349 ADVERSE DRUG REACTIONS (ADR) IN THE NEWBORN INTENSIVE CARE UNIT (NICU). Jacob V. Aranda, Ana Portuguez-Malavasi, Judi Collinge, Eugene Outerbridge. McGill Univ-Montreal Children's Hosp. Res. Inst., McGill Univ. Depts of Pediatrics, Pharmacology and Therapeutics, Montreal, Quebec.

A prospective study on the epidemiology of ADR in the newborn period has been in progress since Feb. 1977. Preliminary analysis of 119 patients whose birth weight (mean and range) was 2563g (450-4535); gestational age 36.0 wks (22-43) who were admitted at 1.9 days, (0.5-65) and hospitalized for 11.5 days (0.5-100 d) revealed 46 ADR in 27 patients (22.7%). Of these, 9 (19.6%) were classified major (fatal or life threatening), 12 (26.1%) moderate, (prolonged hospital stay) and 25 (54.3%) minor. Antibiotics and cardiovascular drugs (e.g. priscoline) were the most common drugs associated with ADR. Using Ireys' criteria for the degree of certainty of a drug-reaction association, drugs appeared to be causative in 11 (24%), (8 minor, 1 moderate, 2 major), probable in 6 (13%) (4 moderate, 2 major), possible in 26 (56.5%) and coincidental in 3 (6.5%). The most common moderate to major ADR noted were hypotension, cardiac arrhythmias, renal failure, seizures, GI bleeding. 18 patients exhibited only 1 ADR while 9 had multiple (2-5) ADR. Thirty-three (71.7%) recovered without sequelae, 11 (23.9%) died from existing disease, 1 patient receiving palliative sedation died from respiratory depression. One asphyxiated patient on steroids died from gastrointestinal hemorrhage. The data indicate a high incidence of ADR in sick neonates. The analysis suggests possible approaches to reduce the frequency of ADR.

350 DIPHTHERIA-PERTUSSIS-TETANUS VACCINE: REACTOGENICITY OF COMMERCIAL PRODUCTS. Roger M. Barkin, Michael E. Pichichero (Spon. by Kenneth McIntosh). University of Colorado Medical Center, Department of Pediatrics, Denver.

Widespread use of diphtheria-pertussis-tetanus (DPT) vaccine necessitates evaluation of reaction rates. Parents from 4 practices were surveyed to ascertain reactions of children to DPT vaccine in the 48 hours after immunization. Vaccines were administered according to current recommendations. Responses were scored in 3 categories (points in parentheses): Temperature: 100-102°F(1) and >102°F(3); Behavior: irritability(1), crying (2), and screaming(3); Local Reactions: redness(1), swelling(1), and tenderness(1). Other reactions were given one point. A score was determined for each patient, points being given for the most severe temperature and/or behavioral reaction, and an additive score for each of the local reactions observed for a maximum of 10. 621 (82.3%) patients returned questionnaires. The average score was 3.54 ± 2.04.

Reaction	Range of Scores	Number	Percentage
None	0	44	7.2
Mild	1-2	166	26.7
Moderate	3-6	359	57.7
Severe	7-9	52	8.4

Over 50% experienced temperatures of at least 100°F and 80% noted behavioral changes. 75.4% had local reactions. No encephalitis, seizures, or hospitalizations were reported. Reactogenicity was similar for the 5 immunizations of the recommended series. These reaction rates underline the need to further evaluate present vaccine products.

351 THE EPIDEMIOLOGY OF HUMAN ROTAVIRUS INFECTION IN D.C. AREA THROUGH FOUR WINTERS. Carl D. Brandt, Hyun W. Kim, William J. Rodriguez, Robert M. Chanock, Robert H. Parrott. Children's Hospital National Medical Center, George Washington University, Washington, D.C. and National Institute of Allergy and Infectious Diseases, Bethesda, Maryland.

From January 1974 through July 1977, human rotavirus (HRV) was visualized by EM in the feces of 37.5% of 440 hospitalized gastroenteritis patients (since Jan. 1974), 22% of 150 outpatients with gastroenteritis (since Nov. 1975) and 2.5% of 366 controls. Most of the "controls" who yielded the agent had recent or concurrent diarrhea in addition to a respiratory tract illness. Most HRV infection occurred from Nov. through April and there seemed to be some variation from year to year. Especially striking HRV activity was seen in January 1976 when 86% of 43 inpatients with gastroenteritis had detectable HRV. The pattern suggests that there will be annual outbreaks in metropolitan Washington, D.C. which will tend to begin in the late fall, peak in Jan., and end in the spring. The frequency of HRV infection per illness was highest between 7 and 24 months of age and illness rapidly decreased in incidence with the increasing age. 81% of 89 HRV-infected black children and 41% of 76 HRV-infected white children were under 1 year of age. Additional studies of parents of children and of hospital personnel and other health workers suggest that HRV reinfection occurs in adults and that severe illness can occur but is less likely to do so in infected adults.

352 AN ADMINISTRATIVE/APPRAISAL TOOL TO IMPROVE COMMUNITY SCREENING FOLLOW-UP. S.E. Barnett. Sponsored by B. Camp. University of Colorado Medical Center, Department of Preventive Medicine and Pediatrics, Denver, Colorado.

Expensive screening programs, EPSDT, Head Start/Day Care (HS/DC) have failed because of poor follow-up. Only 43% follow-up was reported by Eisner (Ped. 49:128, '72) for migrant children. For the past five years, we have implemented a statewide school/center-based migrant HS/DC screening program, involving over a thousand children annually. A simple administrative instrument was implemented as part of the child's health record. The instrument outlined the steps of care required to achieve treatment for problems identified from the screening data base. The center nurse recorded by date the steps of care for each child's problem and monitored the instrument weekly. There were 480 pieces of information the average center nurse needed to know to be aware of where each child was in the process of care. The record also established a data base for a process/outcome evaluation, noting which problems received treatment and follow-up. Out of those children enrolled who received complete screening (743), 1,057 problems were identified and catagorized. Treatment was documented in 989 (93%) of the problems. Treatment for 899 (85%) of the problems was acceptable according to American Academy of Pediatrics' standards. This administrative instrument, which serves as a medical care appraisal tool, has also been found useful in improving follow-up screening and is proposed for broader application.

353 STUDIES OF THE QUALITY OF BLOOD PRESSURE MEASUREMENTS: THE MUSCATINE STUDY. William R. Clarke, Ronald M. Lauer, University of Iowa, Iowa City, Iowa.

To study blood pressure (BP) changes during maturation in children it was necessary to monitor the performance of those taking BP's. The Muscatine study, using standard mercury manometers, has measured 8910 children. These have been repeated at two year intervals since 1970, and 2652 children have been measured 3 or 4 times. A training and evaluation program has been maintained for 5 observers. Periodic evaluation consisted of (1) simultaneous recording of BP's from movie film or video tapes, (2) repeated blind measurement of a sample of children, (3) remeasuring by the same observer of a random sample from each day's screening, (4) comparing the distributions of BP values obtained for each observer and (5) monitoring digit preference for each observer. Films yielded an optimistic estimate of reproducibility (r=0.99 for systolic BP and r=0.88 for diastolic BP). Repeated blind measurements on a sample of children yielded lower estimates (r=0.80 for SBP and r=0.43 for DBP). Rescreening a random sample from each day yielded the most accurate estimate of reproducibility (r=0.92 for SBP and r=0.83 for DBP). On examining the distribution of BP's taken by each observer, only small biases were noted. While all observers were instructed to measure to the closest 2 mm of Hg, digit preference for zero's and four's was evident. Continued monitoring of observer performance showed highly reproducible and consistent results, thus allowing the study of blood pressures with time.

354 HEIGHT,WEIGHT, AND WEIGHT/HEIGHT INDICES:PROSPECTIVE STUDY OF 582 CAUCASIAN CHILDREN FROM BIRTH TO AGE 5 M.S.Dine,P.S.Gartside, and C.J.Glueck. Gen.Clin.Res. Center,Cincinnati General Hospital,U.Cincinnati, Coll. Medicine

Relationships between height(H),weight(W), and W/H indices at birth,3,6,and 12 mo. to those at age 5 yrs. were prospectively studied in 582 white children to examine the contribution of obesity in infancy to obesity in childhood.There were 286 boys(B), 296 girls(G);497 bottle fed, 85 breast fed. H at birth and at 5 yrs. was correlated for B and G(r=.28,.27,p<.0001),with the 6 mo. :5 yr. correlations .53 and .60. W at birth and at age 5 were correlated for B and G(r=.20,.21,p<.0001),with the 6 mo:5 yr correlations .42 and .56. W/H at 6 mo. was related to W/H at age 5 in B and G(r=.34,.52,p<.0001). $H/W^{1/3}$ at 6 mo. and at 5 yrs. was correlated in B and G(r=.40,.55,p<.0001). W/H^2 at 6 mo. and at 5 yrs. was related in B and G(r=.27,.46,p<.0001). The percentage of variation in the 5 yr. W,W/H, $H/W^{1/3}$, and W/H^2 explained by the 6 mo. values for these variables was 18%,12%,16%,and 7% for B, and 32%,27%,31%, and 22% for G. The percentage of variation in the 5 yr. values for W/H, $H/W^{1/3}$, and W/H^2 explained by the 1 yr. values was 25%,22%, and 19% for B,and 34%,19%, and 23% for G. Correlations between H,W, and W/H indices during the 1st yr. and subsequent years, were higher for G than for B. W/H indices for breast and formula fed infants were very similar. Although H, W, and W/H indices at age 5 reflect those of 3,6,and 12 mo., 36% to 94% of their variance at age 5 is not accounted for by their levels between birth and age 1,indicating limits of the predestination concept, that fat infants become fat children.