534 A PERINATAL RESEARCH DATABASE. Richard W. Krouskop, (spon. by Edwin G. Brown), Division of Neonatology, Mount Sinai School of Medicine, Department of Pediatrics, New York, New York.

A computerized perinatal database has been developed at Mount Sinai Hospital to manage information generated by 7000 admissions per year (3500 maternal & 3500 infant), including 900 admissions to the Newborn Special Care Unit. The unique features of this database system occur in 3 areas.

1. It was designed from inception as a comprehensive, integrated maternal-infant database. There are currently 534 maternal and 646 infant variables. The database is designed to prospectively collect data of general utility to any perinatal research study enabling integration of that data with the specialized data collected by specific research.
2. The database is distributed over two separate computer systems to be cost-effective, yet allow complex use of the data. Data are entered on a 16-bit multi-user micro-computer where admission notes, discharge summaries, and summary reports on < 1 year's data are generated. Data are regularly transmitted from the local computer to our University Computing Center where complex statistical analysis, long-term analysis, and archival storage are available.
3. Data collection has been integrated into routine medical care, utilizing problem oriented records to allow prospective data collection rather than retrospective chart abstraction.

535 SHOULD PREGNANT WOMEN BE SCREENED FOR HEPATITIS B? M.L. Kumar, K.C. King, R. Hertz, M. Hampson, M. Radivoyevitch, A.J. McCullough, A.S. Tavill, Depts. of Ped., Ob-Gyn., Path., and Medicine, Cleveland Metro. Gen. Hospital, Cleveland, Ohio.

Infants of HB Ag (+) mothers are at risk for acquisition of hepatitis B virus (HBV) infection. In January 1983 we initiated an intrapartum screening program for HB Ag. In 11 months 3050 women have been tested with 19 positive subjects (0.6%). Eighteen were asymptomatic and one had acute HBV infection. 13 women were black (11 Americans, 2 Africans), 3 white, 2 Hispanic, and 1 Asian. Thirteen women received prenatal care in the clinic, 4 (2 blacks and 2 Hispanics) were cared for by private physicians, and 2 received no prenatal care. Routine prenatal care of asymptomatic carriers had revealed no risk factors for HBV. Reassessment following delivery revealed defined HBV risk factors in 6 subjects, including ethnic risk (2 Africans, 2 Hispanics, and 1 Southeast Asian) and IV drug abuse (1 subject). Five additional subjects had a history of prior hepatitis in a family member. One asymptomatic carrier was HB Ag (+). Two mothers delivered preterm infants including the mother with acute HBV and the asymptomatic HB Ag (+) carrier. Mean birth weight for the 17 term infants was 2977 gms. All infants were HB Ag (-), and received hepatitis B immunoglobulin. Follow-up studies on the infants are in progress. To date, all infants remain HB Ag (-). In view of previously published estimates of the risk for development of HBV infection in neonates of HB Ag (+) mothers, the current program suggests that prenatal screening and appropriate immunoprophylaxis can reduce that risk.

536 EFFECT OF SUSCEPTIBILITY TESTING ON THE IMPACT OF NOSOCOMIAL VARICELLA EXPOSURE. Philip La Russa, Keith Krasinski, Sharon Steinberg, Anne Gershon, and Robert Holzman. New York University School of Medicine, Depts. Pediatrics and Medicine, New York, N.Y.

A pregnant woman with a rash initially diagnosed as scabies delivered a healthy infant in the hospital. When varicella (V) was diagnosed, she was isolated, but she had already exposed 55 patients (35 women, 20 newborns) and 118 hospital staff. Forty-three/153 (28%) of adults, including the mothers of six exposed newborns had no history of V. These 43 adults were tested for susceptibility to V by ELISA, FAMA (fluorescent antibody to membrane antigen), and an intradermal V skin test (ST). The number of susceptibles was 7/43 by ELISA; with 5 additional subjects having equivocal ELISA results, 7/43 by FAMA, and 2/25 by ST (both FAMA susceptible). Susceptible staff were furloughed when potentially communicable. High risk susceptible patients were given VZIG. No secondary cases of V were identified. Institution of control measures consumed 154 hours of staff time. The cost of staff furlough (\$12,000), VZIG (\$675), and serologic testing (\$1,200) was lower than it would have been if staff were furloughed based only on history (\$80,000) or if based on the cost of closing the obstetric and newborn services for the period of risk (\$303,000). The ability to establish immune status dramatically reduced the financial impact of this occurrence and enabled us to continue the delivery of health care. Experience in 82 adults has shown agreement between ST and FAMA in all but 3 ($r=0.90$). ST is easy and potentially widely available. ST's value as a predictor of immunity deserves further study.

537 IMMUNITY OF YOUNG ADULTS TO CHILDHOOD DISEASES. Alan W. Lievens, Jean Taylor-Wiedeman, Philip A. Brunell, Department of Pediatrics, U.T. Health Science Center, San Antonio, Texas.

Epidemics of measles and rubella on college campuses stimulated us to study the immune status of similar age individuals. Plasma collected for routine laboratory studies at entrance to nursing or dental school were tested by Enzyme Linked Immunosorbent Assay (ELISA) for varicella (V), measles and mumps (MM) antibody. To define the seronegative range, tests were standardized for M&M by testing 45 sera obtained from children prior to immunization and for V by testing 24 sera obtained prior to infection. The number of sera falling within 3 SD of the mean of seronegatives in relation to the total number of sera tested were: Mumps 11/235 (4.7%); Measles 3/235 (1.3%); and Varicella 6/235 (2.5%). On the day sera were obtained, 99 students were given MMR on the basis of historical data. Five seronegative for mumps and 2 for measles were not immunized; the latter had "physician documented measles." Thus, half the students needing protection against MMR were not immunized, while many others not requiring vaccine received it. Inexpensive serologic screening performed on blood obtained for other routine laboratory tests can identify the few students requiring vaccine including those who, on the basis of current historical criteria, would not have been immunized.

538 GROWTH DEFICIENCIES IN MEXICAN-AMERICAN CHILDREN IN THE UNITED STATES. Fernando S. Mendoza and Ricardo O. Castillo. Stanford University, Dept. of Peds. and University of California, San Francisco, Dept. of Peds. Sponsored by Ruth T. Gross.

The nutritional status of Mexican-American (M-A) children was evaluated by analyzing data from the National Health and Nutrition Examination Survey I (1971-1974), a probability survey of the nutritional and health status of the United States population. A subsample comprised of M-A children (N=335), ages 1-19 years was compared with non-Hispanic (N-H) children of the same age (N=6728). The groups' mean height, weight, and caloric intake were compared, controlled for socioeconomic status (SES). The M-A children's height and weight percentiles were also examined utilizing the N.C.H.S. growth curves. The results showed that the M-A sample was significantly smaller in both height and weight than the N-H group (H: $p<.001$, W: $p<.05$). The lowest SES M-A group was significantly smaller than the comparable N-H group (H: $p<.01$, W: $p<.02$). These differences were not present among higher SES groups. Within the M-A sample, the mean height and weight was significantly smaller for the low SES group ($p<.05$). The examination of the growth percentiles revealed that 10% of M-A children were below the 5th percentile in height. A similar comparison of weight percentiles did not demonstrate a difference. M-A children in the lowest SES group had caloric intakes significantly lower than comparable N-H groups or higher SES groups among M-A. Conclusion: There are significant growth differences between M-A and N-H children which are affected by SES. This suggests that malnutrition may be a concern among M-A children.

539 HAS CARCINOGENESIS OCCURRED AFTER CHILDHOOD EXPOSURE TO ASBESTOS-SPRAYED SCHOOLROOM CEILINGS? Robert W. Miller and Roger R. Connelly. National Cancer Institute, Clinical Epidemiology and Biometry Branches, Bethesda.

Does deterioration of asbestos sprayed on the ceilings of about 10% of U.S. schools cause mesothelioma or, in conjunction with cigarette-smoking, bronchogenic carcinoma after this childhood exposure? The spraying of ceilings began in the late 1940s (Spooner, CM: New Eng. J. Med. 301:782, 1979) and because of the time it takes for the fraying to occur and the latent period (at least 20 years) for the neoplasia, one would expect insufficient time to have passed to detect a carcinogenic effect. Several school maintenance men have developed mesothelioma, however, and therefore a simple check of U.S. cancer statistics for young adults was made to see if an upturn has occurred in the frequency of either of these two cancers. Neither death-certificate data for the U.S., 1950-1980, nor incidence data, 1973-1980, from the Surveillance, Epidemiology and End-Results Program of the NCI showed an increase in age-specific trends among young adults in recent years for either neoplasm. The negative results to date may be due to exposures that were too low, or latent periods that are too long for the interval that can be studied at present. Persons so exposed as children should be urged not to smoke.