The current study comprises the details of 339 pregnancies terminated by induced abortion for craniospinal malformation between 1995 and 2006.

**Results:** Maternal median age was  $27 \pm 5.8$  years, ranging from 15 to 47 years. In 24.5% of the cases, there was a positive obstetrical-gynecological or genetic history. In 68.1% of the cases, ultrasonographic and autopsy findings were completely identical; in 24.2% a partial coincidence was found, but autopsy allowed for further diagnoses, while in 26 cases (7.7%) different findings were obtained by prenatal ultrasonography and fetopathological investigations. In half of the latter 26 cases, induced abortion was suggested due to hydrocephalus confirmed by ultrasonography but not justified by autopsy or the autopsy revealed the presence of other craniospinal malformation(s).

**Conclusion:** It can be concluded that – in view of the diagnostic efficacy of fetopathological investigations – the ultrasonographic diagnosis of hydrocephalus should be interpreted separately from other craniospinal malformations on the basis of principles of ultrasonographic methodology and at different times.



P - I/10

## ORGANIZATION OF THE POLISH REGISTRY OF CONGENITAL MALFORMATIONS

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The Polish Registry of Congenital Malformations (PRCM) was established by the Polish Ministry of Health and the State Committee for the Scientific Research in 1997. The registry became a part of the Government Program for Monitoring and Primary Prophylaxis of Congenital Malformations in Poland. In June 2001, PRCM joined the EUROCAT network. PRCM covers now the whole Poland, monitoring about 370,000 births per year in 16 provinces of the country. A large geographic coverage and a sizable population require a double level organizational structure of the Registry. PRCM consists of a single Central Working Group and 14 Provincial Working Groups. The Central Working Group resides at the Department of Medical Genetics, University of Medical Sciences, Poznan, Poland. The Central Group is responsible for the reporting system, Registry's database maintenance, as well as diagnostic validation and data interpretation. The Provincial Working Groups are responsible for the supervision of data collection and development of genetic counseling in their respective areas.

PRCM collects information on structural defects diagnosed before the end of the second year of life. The main source of information is a registration form filled by a clinician diagnosing an anomaly. Important demographic and clinical data are stored in a central electronic database. Analysis of the epidemiologic data is performed by the Central Working Group. Additional aims of the Registry include: (1) identification of families at genetic risk (2) evaluation of state of prenatal diagnosis, folic acid intake and genetic counseling with reference to congenital malformations, (3) training of practicing physicians, and (4) community education programs. Detailed information on PRCM organizational structure, electronic reporting system, and recent analyses are available at the PRCM website ([www.rejestrwad.pl](http://www.rejestrwad.pl); see also *J.Appl.Genet.* 46, 341-348, 2005).

*The Project is financed by the Polish Ministry of Health.*

\* The PRCM Working Group at present consists of about 500 people; the most prominent members constitute the PRCM Steering Committee: Balcar-Boron A. (Bydgoszcz), Borszewska-Kornacka M. (Warszawa), Breborowicz G. (Poznan), Czerwionka-Szaflarska M. (Bydgoszcz), Dobrzanska A. (Warszawa), Gadzinowski J. (Poznan, Lodz), Gajewska E. (Wroclaw), Godula-Stuglik U. (Zabrze), Helwich E. (Warszawa), Kondala-Chojnacka A. (Kielce), Krawczynski M. (Poznan), Lauterbach R. (Krakow), Limon J. (Gdansk), Mazurczak T. (Warszawa), Mejnartowicz J.P. (Poznan), Sawulicka-Oleszczuk H. (Lublin), Pietrzyk J. (Krakow), Rusin J. (Rzeszów), Stanczyk J. (Lodz), Szczapa J. (Poznan), Szczepanski M. (Białystok), Szwalkiewicz-Warowicka E. (Olsztyn), Swietlinski J. (Katowice), Szymanski W. (Bydgoszcz), Walczak M. (Szczecin)



**P - I/11**

## **THE IMPACT OF ELECTIVE TERMINATION ON PREVALENCE RATES AT BIRTH OF DOWN SYNDROME**

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**Introduction:** Down syndrome (DS) is one of the most common congenital anomalies occurring in approximately 1 in 700-800 live births. Due to the high number of affected persons and the graveness of the situation it has an elevated public health importance among congenital abnormalities.

**Objective:** The aim of this study was to assess the use and the spread of prenatal diagnostic techniques and analyse the impact of elective termination on prevalence rates of DS at birth in Hungary.

**Materials and methods:** The population-based large data set of the Hungarian Congenital Abnormality Registry (HCAR) established in 1970 collects information on cases with isolated and multiple birth defects including DS. In recent years, a special field study based on an active search, which included all cytogenetic labs and prenatal diagnostic centres, significantly expanded the HCAR database of cases with DS. Demographic data of the Hungarian pregnant population at large (e.g., maternal age distribution) were obtained from the national vital and death records.

The time-trend analysis has made possible to follow the evolution of prenatal diagnostic techniques; to evaluate the impact on the prevalence of DS, and the effectiveness of prenatal diagnosis by maternal age group, and territorial distribution.

**Results:** In the study period (1990-2006) the total number of cases with DS were 3,043 (1.7 per 1,000 births). The timeline analysis showed a gradual increase in the prevalence during the 1990s, and a gradual decrease in the most recent years with a random fluctuation. Spreading of prenatal diagnostic techniques correlated with decreasing number of children born with DS in recent years (70-80 children per year).

In 2006, 55% of all DS cases were identified prenatally. Among older mothers ( $\geq 35$ ) proportion of termination was 73% compared to younger mothers (36%). There was a significant variability in the efficiency of prenatal chromosome abnormality screening by region and institution.

**Discussion:** The prevalence of DS is slightly lower than the value observed in other European countries. Due to the improvement in prenatal diagnosis of DS, the prevalence of prenatally detected affected fetuses significantly increased in the past 10 years. As a consequence, the birth number and prevalence of live birth cases with DS is lower than 10 years ago. The reason of the different prenatal detection rate in different regions needs to be further explored. The better prenatal detection rate observed at some institutions suggests that there are significant possibilities to increase the proportion of prenatal diagnosis of DS.



**P - I/12**

**IMPACT OF THE NATIONAL PRIMARY PREVENTION PROGRAM  
OF NEURAL TUBE DEFECTS IN POLAND ON WOMEN'S KNOWLEDGE  
AND BEHAVIOURS CONCERNING FOLIC ACID**

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Folic acid supplementation during periconceptional period reduces risk of neural tube defect in offspring by 70%.

The National Primary Prevention Program of Neural Tube Defects was developed in Poland in 1997–2007. The Program was based on an informational and educational campaign about benefits of periconceptional folic acid consumption directed to health professionals, women in childbearing age and secondary school students. Surveys on knowledge and behaviours toward folic acid were conducted among women aged 20-34 years in 5 chosen administrative regions in 2001 (n=671) and 2007 (n=652) as tools for the evaluation of the effectiveness of the program. The samples were taken from patients of the primary health centres in 31 randomly selected administrative subregions in every region, proportionally to number of residents and urbanization rate.

The proportion of pregnant women taking folic acid during the pregnancy increased from 46% in 2001 to 84% in 2007, before the pregnancy – from 14% to 35%, and 4 weeks or more before the pregnancy – from 12% to 31% respectively. Preconceptional supplementation with folic acid was more frequent among women with higher education and good economic status, but positive changes were observed also among women with lower education and worse economic status.

The proportion of non-pregnant women taking folic acid in recommended daily dose at least 0,4 mg decreased from 15% in 2001 to 12% in 2007, what was accompanied by the decrease of intake of any vitamin supplements from 57% to 42% respectively.

The improvement in the knowledge of folic acid in Polish women was noticed between 2001 and 2007 as well. The proportion of women knowing, that folic acid is beneficial for fetal development, increased from 23% in 2001 to 51% in 2007. The proportion of women, knowing that folic acid supplementation should begin before the pregnancy, increased from 22% in 2001 to 50% in 2003. Women with higher socio-economic status and also women who were pregnant during or up to 2 years before interview more frequently had detailed knowledge of folic acid influence on a foetus. However, the increase in women's knowledge noticed between 2001 and 2007 was similar independently on educational level and pregnancy status.



**P - I/13**

**CORRELATES OF MOTHERHOOD IN TEENAGE AND THEIR PREGNANCY  
WASTAGE: EVIDENCES FROM INDIA**

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The very environment for childbirth is not conducive and safe in teen ages, having highest probability of hazardous consequences to mother as well as to child from both medical and social point of view. Data from National Family Health Survey (NFHS), 1992-1993, India has been analyzed to find out the factors associated with motherhood in teen ages and their pregnancy wastages. The proportion of teenage mothers did not vary much with place of residence, but those who are illiterates or mere primary school completed, Muslims, Buddhists, Christians and scheduled tribes constituted higher proportion than other categories. Logistic regression analyses revealed that the teenage married women having medium and higher standard of living were found less likely to attain motherhood than those with lower standard of living. Women educated up to primary school and above were found lower probability of experiencing pregnancy wastage as compared to illiterate women. The odds of the status of pregnancy wastage were higher in case of women who have had delivery complications and childbirth before time (pre-term) in comparison to those who had not. To validate the results further analyses have been carried out for similar experience by women in higher ages. This can give a comparison of the situation with that of women in higher and different ages. This can give a better picture and may help in policy measure.



**P - I/14**

## **PRECONCEPTION CARE IN THE FRAME OF THE NATIONAL HEALTH PROGRAM ADDRESSED TO WOMEN AND CHILD IN ROMANIA**

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**Objectives:** The presentation provides information how different component of the preconception care is integrated in the frame of the National Health Program addressed to the mother and child health.

**Design:** Individual intervention of the National Health Programs implemented in Romania in 2007 were analyzed according the performed activities in order to achieve the improvement of knowledge, attitude and behavior of men and women related to preconception health, risk assessment, interconception care of adverse pregnancy outcomes.

**Results:** In the frame of the national health programs addressed to women and children in 2007 more than 138,642 women are active contraceptive users and had the opportunity to built there reproductive life span, Other 92,000 pregnant women are beneficiaries of prenatal care services done by the family doctors and were assessed concerning their health risk

Prevention of anemia among 48,420 pregnant women, through iron and folic acid supplementation is also an opportunity for the family practitioner to asses the general health risk and to perform counseling and health education to prevent birth defects

Prenatal and postnatal diagnosis of congenital disorders among children was an opportunity to asses the genetically health risk of 5,529 families, and to offer interconceptional counseling to other 3,090.

Phenylketonuria and hypothyroidism screening programs including about 71,000 newborns, brought its contribution on risk evaluation and interconception care of parents as well as preconception assistance addressed to affected children and adolescents.

Programs focused on prevention and treatment of chronic diseases of children was an opportunity to discover environmental and genetic risk factors for chronic diseases (asthma, mucoviscidosis, primary immunodeficiency) and to develop proper actions during the preconception period.

**Conclusion:** Additional research is needed in order to evaluate effectiveness of preconception care, and the value of services integrated in the National Health Programs.





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**CONSEQUENCES FOR NEWBORN BABIES WHEN SUBSTANCE ABUSING MOTHERS WERE INVOLUNTARILY HOSPITALIZED DURING PREGNANCY.**

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Since 1996 about 140 pregnant women with drug abuse have been hospitalized against their own will in Borgestadklinikken, Skien, Norway. According to Norwegian legislation pregnant women can be hospitalized against their own will if their abuse may have serious negative consequences for the children. Norway is probably the only country in the world having a paragraph like this.

In the presentation it will be focused on how treatment for these women takes place in Borgestadklinikken in a specialized closed ward. It will be referred to two studies with description of these women`s (group 1) substance abuse and their health situation, compared to the situation of pregnant women hospitalized on a voluntary basis (group 2). The first study shows that there is a significant difference in birth weight between these two groups (group1: 3.027 g, n=50 and group 2: 3.366 g, n=30.  $p=0.028$ ) and a significant correlation between the duration of the mothers` stay in the clinic before delivery and the birth weight of their babies ( $p=0.042$ ). For the babies born to mothers who were involuntarily hospitalized longer than 12 weeks before delivery the second study shows that their average birth weight (3.518 g) is at about the same level as the ordinary average birth weight in Norway. The average birth weight of babies born to women who were involuntarily hospitalized shorter than 12 weeks was 615 g lower. Remarkably few women with alcohol abuse during pregnancy were involuntarily hospitalized, in spite of the fact that alcohol is the most toxic substance for the fetus.

The presentation will also refer to a study of substance abusing pregnant women and what happens to the women and their children after birth when the women are involuntarily hospitalized before delivery. Their social situation will be described, including loss of care for their children.

*Based on the results of these studies there will be a discussion of pros and cons regarding involuntarily hospitalizing of pregnant substance abusing women.*