● **471** DETERMINANTS OF FOSTER CARE FOR THE MALTREATED CHILD. Carolyn L. Gould, Desmond K. Runyan, Donald C. Trost, Frank A. Loda. University of North Carolina School of Medicine, Robert Wood Johnson Clinical Scholars Program and Department of Pediatrics, Chapel Hill.

This study examined the records of the North Carolina Central Registry of Child Abuse and Neglect to determine which social, family and child characteristics were most influential in the decision to place a child in foster care. These records contained all theoretically relevant factors as well as demographic data. Analysis included the computation of odds ratios for foster care for each of 250 variables. A maximum likelihood binary logistic regression model was constructed to obtain the independent and cumulative contribution of each factor.

During a 12 month period of 1978-79, 4611 families were reported for a first episode of confirmed child maltreatment. Approximately 15% of the families had children placed in foster care. Some expected variables such as parental stress factors (substance abuse) and types of abuse (burns and scalds) placed a child at a significant risk for placement in foster care ($p < 0.05$). However, less obvious factors such as referral source (law enforcement agencies) or geographic area also placed children at risk. Overall, our model explained little of the variance of these decisions ($R^2 = 0.168$) and poorly predicted placement (sensitivity 66.3%, specificity 74.6%). Using existing data we were unable to adequately describe the decision process in selecting foster care. Among a large population of maltreated children, placement in foster care approximates a random process.

472 HEPATITIS B DURING PREGNANCY: IDENTIFICATION OF HIGH RISK GROUPS. Madhu Gudavalli, Catherine M.P. Kierney, Saul Krugman. New York University School of Medicine, New York Infirmary-Beekman Downtown Hospital, Department of Pediatrics, New York.

Recent studies confirming the efficacy of hepatitis B immune globulin for the prevention of neonatal hepatitis B virus (HBV) infection have highlighted the need for identifying high risk pregnant women in the United States. During the period March to November 1980, of 300 pregnant women of Chinese extraction at New York Infirmary Hospital who were tested for hepatitis B surface antigen (HBsAg), 43 (14.3%) were positive. Of 37 HBsAg-positive women who were tested for 'e' antigen (HBeAg), 18 (48.6%) were positive. Of 236 women who were tested for both HBsAg and its antibody (anti-HBs), 132 (56%) had evidence of present or past HBV infection; 13.5% HBsAg-positive and 42.5% anti-HBs-positive. About 98% of the women were born outside the United States, 80 to 90% from Mainland China and Hong Kong and the others from Taiwan, Burma, Macau and other islands. Their length of stay in the USA ranged from 3 months to 15 years. In view of these findings Chinese women should be routinely tested for HBsAg during pregnancy.

473 PRENATAL SELECTION BIAS IN THE EVALUATION OF NEONATAL INTENSIVE CARE (NIC). Sargent P. Horwood, Michael H. Boyle, George W. Torrance, John C. Sinclair, McMaster Univ. Dept. of Peds. and Faculty of Business, Hamilton, Ontario.

Evaluation of NIC of very low birth weight infants (VLBW) has been based largely on infants treated in referral centers. The characteristics of the population of infants from which the treated infants come are unknown. To address the issue of maternal residence, all VLBW (500-1499g) livebirths in Hamilton-Wentworth County (1974 pop. 406,900) from 1964-69 and 1973-77 (before and after the introduction of the McMaster Regional Perinatal Program) were reviewed. The newborn mortality at final discharge by maternal residence was as follows:

Period	Maternal Residence	N	Outcome		Mortality Rate
			Alive	Dead	
1964-69	Ham-Went	353 (94%)	144	209	.592
	Other	23 (6%)	13	10	.435
	Total	376 (100%)	157	219	.582
1973-77	Ham-Went	255 (61%)	143	112	.439
	Other	161 (39%)	108	53	.329
	Total	416 (100%)	251	165	.397

Mortality rates decreased between the 2 time periods from .582 to .397, a difference of .185. Adjusting for maternal residence by applying 1964-69 mortality rates to the number of births in 1973-77 results in an expected mortality rate of .531. 28% (.051/.185) of the decrease in mortality is "explained" by maternal residence. Maternal selection may introduce a bias in the evaluation of NIC of VLBW infants.

474 THE ROLE OF CLIMATOLOGICAL FACTORS ON THE BACTERIOLOGY OF URINARY TRACT INFECTION (UTI). Abdul J. Khan Prabha Dosi and Hugh E. Evans, Dept. of Ped., Jewish Hospital and Medical Center, Brooklyn, New York.

The relationship of environmental temperature (T) and humidity (H) in the prevalence of urinary tract pathogens is unknown. 1123 consecutive UTIs encountered over 5 years, in 404 pediatric patients (average age 4.5 years) were included. Etiologies included 723 *E. coli*, (EC), 184 *proteus mirabilis* (PM), 94 *Klebsiella* (KL), 54 gram positive (GP) and 68 others. Their monthly prevalence compared with the average monthly T (lowest, left of table) and H was as follows: PM varied negatively with T (-0.7,

	T ⁰	30	32	36	44	48	52	56	63	70	71	75	76
H	65	60	59	59	65	54	69	66	70	67	69	74	
Mon.	Jan	Feb	Dec	Mar	Nov	Apr	Oct	May	Sep	Jun	Aug	Jul	
EC	54	69	46	64	72	67	68	47	65	54	67	50	
PM	20	28	35	16	6	15	12	11	6	7	11	11	
KL	1	8	1	8	5	10	13	4	10	2	17	15	

$P < 0.002$) and H (-0.58, $P < 0.002$). KL varied positively with T (+0.56, $P < 0.002$) only. EC and GP were not affected. During the 3 coldest months PM comprised 25% of UTI as compared with 11% in the 3 warmest months ($P < 0.001$); for KL proportions was 3% and 13% respectively ($P < 0.01$). Environment apparently influences the prevalence of PM and KL. The findings for PM are consistent with its increased occurrence in colder geographic areas. (J. Ped. 94:851, 1979). Relationship of KL with T correlates with its occurrence in epidemics during the summer season.

475 BLOOD PRESSURE DETERMINANTS IN CHILDREN OF HYPERTENSIVE PARENTS. P.Khoury, J.A.Morrison, P.M. Laskarzewski, C.J.Gluck. Univ. Cincinnati, College Med., Cinti. General Hosp., LRC, GCRC, Cincinnati, Ohio

Parent(P)-child(C) sharing of explanatory variables for blood pressure(BP) was studied in 161 kindreds(k) randomly recalled in the Princeton School family study, comparing 121 K [345 children, CH] with neither P on hypotensive agents (H-), and 40 K [80 CH] with at least 1 P on hypotensives (H+). The following mean (SE) BP determinants, covariance adjusted for age, race, and sex, differed in CH from H+ and H- K ($*p < .03$, $**p < .01$):

Weight[W],kg	Quetelet[Q],W/H ²	Hematocrit[HCT],%	Bilirubin[BI]
H+ 52.4±1.3	2.06±0.04	44.2±.31	0.65±0.04
H- 49.3±0.7*	1.95±0.02**	43.0±.17**	0.52±0.02**

Mean covariance adjusted total (TC), high, and low density lipoprotein cholesterol (C-HDL, C-LDL), and triglyceride did not differ in CH from H+ and H- K, $p > 0.1$. Multiple linear regression with P use of hypotensive agents as a class (explanatory) variable revealed different ($p < .05$) relationships in CH of H+ and H- fathers for CHs' and fathers' HCT, TC, C-HDL, C-LDL, WT, Q, alkaline phosphatase, thyroxine, and creatinine. The relationships between CHs' and mothers' HCT, W, Q, and glucose differed between CH of H+ and H- mothers. CH of H+ P display BP determinants which, in aggregate, may facilitate the ultimate expression of high BP, and reflect familial sharing of high BP. In CH from H+ K potentially predisposed to high BP, control of obesity, a major determinant of BP in CH, might prevent the eventual development of high BP or reduce its severity.

476 CHILDHOOD RENAL AND RESPIRATORY DISEASE AS A MATERNAL RISK FACTOR IN LOW BIRTH WEIGHT. Phyllis C. Leppert (spon. by L.S. James), Div. of Perinat. Med., Depts. of Ped. & Ob-Gyn., Coll. of Physicians & Surgeons, Columbia Univ., NY.

In a recent study which assessed the effect of "healed" renal disease on pregnancy outcome the incidence of low birth weight infants born to women with previous illness requiring hospitalization as children was unexpectedly higher than that among siblings of the renal disease cohort ($p < 0.05$). Further analysis of data from birth certificates of 88 live births to the 109 women with previous respiratory disease and 57 infants to the 64 siblings of the renal disease group indicate that these differences persist. 12 (13.6%) low birth weight infants were born to the renal disease mothers and 11 (18.3%) low birth weight infants were delivered to the women in the respiratory disease group. 2 (3.5%) of the infants born to the sibling cohort were low birth weight. Gestational age was calculated against LMP. The curves generated by plotting gestational age vs birth weight of the three cohorts were compared to the birth weight curves of Lubchenko and Babson. When race, socioeconomic status and the effect of maternal cigarette smoking were controlled, the differences also persisted. These data challenge the current concept that low socioeconomic status per se is a risk factor for low birth weight. Women with disease severe enough to be hospitalized as children may represent a risk factor for preterm and small for gestational age infants.