

**546** THE NATIONAL WIC EVALUATION: WIC AND PERINATAL OUTCOME IN 12,000,000 LINKED BIRTH AND DEATH CERTIFICATES. David Rush and Jose Alvir. Albert Einstein Coll. of Med., Dept. of Pediatrics and of Obstetrics and Gynecol. Bronx, NY.

These are first results from the Congressionally mandated national evaluation of the Special Supplemental Food Program for Women, Infants and Children (WIC). Records of individual participation in the program were unavailable. However, for 888 counties in 8 states, between 1972 and 1980, we could relate the penetration of WIC (# of women served/estimated # eligible) to 12,000,000 linked county birth and death records.

Counties which received WIC programs had, consistent with program goals, much worse perinatal outcome. After controlling for between county differences and for year of observation, we found a positive relationship between WIC and all outcomes. Estimated differences with full penetration were increases of 7.0 g in birthweight (p=0.03) and 0.37 d in gestation (0.05 < p < 0.10) and decreases of 0.60/1000 in deaths from 0-6 d, 0.73/1000 in deaths from 0-27 d, and 0.13/1000 in deaths from 28-364 d (all n.s.).

These estimated changes are of small magnitude, but would arise from benefits to only one third of births, those in families with incomes < 195% of the federally defined poverty level. Changes in that population would thus be of impressive magnitude (21 g birthweight, 1.1 d gestation, and -2.2/1000 neonatal mortality).

We will present outcome for subgroups stratified by race, education and marital status and thus at differing likelihood for having received WIC benefits.

**547** RENAL FUNCTION 9-17 YEARS AFTER CHILDHOOD LEAD POISONING. Henrietta Sachs and Donald Moel. (Spon. by Carl Hunt). Northwestern Univ., Children's Memorial Hospital, Department of Pediatrics, Chicago.

There is great debate as to whether lead poisoning occurring during childhood results in chronic nephropathy later in life. Renal function was studied in a cohort of 71 patients who had blood lead levels (PbB) greater than 100 mcg/dl (range 100-471 mcg/dl; median 142 mcg/dl) between 1966-72 (aged 1-6 years) and 21 control siblings (C) who had PbB less than 40 mcg/dl. With one exception, all subjects in the patient cohort were treated by one of the authors. Patients were continued under observation in the lead clinic until PbB remained below 50 mcg on two successive visits. They were subsequently recalled for physical, neurological and psychological examinations. During the present recall, the fifth since 1974, (age range 10-21 years) the evaluation included blood pressure, urinalysis, serum creatinine, creatinine clearance, serum  $\beta_2$ -microglobulin ( $\beta_2$ -M), fractional excretion  $\beta_2$ -M ( $FE_{\beta_2-M}$ ), maximal concentrating capacity, and quantitative protein excretion. The frequency of hypertension, hematuria, and proteinuria did not differ in the 2 groups. Also, the incidence of decreased urinary concentrating ability, raised serum creatinine and  $\beta_2$ -M level was similar in the 2 groups. Amino acid excretion and  $FE_{\beta_2-M}$  were compared in a subset of the cohort (32 patients, PbB from 150-471 mcg/dl) to C patients; no significant differences in the incidence of abnormal excretion were observed. We conclude that patients lead poisoned as children in the insuing 9-17 years do not have a higher incidence of abnormal kidney function. Further follow-up will be necessary since renal abnormalities may only become apparent after a longer "latent period".

**548** PSEUDOMONAS CEPACIA AND CYSTIC FIBROSIS (CF): EVIDENCE FOR LACK OF PERSON TO PERSON TRANSMISSION. Glenn Seagren, Patricia Peek, John Malnor, Richard Honicky, and Dennis Murray (Spon. by Marshall Klaus). Department of Pediatrics/Human Development, Michigan State University, East Lansing, MI and Ingham Medical Center, Lansing, MI.

*Pseudomonas cepacia* (Pc) is a lesser known, but important organism colonizing patients with CF. Pc is resistant to many antibiotics commonly used to treat pulmonary infections in CF. We have evaluated the period prevalence and transmissibility of this organism during a 1 week CF camp during Summer, 1983. Campers (cp) and camp staff (c-s) had cultures of sputum or deep throat swabs obtained on days 1 and 7 of camp. All *Pseudomonas* isolates were subjected to species identification. Antibiotic sensitivity testing was performed on all Pc isolates. Records of recent antibiotic therapy and hospitalizations were obtained from all participants. At entry 5/98 (5.1%) cp and c-s with CF had Pc identified; only 2/5 were recognized prior to camp. At exit only 1/95 (1.1%) cp and c-s with CF had Pc identified; this individual was also positive for Pc on entry. At no time did non-CF c-s have Pc isolated. All Pc tested were resistant to carbenicillin and gentamicin. Compared to a quality control, patients' isolates of Pc required 4-8 fold higher concentrations of trimethoprim-sulfamethoxazole (TMP-SMX) to inhibit growth. Of patients from whom Pc was isolated 3/5 were known to be taking TMP-SMX at camp entry.

Our data suggests Pc is not transmitted from person to person during a summer camp, and TMP-SMX may not be effective therapy in controlling Pc colonization.

**549** LONG-TERM FOLLOW-UP OF THE RATE OF PHARYNGEAL COLONIZATION WITH HAEMOPHILUS INFLUENZAE TYPE B (Hib) AT A CHRONIC-CARE FACILITY FOLLOWING PROPHYLAXIS WITH RIFAMPIN. Eugene D. Shapiro and Ellen R. Wald. Yale U. and U. of Pittsburgh Schools of Medicine, New Haven, CT and Pittsburgh, PA.

Although rifampin is effective in eliminating pharyngeal carriage of Hib, there are few data about Hib colonization rates in treated groups long after administration of rifampin. After two children at a chronic-care facility for severely handicapped children had developed Hib meningitis, pharyngeal cultures using agar plates containing hyperimmune Hib antiserum revealed that 17 of the 97 children (18%) who resided there were colonized with Hib. A repeat survey 11 days after all carriers had been treated with rifampin showed that only 1 of these 97 children (1%) remained colonized with Hib. Six months later the rate of colonization rose significantly: 12 of the 85 available children (14%) were colonized with Hib ( $\chi^2=11.69$ ;  $P<0.001$ ). Cultures were positive from 1 of 14 children in whom Hib colonization had previously been eradicated with rifampin. Potential sources for the re-introduction and transmission of Hib included visiting families, members of the staff, the one persistent carrier, and the newly admitted children (2 of 5 of whom were colonized with Hib).

Although 6 months after prophylaxis with rifampin the prevalence of colonization with Hib was similar to that before rifampin was administered, no new cases of invasive Hib infections occurred at the facility during the ensuing 3 years. Because colonization with Hib is a dynamic process, reduction of the rate of colonization with Hib by chemoprophylaxis may only be transient, even in relatively closed populations.

**550** CLINICAL AND LABORATORY STUDIES IN HOUSEHOLD CONTACTS OF PEDIATRIC AIDS CASES. Rajendra Singh, James M. Oleske, Mary M. Zabala, T. Bokhari, Houman Ahdieh, Thomas N. Denny, Antonio de la Cruz, Vijay V. Joshi, Anthony Minnefor (Spon. by Franklin C. Behrle). University of Medicine and Dentistry of New Jersey. Department of Pediatrics, Newark, New Jersey.

During a 24 month period, ten children fitting the criteria of the immune deficiency syndrome (AIDS) and their household contacts were followed. Five of these children have died. All were born to parents where one or both had recognized risk factors for AIDS. Seven mothers and 3 fathers studied were asymptomatic but only 3 had normal immune studies. There were 3 mothers and 2 fathers who were both symptomatic for AIDS and had abnormal immune studies compatible with AIDS. Five younger siblings of these 10 childhood AIDS cases and 3 foster mothers have remained asymptomatic and immunologically normal during this study period. This study suggests that first born infants to parents with AIDS risk factors are at the greatest risk of developing AIDS, most probably by vertical transmission of the AIDS agent. Transmission of AIDS from index children cases to other household contacts has not been demonstrated and such transmission appears unlikely to occur. These observations are significant in that intra-familial spread, if it does occur, is likely to be an infrequent event. This data should assist those AIDS patients requiring social services to find placement in homes or with agencies following discharge from hospitals.

**551** ECONOMIC CYCLES, REPRODUCTIVE PATTERNS AND PERINATAL MORTALITY. Rajesh K. Sinha, Kwang-sun Lee and Lawrence M. Gartner, University of Chicago, Department of Pediatrics, Chicago, IL.

This study is designed to test the hypothesis that changes in economic activity influence maternal factors associated with low birthweight outcome of pregnancy and, in turn, perinatal mortality. The economic and health indices for the 50 states and Washington, D.C. in the period, 1970 through 1978, are obtained and examined as below.

Economic Indices	Health Indices
1. Unemployment	vs. 1. Maternal factors: age, education, birth order
	3. Very-low and low birthweight rates
2. Personal income	4. Fetal, neonatal, and post-neonatal infant mortality

Regression analysis reveals that variations in health indices among the states and Washington, D.C. in 1970, 1974, and 1978 cannot be attributed to the corresponding differences in economic indices (all,  $p>.05$ ). Net annual changes in health indices from 1970 through 1978 cannot be explained on the basis of net annual differences of economic indices during the same period (all,  $p>.05$ ). A similar relationship is examined utilizing the net differences of the above indices between the worst economic year, 1974, and two relatively good years, 1970 and 1978. Although the magnitude of the change in economic indices during these two periods is large, the perinatal health indices improved progressively irrespective of the direction or magnitude of the economic change (all,  $p>.05$ ).