

37

**MATERNAL ATTACHMENT AND EXPECTATIONS: A COMPARISON OF MOTHERS OF HEALTHY AND SICK NEWBORNS.** Robert G. Dillard and Kathleen G. Auerbach. (Spon. by J.L.

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A program for parents has been developed at the Intensive Care Nursery (ICN) of the N.C. Baptist Hospital to deal with acute emotional disturbances and to prevent long term adverse consequences of neonatal illness. With activities coordinated by a full-time social work staff, ICN personnel use crisis intervention techniques and stress parent-child contact and parental participation in the care of critically ill infants.

To assess the results of the program, a questionnaire was administered at the time of infant discharge to 61 mothers of infants cared for in the ICN and 42 mothers of normal term infants who received routine hospital care. There were no significant differences between the two groups in socioeconomic status using indices of education, income, occupational or marital status.

Comparing mothers of ICN infants and normal infants, there was no difference in maternal perception of infants as assessed by the Broussard "Neonatal Perception Inventory" or in response to questions related to attachment, expectations, or the emotional impact of the baby's birth. The mothers of critically ill infants had healthy attitudes about their babies, were strongly attached to them, and responded to the crisis by maintaining their emotional integrity.

40

**IMPACT OF CONGENITAL HEART DISEASE (CHD) ON THE FAMILY: MOST FAMILIES COPE WELL**

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Chronic illness can produce great stress on family life. We investigated the effect of CHD on family stability by comparing families of 40 children with surgically corrected tetralogy of Fallot with 40 families with a child who had appendectomy (APP) but never another serious illness. Matching included child's age, sex and time since surgery, and all families were free of serious illness and had intact marriage at index child's birth. Family assessment included a factual questionnaire and the multiple choice Family Effectiveness Test (FET) - completed by the mother which discriminates well between families of disturbed and non-disturbed children and correlates well with other tests of marriage stability. No significant difference was seen in the 10 year occurrence of marriage breakup between the CHD group (7/40) and the APP group (5/40). ( $\chi^2=0.40$ , McNemar's Test). Similarly, the mean FET scores were not significantly different between the 2 groups: CHD 38.4, APP 40.6 ( $t=1.41$ ), indicating a high degree of stability (max. 48.0). Division of the CHD group into a) severe - shunt prior to total correction and b) mild - no prior shunt, revealed no differences in marriage breakup or FET between sub-groups. We conclude that stress due to reparable tetralogy of Fallot in the family is well tolerated and is associated with no more family instability or marriage breakup than a childhood APP. The severity of the tetralogy has apparently no effect on the family's ability to cope.

38

**FACTORS MOTIVATING PHYSICIANS TO HIRE PHYSICIAN ASSISTANTS IN RURAL OFFICE PRACTICES.** Edem E. Ekwo, Dennis Oliver, Carol Fethke (Spon. by Kabir

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Factors motivating physicians to hire physician assistants (PA) are not well delineated, yet 23% of PA activities in primary health care settings in Iowa involve children less than 15 years old. Of 64 Iowa physicians who employed PA from 1973 to 1977 in their offices, 75% completed a ten point scale questionnaire. 37/51 (73%) of these physicians still employed PA at time of study and 8/13 (62%) had terminated PA employment. 31 of these 51 practice sites with PA in active practice had populations < 10,000. Factors which strongly motivated physicians to hire PA were MD practice from multiple offices serving populations < 5,000 (40% of sites). Other motivating factors were physician's belief that MDs should delegate certain tasks to non-MDs (65%), and also MD's desire to provide innovative care (51%), optimal care (55%), new services (33%), more of the usual service (63%), to more patients (57%), and to reduce waiting time for appointments (49%). Non-motivating factors were prior MD's work or educational experiences with similar health personnel, the MD's desire to provide services at less cost, reward faithful employee, increase earning, compete favorably with colleagues, work fewer hours, and to create time for continued education. Similar motivating factors were found among physicians who had hired and dismissed PA. These findings have educational, legislative and social implications.

41

**THE PREDICTION OF SCHOOL AGE I.Q. DURING INFANCY IN THE PREMATURE CHILD.** Robert B. FitzSimons, Stanley A. Ashby, Pamela M. Fitzhardinge. Univ. of Toronto,

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Although the estimation of intelligence is an essential part of studies of the effects of prematurity, there is controversy regarding the earliest age at which psychometric testing is reliable. This paper presents results of a 6 year prospective study of 90 infants born in 1970, 1971. Mean birthweight was  $1165 \pm 198$ g; mean gestation  $29.8 \pm 2.8$  wk. The infants were randomly divided into 2 groups according to the age of early psychometric testing. Bayley Scales were administered to Group I (N=34) at ages 9-13 mo from term and to Group II (N=56) at ages 14-26 mo from term. The Mental and Psychomotor Development Indices were averaged for each patient and the results expressed as the Bayley Index (Group I,  $91.3 \pm 17$ ; Group II,  $88.4 \pm 19$ ). Wechsler Intelligence Tests were administered to each group at 5-6 yr. The Full Scale Quotients were  $92.1 \pm 14$  for Group I;  $87.5 \pm 18$  for Group II. Multiple regression analyses were made between the Bayley and Wechsler scores in each group. Group II showed a high positive correlation ( $r=0.72$ ,  $p < 0.001$ ). This correlation was significantly higher ( $p < 0.05$ ) than the coefficient obtained for Group I ( $r=0.36$ ,  $p < 0.02$ ). Low socio-economic status tended to lower the Wechsler score below the expected value.

The results show that psychometric testing prior to 2 yr of age in premature infants is predictive of school age I.Q. but that the prediction is most reliable if testing is done after 14 mo from term.

39

**DOWN SYNDROME SURVEY.** M. Feingold, J.E. O'Brien, Dept. of Pediatrics, New England Medical Center Hospital, Boston, Massachusetts.

Questionnaires were sent to parents of Down syndrome children in 1970 and 1974 attempting to determine their views on various subjects relating to having a child with Down syndrome. Because of some of the fallacies present in questionnaires, in 1977, parents were interviewed and asked the same questions. A total of 194 answered the questionnaire and 35 were interviewed.

We were interested in determining if having a Down syndrome child had any effect on the marriage. In 1970 and 1974, 38 percent of the respondents answered that their relationship had changed in a positive manner since having a child with Down syndrome. Fifty-eight percent said there was no change and 3 percent said there was a negative change. Of the parents interviewed, 46 percent said they had a more positive relationship with their spouse, 49 percent said there was no change and 6 percent said there was a negative relationship.

In 1974, 15 percent of the parents believed they had a more positive relationship with their other children since having a child with Down syndrome. In 1977, more fathers than mothers believed they had a more positive relationship when compared to the 1974 figures. Generally, as the children became older there were no significant changes in the parents' responses.

The divorce rate in the 1970 and 1974 survey was 4 percent. There were no divorces in the smaller interview group.

42

**CHILD ABUSE IN AN URBAN POPULATION.** Alan R. Fleischman, Charlotte Grant, Constance Zoff, Carolyn Zeichner,

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There were 103 patients with suspected child abuse or neglect reported to the Bureau of Child Welfare (BCW) in 1977 from our hospitals. The predominant form of abuse varied with age: 14 patients were less than 6mo. old with major trauma in 10, including 5 instances of subdural hematomas; 34 patients were 6mo.-3yr. old with significant trauma in 15 and neglect or failure to thrive in 11; 39 patients were 3-12 yr. old including 10 instances of sexual abuse; 16 patients were 12-18 yr. old with 8 instances of parent inflicted trauma as a result of an argument.

28% of the patients came from families with a prior record with BCW. Alcohol and/or drugs were associated with the abuse in 20% of patients. An apparent psychiatric disorder was present in one or both parents in 26% of the cases. Significantly, 43% of patients less than six mo. of age had parents with psychiatric problems. Patients were returned home by BCW in 87 instances and placed with relatives or foster care in 12 cases. Follow up indicated that 21% had no positive change in their families or environment which would prevent future abuse or neglect.

This study of urban poor suggests that: 1-there is a high incidence of psychiatric disorders in the families of abused children; 2-sexual abuse is common in the childhood age; and 3-child abuse is a chronic disorder with a recurrence rate of 20-30% as a result of inadequate resources for treatment and prevention.