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SEMIOLGIC ANALYSIS OF A NEW PHYSICIAN ROLE. Samuel S. Gidding, (Sponsored by Macdonald Dick) University of Michigan, C.S. Mott Children's Hospital, Dept. of Pediatrics, Ann Arbor

New technologies have altered the way medicine is practiced. We propose that the influence of these new technologies in medicine may best be understood using the semiologic concepts of syntagm and association as developed by Roland Barthes. A syntagm is a linear sequence of associations which make a logical statement. For example the sequence of courses on a menu forms a syntagm; the listed choices for a particular course form an association. A classic syntagm which epitomizes medical practice is the sequence of associations: history, physical exam, differential diagnosis, diagnostic plans, therapeutic plans, outcome assessment. Older independent technologies such as the present illness, stethoscope, chemical analyses, and x-ray, strengthen this syntagm because the contributions as associations do not have clinical meaning until they have been incorporated into a complete syntagm by a physician. Newer interactive technologies such as 2-D echocardiogram or insulin pump can rapidly acquire data for sequential analysis by a computer or skilled operator which (who) can then achieve the desired outcome (euglycemia, cardiac diagnosis). The physician's role in the classic syntagm as synthesizer of independent associations is usurped by this new interactive technology. Thus, many physicians who primarily manage technologies participate in a new syntagm--patient-data base, interactive technology, interaction outcome--resulting in a different role model than that created by the classic syntagm. Recognition of new physician roles has implications for physician training, man power assessments, and self-understanding.

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THE USE OF INOTROPIC AGENTS IN CHILDREN WITH SHOCK. Clarence W. Gowen, Jr., George Benzing, III. The University of Cincinnati, Cincinnati Children's Hosp. and Med. Center, Dept. of Peds, Cincinnati, Ohio.

To evaluate the use of inotropic agents in the treatment of shock, the charts of 85 medical patients were reviewed. Each of the 85 hypotensive patients (MAP <2SD below the mean for age) were initially treated with dopamine (10 to 30 µg/kg/min.). Sixty-seven patients responded to dopamine alone with a survival rate of 95%. However, 18 of 85 patients (21%), because of continued hypotension and/or inadequate urine output (<1.0cc/kg/hr.) on 30 µg/kg/min. of dopamine, were placed on epinephrine and the dopamine was discontinued. The dose of epinephrine ranged from 0.1 to 1.0 µg/kg/min. While on epinephrine 3 of 18 patients (17%) did not improve with respect to arterial blood pressure or urine output; 10 of 18 patients (55%) showed a transient response, but later died from their illness; and 5 of 18 patients (28%) survived. A significant difference in the blood pressure, blood urea nitrogen, and the dose and duration of epinephrine therapy was observed between the survivors and the non-survivors after epinephrine. Significant changes in urine output were observed in both groups.

From this study, 28% of the patients who presented in shock and failed to respond to dopamine therapy did respond to a constant infusion of epinephrine with resolution of hypotension and ultimate survival. Therefore, epinephrine should be considered as a therapeutic modality in patients who are unresponsive to dopamine therapy.

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THE IMPACT OF CME ON PHYSICIAN PERFORMANCE, KNOWLEDGE AND PATIENT CARE. Larrie W. Greenberg, Leslie S. Jewett. (Spon. by Donald W. Delaney) George Washington University School of Medicine, Children's Hospital National Medical Center, Department of Child Health and Development, Washington, D.C.

The purpose of this study was to compare two educational processes (traditional didactic lecture and case study format) to determine their impact on physician knowledge, performance, and patient care.

**METHODOLOGY:** One hour traditional didactic lectures (TDL) or case presentations (CP) were presented. Topics included headaches and behavior problems (TDL), and enuresis and sleep disorders (CP). Multiple choice questions were administered pre, post, and six to nine months post educational session. Twenty-three pediatricians participated in the study. A simulated mother/child presented to each office within the year with a diagnosis featured at a CME session. Post office visit, mothers completed checklists to document physician behavior. Patient records were rated as to the appropriateness of the diagnosis and plan.

**RESULTS:** Following instruction, 44% of the pediatricians showed a gain in their knowledge, with no difference between those attending TDL and CP. Six to nine months after instruction, 26% attending TDL and 25% in CP increased their cognitive knowledge, 42% TDL and 38% CP performed at a lower level. Physicians' records revealed that the accuracy of the diagnosis among the CP (79%) and TDL (78%) groups was similar. More pediatricians (80%) attending a CP session recorded a plan for their patients than did those (38%) attending TDL ( $\chi^2=6.39; p < .02$ ).

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EFFECT OF HOME VISITING NURSE (HVN) ON INTENSIVE CARE NURSERY GRADUATES (ICN-G), THEIR FAMILIES, AND PHYSICIANS. Hallam Hurt, Laura Gealt, and Nancy Brodsky. (Spon. by Hope Punnett). Albert Einstein Medical Center and Temple University School of Medicine, Dept. of Ped., Phila., Pa.

Discharge of the high-risk infant promotes parental anxiety, increases demands on primary physicians, and rarely signifies complete resolution of the infant's problems. For these reasons, we are currently evaluating the efficacy of a HVN, who makes unlimited phone calls and at least 4 home visits/12 wk. period. Using infants who were hospitalized >1 wk. we have enrolled 35 patients into study (S) or control (C) groups. In the past 6 months, 8C, 8S infants have completed the 12 wk. study period. C infants are larger ( $2397 \pm 948$  vs  $1851 \pm 808$  gm), older ( $35.3 \pm 3.8$  vs  $32.6 \pm 3.2$  wk. EGA  $p = < .03$ ), and hospitalized fewer days ( $27.2 \pm 22.0$  vs  $36.4 \pm 23.4$ ) than S. Although no differences have yet been found in parental stress indices, 7/8 S families felt their most helpful information has come from HVN. Further, S families uniformly recommend that similar nursing services be provided for other families of ICN-G; the majority recommend an extension of services beyond 12 wks. A mean of 6 chronic medical, 12 new medical, 12 psychosocial, and 19 general infant problems/S family required intervention by the HVN. Mean specific interventions/family included teaching (21), counselling/support (25), notifying a physician (3), and referral to a physician (1). Numbers of interventions/family decreased from 10/wk. in wk. 1 to 0.5/wk. in wk. 12.

HVN are useful to families of ICN-G and are likely useful to infants. Preliminary responses from primary physicians for S families indicate positive support for the HVN. Supp. by RWJ #2377.

**● 808** OUTCOME STUDIES OF NEONATAL ENTEROVIRUS INFECTION. Jerri A Jenista, Larry E Dalzell, Philip W Davidson, Marilyn A Menegus. (Spon. by Robert P Kelch) University of Rochester Medical Center; Strong Memorial Hospital; Depts Pediatrics, Microbiology, Surgery; Rochester, NY.

Enterovirus infection is prevalent in infants < 28 days of age during the summer and fall months and is a common cause of hospital admission. The long-term outcome is unknown although previous studies have indicated possible neurologic residua in infants suffering enterovirus meningitis in the first year of life. During the summer and fall of 1981, we prospectively followed 668 normal newborns in Rochester, NY. In the first month of life 12.8% had a culture-proven enterovirus infection. 21% of infected infants were hospitalized; 79% were asymptomatic. In 1983, at approx. 18 mos. of age, 71/75 neonatally infected infants and their matched controls underwent physical, audiologic, speech and language and developmental examination. Controls were non-neonatally infected infants from the original cohort matched for week of birth, sex, race, socioeconomic status and residence. The study and control groups did not differ on any variable of perinatal course or interim medical course from age 1 to 18 mos. Infected infants compared to uninfected matched controls showed mean delays in development - 0.7 mos ( $p = .032$ ), receptive language - 1.8 mos ( $p = .005$ ), and expressive language - 1.4 mos ( $p = .025$ ), not accounted for by difference in age at testing, audiologic abnormality or clinical severity of the neonatal infection. We conclude that enterovirus infection occurring in the first month of life, even if asymptomatic, may result in developmental and language delays.

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FACTORS INFLUENCING CAREER CHOICE AND SATISFACTION IN PEDIATRICS. Leslie S. Jewett, Larrie W. Greenberg, Zandy Leibowitz, Arnold H. Einhorn, Lawrence F. Cohen. George Washington University School of Medicine, Children's Hospital National Medical Center, Department of Child Health and Development, Washington, D.C.

The "dissatisfied pediatrician syndrome" has been manifested in an extremely high career burn-out rate among pediatricians. This study's purpose was to cite factors which lead to career satisfaction and dissatisfaction or burn-out in pediatricians. **METHODOLOGY:** Pediatricians (87) surveyed in Washington, D.C. and at the fall 1983 AAP meeting career assessment exhibit (125) completed a questionnaire, the FIRO-B Scale, and Rezler Learning Preference Inventory. 63% were in practice, 32% in academics, and 5% in research or other. 73% were males; 27% were females. **RESULTS:** Many pediatricians, unrelated to career choice or satisfaction, reported feeling stressed and tense. Dissatisfying factors were: long hours, busy workloads, inadequate remuneration, stress, and malpractice threats. Academics found the difficulty of balancing patient care, administration, research, and teaching responsibilities and the lack of support and time for research and teaching to be dissatisfying. Practitioners reported endless telephone calls, practice management, insecurity, routine work, limited time for research and teaching and lack of contact with peers to be dissatisfying. The time spent in patient care, teaching, administration, and research were found to significantly correlate with career satisfaction. Career profiles for pediatricians in practice and academics were predictable based on study results.