Smoking Policy in Pediatric Wards and Hospitals, J.A. Jenista, (Spon. by W.J. Oliver). C.S. Mott Children's Hospital, Univ. of Michigan, Ann Arbor, MI.

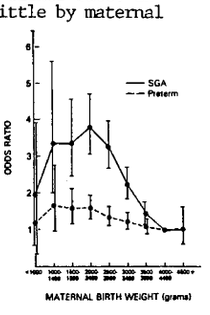
506 The AAP has recommended that pediatricians take the lead in banning cigarette smoking in all pediatric health care facilities. This study investigated the use of "non-smoking" policies and their planned revisions, problems in enforcement and challenges to restrictive or lenient policies. Mail surveys were sent to all 320 hospitals affiliated with pediatric training programs as the institutions most likely to attempt to comply with the AAP recommendations. Based on data from the first 1/3 of the sample, the hospitals had a range of 12-265 pediatric beds in children's hospitals 26% or defined areas of larger hospitals 71%. All but 3 had formal smoking policies, in place for a median of 6 mos-2 yrs. 72% had revised or were planning revision within the next year. 57% of policies were governed by city, state, university or other regulating bodies. Smoking was entirely banned from all public and private areas in 8%. All programs restricted smoking to designated areas only. Most policies applied to all patients, visitors and employees and to all in- and outpatient facilities. The most common designated areas for smoking were: cafeteria 66%, private offices 62%, outside courtyards 48%, staff lounges 41%, smoking waiting rooms 40%; 78% allowed patient smoking. Policies were made public by signs 93% or brochures 55%. Penalties were usually "leave nonsmoking area" 79% or disciplinary measures for employees 47%. Responsibility of enforcement lay with all employees 88%, security 41% or supervisors 41%. Only 19% reported strict enforcement with stringent penalties. 48% of policies had been challenged by employees, patients or physicians; all but one were dealt with by the hospital administration. Although nearly all policies have been recently or are being revised, pediatric hospitals and wards remain sadly remiss in controlling smoking.

INFLUENZA IN CHILDREN WITH CANCER. A Kempe, CB Hall, NE MacDonald, HR Foye, ED Lewis, HJ Cohen, B Luke, C Bulberg. U.of Rochester, Strong Mem.Hosp., Dept. of Ped.,Rochester,NY and U.of Ottawa, Children's Hosp.of Eastern Ontario, Ottawa, Ontario.

● 507 Although annual influenza(flu) vaccination is recommended for patients(pts) in designated high-risk categories, little data exist to support these recommendations in pediatric pts. We prospectively followed a group of oncology pts (OP) on chemRx or off Rx for <1 yr. who were not immunized against flu during 2 flu seasons to determine their relative risk of infection and complications compared with matched sibling control (SC) and community control(CC) groups. Results of culture & serology data (episodes/patient seasons) show a higher occurrence of flu in the OP group(33%) than in the SC(22%) or the CC groups (14% p=.01 chi-sq). A "protective" preseason titer of ≥1:32 did not prevent flu in 20% of the OP group compared with 4% of the SC and 2% of the CC groups(p .02). No significant differences were noted in duration of reported symptoms between groups and clinical complications occurred too infrequently to analyze. 2/18(11%) of the culture ⊕ OP group were hospitalized during their illness and an additional 1/18 had a nosocomial infection. None of the control children were hospitalized. We conclude that OP's are at greater risk of acquiring flu than are normal children. The duration of their symptoms appears similar to that in normal children but hospitalization may accompany infection more frequently. A preseason titer of ≥1:32, often used as a marker of successful immunization in flu vaccine trials, was poorly protective in the OP group but was protective in controls. Our findings have significant implications for vaccination recommendations and suggest the need for a clinical efficacy trial of the flu vaccine.

MOTHER'S BIRTH WEIGHT AND THE RISK OF PRETERM AND SMALL FOR GESTATIONAL AGE BIRTH Mark A. Klebanoff (NICHD, NIH, Bethesda, MD) (Spon. by J.L. Mills)

† 508 Birth certificates for Tennessee births during 1979-1984 were linked with their mothers' birth certificates for births in Tennessee during 1959-1966 (n=33,108 white;10,783 black). Maternal birth weight was positively correlated (p<0.0001) with both mean infant birth weight and the fraction of offspring <2500 and <1500 g. Examining the relationship between maternal birth weight and either intrauterine growth or duration of gestation showed that the rate of small for gestational age (SGA) varied from a low of 5.9% for white and 4.8% for black mothers weighing 4000-4499 g at birth to a maximum of 20% for low birth wt mothers of either race. In contrast, the rate of preterm birth varied little by maternal birth weight for both whites and blacks. The race-adjusted odds ratios and 95% C.I. are in the figure. These data suggest that maternal birth weight exerts a stronger influence on IUGR than on the duration of gestation. Women who were smaller than average at birth may be as much as 4 times more likely to give birth to a SGA infant than are women who were larger than average at birth. Women who were large at birth are at low risk for the delivery of a SGA infant.



THE EFFECTS OF POLYBROMINATED BIPHENYLS (PBB) ON THE HUMAN CYTOCHROME P-450 SYSTEM (P-450).

509 George H. Lambert, Harold Humphrey, and Dale Schoeller. (Spon. A. Cutilletta), Loyola U., Stritch School of Med., Dept of Ped., Maywood, IL.; Michigan Dept. of Public Health, Lansing, MI.; Clinical Nutrition Center, University of Chicago, Chicago, IL.

Humans have been exposed to many polyhalogenated biphenyls including PBB. The effects of PBB exposure on P-450 may be the most sensitive indicator of biologic effect and has never been studied in man. We examined the effects of PBB on P-450 as determined by the caffeine breath test (CBT) in healthy non-smoking adults from rural Michigan with (+) and without (-) detectable PBB serum levels and prepubescent children with known perinatal exposure to PBB. The results were compared to the CBT results previously obtained from nonexposed urban adult non-smokers and age-matched children.

	N	CBT(±SEM)		N	CBT
rural adults			rural children		
+ PBB levels	43	5.6±.3	+ PBB exp.	41	6.8±.5
- PBB levels	12	5.4±.6	urban children		
urban adults	29	4.0±.3	- PBB exp.	23	7.0±.4

The nonexp. and PBB exp. children had similar CBT data. The adult groups were not significantly different from each other except for the rural adults +PBB levels who had significantly higher CBT values than the nonexposed urban adults($P<.01$). Future studies are needed to determine if there is a difference in P-450 function as determined by the CBT between the rural and urban adult populations who are nonexposed to PBB or exposed with non-detectable PBB serum levels, or exposed in the perinatal period.

MOLECULAR EPIDEMIOLOGY OF PSEUDOMONAS CEPACIA (PC) IN PATIENTS WITH CYSTIC FIBROSIS (CF). John J. LiPuma, Daniel V. Schidlow, Thomas D. Edlind, Joel Mortensen, Terrence L. Stull (spon. by C.Wilson),Medical College of Pennsylvania, Depts. of Pediatrics, Microbiology/Immunology and Temple U. Sch. of Med., St. Christopher's Hospital for Children, Dept. of Pediatrics, Philadelphia.

510 PC is now recognized as an important pathogen among CF patients. However, little is known regarding its epidemiology. We have developed a typing system which allows determination of isolate genotype. Following isolation and endonuclease digestion,PC chromosomal DNA fragments were separated by agarose gel electrophoresis, transferred to nitrocellulose, and probed with ^{32}P labelled ribosomal RNA purified from Escherichia coli. Hybridization band polymorphism allowed discrimination of unique and identical isolate genotypes. Analysis of 9 PC isolates of unknown epidemiological significance obtained from 6 geographically diverse locations revealed 8 distinct genotypes. The 2 identical isolates originated from the same CF center. Of 7 blindly selected (nonsibling) PC isolates obtained from our CF center, 3 were found to have an identical genotype. Twelve PC isolates obtained from the 8 members of 3 sibships attending our CF center were available for study. In 2 of these 3 families, the isolates from each sibling exhibited identical genotype. In the remaining family each of the 3 siblings were colonized by genotypically distinct strains, although siblings A&B had identical isolates at certain times. Our data suggest that individuals attending the same CF center may be colonized with common PC strains. Furthermore, we have shown that while some siblings with CF are colonized with identical PC strains, others are not. The epidemiologic relevance of our findings in siblings requires further elucidation.

LOWER SOCIOECONOMIC GROUPS HAVE A HIGHER INCIDENCE OF PERSISTENT PATENCY OF THE DUCTUS ARTERIOSUS

511 M.M. Mas C.E. Mullins, J.T. Bricker, D.G. McNamara. Baylor College of Medicine, Houston, TX.

It has been suggested anecdotally that socioeconomic differences exist between patients (pts) with different diagnostic categories of congenital cardiac defects. The purpose of this study was to evaluate socioeconomic status (SES) in a retrospective manner in populations presenting with two common congenital cardiac defects: isolated patency of the ductus arteriosus (PDA), excluding newborns and prematures and isolated atrial septal defect (ASD). All pts presenting with the diagnosis of ASD or PDA over a 5 year period were included. Pts with associated cardiovascular malformations or noncardiovascular syndromes were excluded. 101 children with PDA and 59 with ASD were included. Low SES was identified by information for eligibility for county, state, or federal economic assistance and classified according to the federal guidelines for the poverty level. Patients were placed into racial and ethnic categories based on information given at the time of the first clinic visit. Results of this assessment were that 37% (37/101) of PDA and 15% (9/59) of ASD pts were in the low SES category. Racial/ethnic distribution among PDA's was 54/101 Anglo, 10/101 black, 33/101 hispanic, 4/101 Asian. Distribution among ASD's was 43/59 Anglo, 4/59 black, 7/59 hispanic, 5/59 Asians. Significant differences were found between the ASD and PDA groups for SES (X^2), and between proportions of Anglo and hispanic pts. Based on this we conclude that a difference in SES exists between ASD and PDA pts. Possible explanations are: differences in perinatal care or nutrition, differences in hereditary risk based on genetic background, and bias in referral.