338. DYER, ELAINE D.; AND PETERSON, D. E. Safe care of IPPB machines. *Am J Nurs* 71:2163-2166, Nov. 1971.

The investigators, a nurse researcher and a microbiologist, studied the source of contamination in 2 IPPB machines, the Bennett PR 2 and the Bird Mark 10, and the effect of precautionary measures to reduce contamination. When disposable filters were not incorporated in the main line tubing and the nebulizing line, pathogens were recovered from all parts of the delivery tubing. When filters were used, and autoclaved parts changed in the Bennett between patients, sterile therapy could be presented 96% of the time. The filters do not interfere with gas flow pressures or humidification from the reservoir humidifier. The equipment between the filter and the patient cannot be autoclaved in the Bird, and must be decontaminated by other methods. Acetic acid solution nebulized daily from the reservoir nebulizer reduced bacteria emitted from the vapor. The side arm nebulizer is distal to the filters, unaffected by the filters, and among the autocavable parts. When the experimenters found that challenge organisms placed in the nebulizer and released through the exhalation valve of the IPPB machine settled out at distances of 32 feet from the machine, they suggested that ward administration of this therapy is of questionable safety.—M. W. Blackwell.

339. STOKES, E. JOAN; THOMPSON, R. E. M.; PARKER, MARGARET J.; BRADLEY, JEAN M.; HITCHCOCK, NORAH M.; AND WALKER, JANICE S. Hospital staphylococci in three London teaching hospitals. *Lancet* 1:84-88, Jan. 8, 1972.

The nasal carrier-rates of *Staphylococci aureus* in patients and staff and strains isolated from 100 consecutive infections were compared in 3 hospitals. Two of these had for some years carried out measures additional to strict aseptic technique for the prevention of hospital infection. Evidence is presented of the efficacy of these measures in maintaining a low carrier-rate of antibiotic-resistant strains in the patients.—Journal Abstract.

MATERNAL AND CHILD HEALTH
(Including Infant Health)

340. BELL, R. Q.; WALDROP, MARY F.; AND WELLER, G. M. A rating system for the assessment of hyperactive and withdrawn children in preschool samples. *Am J Orthopsychiatry* 42:23-34, Jan. 1972.

Six rating scales for hyperactivity and 3 for withdrawal were developed from a series of studies on 202 early preschool-age children. Testing of the scales for factor composition revealed that they formed one bipolar hyperactivity-withdrawal factor for males and separate hyperactivity and withdrawal factors for females. A factor scoring system is presented that can be applied by teachers on a periodic basis to keep a running account of hyperactive and withdrawn behavior. Research applications could include 1) explicit accounting for cases otherwise reported as "untestable" in experimental studies; 2) separate identification of the few extreme cases that, even in nonclinical samples, are sufficient to create statistical findings not applicable to the more modal portion of the sample; and 3) assessing the results of treatment programs for hyperactive and withdrawn children.—Author Summary.

341. KATZ, VIOLET. Relationship between auditory stimulation and the developmental behavior of the premature infant. IN *Seventh Nursing Research Conference, Atlanta, Georgia, March 10-12, 1971.* New York, N. Y., American Nurses' Association, 1971, pp. 103-117. Also see Abstract No. 478, *Nursing Research* 20:472, Sept.-Oct. 1971.

342. KORSCH, BARBARA M.; NEGRETE, VIDA FRANCIS; MERCER, ANN S.; AND FREEMON, BARBARA. How comprehensive are well child visits? *Am J Dis Child* 122:483-488, Dec. 1971.

While previous studies of content of well-child visits have indicated an emphasis on physical examinations, immunizations, and feeding advice, this study tested the comprehensiveness of well-child visits today with respect to inclusion of psychosocial components by doctors and nurses and the effect mothers' needs and concerns had on visit content. Four hundred and fifty well-child visits in health department clinics, private offices, and prepaid insurance clinics were studied by means of previsit interviews with mothers to determine their concerns regarding child development and family relationships and their expectations of the nurse and doctor, tape recordings of the visit interaction, and postvisit interviews to determine visit satisfaction. Tapes were analyzed to determine how many of the mothers' previsit concerns were verbalized during the visit, how many were dealt with, and how much psychosocial input was initiated by doctors and nurses. In all 3 settings less than 10% of the mothers' expectations were related to psychologic subjects, and, when verbalized, about half of them were dealt with; 90% of the concerns related to physical subjects received responses. Nurses and doctors initiated little input regarding social, emotional, and behavioral concerns. Reassurance and anticipatory guidance constituted 10% or less of the interaction. Findings suggest that doctors and nurses continue to focus on physical concerns, and incorporate little psychosocial content, reassurance, and anticipatory guidance in the well-child visit. They do not give and mothers do not expect comprehensive care.—R. A. Walker.

343. PORTER, LUZ S. Physical-physiological activity and infants' growth and development. IN *Seventh Nursing Research Conference, Atlanta, Georgia, March 10-12, 1971.* New York, N. Y., American Nurses' Association, 1971, pp. 1-43.

This paper reports 2 studies conducted between 1966 and 1969 designed to seek differences in development of infants who received a program of physical exercises and infants who received only normal treatment. Six independent variables were chosen to reflect infant development: weight gain, length gain, motor behavior, language behavior, adaptive behavior, and personal-social behavior. Two groups of infants were chosen for each study, eliminating any with a history of prematurity, birth injury, congenital anomaly, or other physical or development abnormality. The 1st study, using infants in a foundling home, had 30 control and 30 experimental subjects. The 2nd study, using infants in their natural homes, raised the number in the sample to 47 controls and 47 experimentals. Infants ranged in age from 4 to 40 weeks and were matched for age and sex. The exercises used in the study called for an attendant to set the subject's upper and lower limbs in cycling motion alternately. These exercises were administered for 20 minutes daily, in 2 sessions during which 5 minutes of exercise were followed by 5 minutes of rest, then 5 more minutes of exercise followed by 5 minutes in which the infant was rocked to sleep. This regimen was followed 6 days a week for a 2-month period. In the 1st study, cycling motion was carried out at a rate of 30 cycles per minute; in the 2nd, cycling motion was varied according to the age of the infant. Developmental behavior was measured by use of the Gesell Developmental Schedules. Significant differences were found between control and experimental groups on all 6 measures, proving that the exercise regimen did add to the development of the infants in the study.—J. Vian. (Also see *Philipp J Nurs* 40: 91-94, July-Sept. 1971.)

344. SEGALL, MARY. Relationship between auditory stimulation and heart rate response of the premature infant. IN *Seventh Nursing Research Conference, Atlanta, Georgia, March 10-12, 1971.* New York, N. Y., American Nurses' Association, 1971, pp. 119-129.

In seeking for differences in heart rate response between premature infants who were exposed to a tape recording of the mother's voice and premature infants who did not receive such sensory input, the author compared 30 pairs of infants of 28-32 weeks' gestational age, matched for sex and ethnic background. In each pair 1 infant received the experimental treatment of hearing his mother's recorded voice for a total of 30 minutes per day; the other infant did not receive this treatment. The treatment was continued until the infant reached 36 weeks' gestational age; each infant's heart rate responses to a variety of auditory stimuli were recorded in 1 testing session. Infants were tested in quiescent and aroused (crying) states. Quiescent infants received 10 seconds of white noise, repeated 4 times with a 75-second interval. Crying infants received the recorded sound of the mother's voice and an unfamiliar female voice; each voice was presented 2 times for 30 seconds each, and the order of their presentation was random. Two scores were obtained for each infant: a prestimulus value and a change score. Infants in the experimental group who were tested in the quiescent state demonstrated an overall greater amount of increase in heart rate to the white noise than did those in the control group, although prestimulus scores were not significantly different between the 2 groups. Furthermore, the experimental group showed the greatest amount of acceleration on the 1st trial, followed by a general decrease in amount of acceleration, while the control group showed an irregular pattern of response to the white noise. Among the infants tested in the crying state, both experimentals and controls showed a decrease in heart rate, with the decrease significantly greater for the experimentals. The experimental group also tended to decelerate more to the sound of the mother's voice than to that of the unfamiliar voice, but the difference was not significant. The author discusses the implications of these findings for the nursing care of the premature infant.—J. Vian. (Also see Segall, Mary E. Cardiac responsibility to auditory stimulation in premature infants. *Nurs Res* 21:15-19, Jan.-Feb. 1972.)