

516

CHILDHOOD OBESITY ASSOCIATED WITH TELEVISION VIEWING  
W.H. Dietz and S.L. Gortmaker, Tufts University  
School of Medicine, Department of Pediatrics and  
Harvard School of Public Health, Boston, MA (Spon. R.J. Grand).

The association of childhood obesity with TV viewing has not been previously examined. Cycle II and Cycle III of the National Health Examination Survey provided representative samples of non-institutionalized U.S. populations aged 6-11 and 12-17 years old respectively. 2153 of the 7119 children studied during Cycle II were restudied in Cycle III (n=6671). Hours of TV viewing were obtained by parental report in Cycle II and self-report in Cycle III. Obesity was defined as a triceps skinfold > the 85th percentile. In both cross sectional samples, increased TV viewing was significantly ( $p < .01$ ,  $p < .001$ ) associated with an increased prevalence of obesity, whereas no significant effect existed for other leisure activities. The slope of the regression of obesity prevalence on TV was positive and significant in both samples and indicated an increase in the probability of obesity of 0.6-2% for each additional daily hour of TV. TV in Cycle II was significantly related to the probability of obesity in Cycle III, even when prior obesity was controlled. In all three samples (2 cross-sectional, 1 prospective) the significant association of TV and obesity persisted when controlled for other characteristics significantly associated with obesity (season, region, population density, race, SES, parental age and family size). These data infer a causal association of TV viewing and obesity. Potential mechanisms include reduced physical activity and increased consumption of calorically dense foods. Conversely, both obesity and TV viewing could relate to other unmeasured family behaviors.

† 517

EFFICACY OF THE OVERGOWN IN PREVENTING NOSOCOMIAL  
INFECTION IN A PEDIATRIC INTENSIVE CARE UNIT, Leigh  
G. Donowitz (Spon. by J. Owen Hendley), Univ. of VA  
School of Medicine, Dept. of Pediatrics, Charlottesville, VA

454 consecutive patients admitted to the Pediatric Intensive Care Unit were prospectively studied during four three month periods of gown and no gown use to determine whether gown use decreased the 1) overall nosocomial infection rate 2) incidence of intravascular catheter colonization 3) breaks in handwashing technique and 4) traffic. Nosocomial infection surveillance was performed daily by a trained infection control practitioner. 678 intravascular catheters were semiquantitatively cultured. Handwashing techniques and traffic were monitored by a research nurse for 94 two hour periods.

The overall infection rate was 26 (13%) of 198 admissions during the gown periods versus 23 (9%) of 256 admissions for the no gown periods. 16 (4.6%) of 348 intravascular catheters were colonized during gown periods compared to 21 (6.3%) of 330 during the no gown periods ( $p < 0.25$ ). 54 (59%) of 78 patient contacts were followed by no handwashing during gown periods and 59 (70%) of 84 contacts were followed by no handwashing during the no gown periods. The mean occurrence of visits per patient and visits per observation period differed between gown and no gown periods by analysis of variance by  $p < .01$  and  $p < .005$  respectively.

Although traffic is decreased during periods of gown use, overgowns are an expensive but ineffective method of decreasing nosocomial infection rates, procedural contamination or of effecting better handwashing technique.

518

CHILD ABUSE AND ACCIDENTS: DIFFERENT MANIFESTATIONS  
OF COMMON ETIOLOGY? Howard Dubowitz, Eli H.  
Newberger, William G. Bithoney, Robert L. Hampton,  
Carolyn M. Newberger, Daniel Kessler. Children's Hospital,  
Boston, Mass.

The concept of accidents as random events is approached critically in this study comparing 44 abused children to 44 children with accidents, matched on age, race and social class. All were hospitalized and under 5 years. Using a structured, precoded maternal interview and review of medical records, data were gathered on: demographic information, family and disciplinary histories, current social situation, supports and stresses, maternal disposition and approaches towards the child, child's health, temperament and social development.

The groups were first compared on individual variables. Those that emerged as significant discriminators were entered into stepwise discriminant function analyses. The resultant profile was examined for its ability to predict between the accident and abuse groups.

The majority of variables were similar for the two groups. The major significant differences pertained to social isolation, poverty (despite matching), stresses, paternal history of harsh discipline, and maternal perception of child as sickly and socially immature. In each area, the abuse group reported the greater difficulties. The findings suggest the need for a broadened classification system for children's traumatic injuries, to better guide appropriate medical management.

519

NUTRITIONAL STATUS AND GROWTH IN NEW-IMMIGRANT  
SCHOOL CHILDREN (K-6). Dean F. Echenberg, Nelson B.  
Freimer, Robert T. Jackson, Ricardo O. Castillo and  
Norman Kretschmer. University of California, Berkeley, San  
Francisco General Hospital, Department of Pediatrics.

631 immigrant school children were studied in conjunction with the San Francisco Newcomer Schools; Chinese, Hispanic and Filipino/S.E. Asian. Nutritional status and food habits of the children and families were assessed. The pilot phase consisted of questionnaires administered to parents, food intake information, and anthropometric and dental examinations. A subset of the smallest and largest children was selected for laboratory and physical examination based on weight per height and height per age. The survey revealed stunting in all three groups, 33% of the children from the Filipino school were below the 5th percentile of the NCHS standards for height per age but 13% and 16% of the Hispanic and Chinese children were in this category. Less than 3% revealed minimal acute wasting. 8.2% of the Hispanic children were above the 95th percentile of weight per height. During the first 6 months, there was an increase in height per age (Z score) relative to the reference group. 61% of the children required dental treatment. Children in the subset gave histories of nutritional deprivation prior to migration; physical examinations and blood analyses revealed no significant abnormalities. 64% of the subset had at least one parasite; 80% in the Chinese school and 36% in the Filipino School. 52% of the subset had serious dental disease versus 33% in the normal group. This work was supported in part by grants from the San Francisco Foundation and the U.S.D.A.

520

ANTENATAL ULTRASOUND-PERINATAL IMPLICATIONS. A.A.  
Fananoff, M.Jassani, M.Gauderer, W.Johnson, A.Zinn,  
M.Gyves. CWRU, Depts. Peds, OB, Radiol., Cleve, OH

Antenatal ultrasonography has clearly defined many fetal abnormalities, permitting referral and interdisciplinary consultation prior to delivery. We sought to determine its impact at a tertiary perinatal center. During the past 6 years (1978-83), >15,000 examinations were completed by a single observer (MJ). Indications included genetic amniocentesis (3,414 cases), size-date discrepancy, and suspicion of fetal malformations (based on history or alpha fetoprotein screening). Although the number of genetic studies increased from 268 in 1978 to >700 in 1982/83 the main indication, maternal age >35 yrs (68%), and number of chromosome abnormalities (2.3±0.6%), remained constant. Major anatomic malformations were identified in 139 fetuses, 0.9% of all studies, including the CNS (39%), genito-urinary (19%) and gastrointestinal (13%) systems. 56 were diagnosed before 21 wks of which 38 pregnancies were terminated. Better planning of delivery and operative care was possible, particularly with gastrointestinal lesions and abdominal wall defects. The natural history of many of the lesions was unknown. The ultrasound diagnosis was confirmed after delivery in all but 5 cases. To date, only 1 lethal malformation (infantile polycystic kidneys) was missed. We conclude ultrasonographic technology is currently in advance of knowledge of the natural history of many lesions diagnosed early. This presents a dilemma for both staff and patients alike. To fully utilize available resources a multidisciplinary fetal diagnostic and therapeutic team should be established at tertiary perinatal centers.

521

CRITICAL ASSESSMENT OF TRANSPORT VARIABLES  
ON NB <1500 GM SURVIVAL. Angelo Ferrara, Yucel  
Atakent, Jean-Robert Boursiquot, Jose Simpao. New  
York University Medical Center, Dept. Peds., New York, N.Y.

The impact of hospital of birth (Level I,II), age of transport (< 2hr, ≥2hr), severity (Apgar  $\leq 6, \geq 7$ ) & time of transport (weekdays (WD) 8a-4p, 4p-8a & weekends (WE) on survival were evaluated in transported NB <1500 Gm in 1981-82 in NYC. 324 NB transport records were reviewed from 18 Level I Hosp. (N=163) & 22 Level II Hosp. (N=161). 4 Stratified groups (GR) of varying risks were compared (see Table). Groupings were validated by logistic regression (% survival on risk category),  $r^2 = .995$ ,  $F_{1,2} = 441.05$ ,  $P < 0.005$ . Results: (1) By  $\chi^2$  &/or Fischer exact test, Level II Hosp. had a significant (sig) increase in survival on WD transports in 2 high risk Gr (1&2) compared to Level I, verified by Mantel-Haenszel testing  $\chi^2 = 9.12$ ,  $P < 0.005$  with odds ratio of 8.7 in favor of Level II. This was not noted on WE with high risk Gr 1,2; (2) Lower risk Gr 3, Level I showed sig higher survival than Level II on WD. It is clear that earlier transport of high risk small neonates from Level I is essential.

TABLE - % SURVIVAL &amp; (N)

GR 1 (<2h. Ap $\leq 6$ )	WD I (12)	.50	II (5)	.60**
(HIGHEST RISK)	WE I (31)	.61**	II (13)	.38
GR 2 (2h. Ap $\leq 6$ )	WD I (7)	.14	II (29)	.79***
	WE I (16)	.63	II (35)	.80***
GR 3 (<2h. Ap $\geq 7$ )	WD I (17)	.94**	II (8)	.75
	WE I (65)	.83*	II (17)	.76
GR 4 (2h. Ap $\geq 7$ )	WD I (3)	1.00*	II (22)	.86
(LOWEST RISK)	WE I (12)	.83*	II (32)	.84

\*NS \*\*P &lt; 0.005 \*\*\*P &lt; 0.0005