769 ETHICAL IMPLICATIONS OF STUDENT-PATIENT INTERACTION ON PEDIATRIC SERVICES: A STUDY OF PEDIATIC CHAIRPERSONS. Daniel L. Cohen, Rosslyn I. Kessel, Laurence McCullough, Aristide Y. Apostolides, Errol R. Alden, USUHS, Dept. of Peds., Bethesda, MD; University of Maryland, Baltimore; Georgetown University, D.C. (Spon. by Gerald Fischer)

Should parents be informed that medical students may perform invasive procedures on their children? Surveys were sent to all university pediatric dept. chairpersons (n=124) to ascertain policy governing ethical aspects of student involvement in the care of children. Surveys were returned from 99 chairpersons (80%). Seventy percent of pediatric departments specifically inform parents that students will be involved in the general care of their children but only 8% of depts. specifically obtain permission for student participation in all aspects of care. Depts. were less likely to obtain specific permission for involvement in noninvasive aspects of care (18%) than in invasive aspects (46%). The common explanation was the presumption that students are part of the hospital team; therefore specific permission for their participation was not necessary (60%). Fourteen percent of chairpersons felt that seeking permission for student involvement in some aspects of care might, through parental rejection, be detrimental to the students' education. With respect to invasive procedures 65% of depts. invoked the team concept - "we will do it together" while 4% actually informed parents that students would perform the procedures. There is considerable variability in the approach to the ethical issues surrounding student involvement with pediatric patients, and thus variability in conforming with federal and JCAH guidelines.

770 USE OF A HANDHELD PROGRAMMABLE CALCULATOR FOR FLUID AND NUTRITIONAL MANAGEMENT IN THE INTENSIVE CARE NURSERY. Edwing A. Contreras, Evelyn R. Lohla, Javier J. Bustamante, Doanh K. Phan and A. Ray Farmer (sponsored by Surendra K. Varma) Texas Tech University Health Sciences Center, Department of Pediatrics, Division of Neonatology, Lubbock, Texas.

Desk-top microcomputers programmed to calculate the daily fluid and nutritional requirements of infants admitted to neonatal intensive care units are being used with increasing frequency. We would like to report our experience with a relatively inexpensive, small, battery powered, handheld programmable calculator: the Hewlett-Packard 41 CV (HP-41CV). This calculator has an Alpha-numeric display, is simple to program and does not require prior knowledge of computer language. The small size and portability of the HP-41CV allows it to be carried during rounds with the calculations made at the bedside.

The main program allows the physician to evaluate fluid balance and caloric intake for the previous day and project values, depending on any changes planned for the following day.

An additional program designed to individualize total parenteral nutrition orders with special features of automatic calculations for glucose infusion rate (mg/kg/min) and maximum allowance for amino acids based on total calories to be expended has been very useful. Similar advantages with microcomputers include rapid execution and elimination of errors in mathematical computations. We feel that the use of this calculator is an excellent alternative if cost and portability are considered.

† **771** **MICROCEPHALY IN PRETERM INFANTS: INCIDENCE AND ASSOCIATED DEVELOPMENTAL PROBLEMS.** M. Hoffman-Williamson, J. Bernbaum, A. Daft, (Spon. by W.W. Fox) Univ. of PA. Sch. of Med., Dept. of Peds, Children's Hosp. of Phila., Phila., PA.

Given the paucity of data that exist regarding microcephaly in an exclusively preterm population, we studied the occurrence of abnormalities in toddler head circumference (THC) and the relation of THC to developmental status. In those with small THC, birth head circumference (BHC) was also analyzed. HC, WT and L and developmental status (Bayley Scales of Infant Development) at 18-36 months were determined in 117 infants with BW ≤1750 gm. 91 (78%) had THC in the normal range. Of the remaining 26 (22%) who had THC ≤-2 S.D., 3 were clearly microcephalic (MC) (≤-3 SD); 10 were suspected MC (≤-2 SD); and 13 were near MC (at -2SD). Only one child in each MC group exhibited abnormal WT and L in addition to small head size. The table demonstrates the developmental status of each THC group (excluding 5 toddlers with normal THC untestable due to blindness or behavior problems).

Devel. Status	MC	Suspected MC	Near MC	Normal THC
normal	0%	40%	46%	67%
mild-mod	67%	30%	38%	22%
sev impaired	23%	20%	16%	5%

Review of BHC of those 26 toddlers with small THC revealed 14 (54%) who were initially microcephalic (≤10%ile) and 12 (46%) who had normal BHC. Conclusions: 1) There is a higher incidence of microcephaly or near microcephaly in toddlers who were preterm as compared to those who were born at term. 2) A higher % of delays exists in those with THC≤-2SD. 3) A normal BHC does not preclude a later decline in HC%ile and the related risk for developmental problems.

772 ACOUSTIC OTOSCOPY (A.O.) COMPARED WITH TYMPANOMETRY AND MYRINGOTOMY IN THE DIAGNOSIS OF MIDDLE EAR EFFUSION IN CHILDREN AND INFANTS. Virgil M. Howie, Yi Tsong and William D. Clark, University of Texas Medical Branch, Departments of Pediatrics, Biostatistics and Otolaryngology, Galveston, Texas.

216 outpatients had 346 middle ear aspirates for either acute otitis media (#66) or insertion of pressure equalization tubes (#150). A.O. was available immediately prior to aspiration in 346 ears and both tympanometry and A.O. were available in 162 ears. The sensitivity of the A.O. was 85% with a specificity of 64% in the 346 ears aspirated. The sensitivity of tympanometry was 90% and specificity was 67% in the 162 ears for which both measurements were made. These sensitivities and specificities are not significantly different, but the specificities are better than the prediction of an experienced pediatrician using pneumatic otoscopy on the same patients.

773 HOME VISITING NURSES (HVN) ARE BENEFICIAL IN CARE OF INTENSIVE CARE NURSERY GRADUATES (ICN-G). Hallam Hurt, Laura Gealt, Molly Johnson, Marsha Wurtz, and Nancy Brodsky. (Spon. by Hope Punnett). Albert Einstein Medical Center, Temple Univ Sch Med, Dept. of Ped., Phila., Pa.

ICN-G often are discharged with unresolved problems to families (F) whose anxiety is increased by the homecoming. To improve outcome of ICN-G and decrease F anxiety we are assessing the efficacy of HVN who make unlimited phone calls and ≥ 4 visits/12 wk study period for ICN-G hospitalized ≥ 1 wk. In 15 mos. 79 ICN-G (37 C and 42 S) have completed the study. There were no significant differences between S and C groups at enrollment.

HVN interventions (mean)/S family/12 wk are 17 (28%) for new medical, 12 (21%) for chronic medical, 11 (19%) for psycho-social and 19 (32%) for general infant problems. Major interventions are teaching (38%), counseling/support (48%) and notification of physician (10%). Total interventions/S family/wk decreased from a mean of 10.9 in wk 1 to 1.8 in wk 12. Inter-rater reliability among HVN is 93%.

Outcome shows no difference in weight gain, rehospitalizations, deaths, or developmental status. However, F of S infants who are firstborn, require home monitoring or are of higher socio-economic status exhibit decreased anxiety (Multiple Affect Adjective Check List) at 12 wk vs. baseline ($p < .05$); corresponding C families do not. Further, 26/26 S families responding to a survey feel all ICN-G should receive HVN; 67% recommend extension of services > 12 wk. Finally, 75% of physicians of ICN-G responding to a questionnaire feel HVN provide more information than regional centers, none feels HVN interfere in their relationship with ICN-G and F, and 100% feel regional centers should provide HVN to all ICN-G. HVN decrease anxiety in F of ICN-G, improve communications with primary physicians and are recommended by both F and physicians to assist in care of all ICN-G.

774 ANOTHER LOOK AT CAREER CHOICE AND LEARNING STYLES. Leslie Jewett, Ed.D., Larrie W. Greenberg, M.D., Richard P. Foley, Ph.D., Rhonda M. Goldberg, M.A., Chariklia T. Spiegel, M.D., Carol Green, M.D. Children's Hospital National Medical Center, George Washington University School of Medicine, University of Illinois Center for Educational Dev.

Few relationships have been found between physicians' career choices and learning and personality styles. This study re-examines physicians' career choices utilizing a learning preference inventory which assesses approaches to learning.

METHOD: The majority of residents in the specialties of internal medicine (62), obstetrics/gynecology (16), pediatrics (52), psychiatry (15), and surgery (24) completed the Rezler Learning Preference Inventory, and the FIRO-B Scale. The analysis method to determine differences was an ANOVA.

RESULTS: Residents in all specialties except psychiatry had strong preferences for concrete, practical learning while many psychiatry residents prefer learning theoretically ($p < .05$). Significantly more ($p < .05$) psychiatry residents preferred teacher structured learning while residents in other specialties were more likely to prefer student-structured learning ($p < .05$). Pediatric residents preferred learning with others ($p < .05$) while ob/gyn residents preferred independent learning such as reading ($p < .05$). On the FIRO-B Scale which measures typical ways individuals interact with other people, pediatric residents as compared to the other specialties were more likely to want others involved in their activities and to have warm and personal relationships instead of doing things alone or have businesslike relationships.