

385 CONTROL OF NOSOCOMIAL RESPIRATORY SYNCYTIAL VIRUS(RSV) INFECTIONS. Caroline B.Hall, Joyce M.Geiman, R. Gordon Douglas, Jr., Mary P. Meagher (Intr.by David H.Smith). Univ. of Rochester School of Medicine, Dept. of Ped. and Medicine, Rochester, New York 14642

RSV has been the major cause of nosocomial infections on our infant wards, affecting 45% of infants hospitalized for > 1 week, and 42% of the staff. We evaluated methods to control the hospital spread of RSV during a community RSV outbreak. Methods included isolation of all infants with respiratory illness; strict handwashing, gowns, secretion precautions, cohorting of staff to ill infants, but no masks. Every 3-4 days all infants and staff were examined and nasal washes obtained. Of 123 infants admitted; 36 had RSV. Of 87 contact infants, 42 were hospitalized for >1 week. Nosocomial illness occurred in 8 or 9% of contact infants and in 19% of those hospitalized for >1 week. Three had pneumonia and 1 died. Of 43 staff, 24 or 56% acquired RSV (60% of nurses and doctors, 38% of medical students). Symptomatic illness occurred in 83% and 46% missed work. Hence, these procedures reduced infant nosocomial infection by over half, but did not affect staff infection rates. This suggests that staff continue to be infected while closely caring for infected babies, perhaps by self-inoculation of contaminated secretions from their hands or fomites, or by large droplets while holding infants. However, with handwashing and changing gowns between rooms, but without masks, staff did not appear to transmit RSV to neighboring uninfected infants.

386 ISOLATION OF POTENTIALLY PATHOGENIC ORGANISMS FROM THE VAGINA OF GIRLS UNDER 16 YEARS OF AGE.

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We have examined vaginal cultures from 100 girls, two months to 15 years of age, who presented as outpatients to Boston City Hospital. Significant organisms are listed below:

Organism	No. examined	0-2years	3-10years	11-15years
<u>Corynebacterium vaginale</u>	59	2/11(18%)	1/40(2.5%)	5/8(63%)
<u>Mycoplasma hominus</u>	90	0/28	4/44(9%)	1/18(6%)
<u>Ureaplasma urealyticum</u>	90	8/28(28%)	10/44(23%)	9/18(50%)
<u>Candida tropicalis</u>	97	7/29(24%)	0/48	0/20
<u>Candida albicans</u>	97	1/29(3.4%)	5/48(10%)	4/20(20%)
<u>Neisseria gonorrhoeae</u>	99	0/30	1/49(2%)	0/20
<u>Trichomonas vaginalis</u>	97	0/29	0/48	2/20(10%)

N. gonorrhoeae was isolated from a 4 year old with purulent vaginitis. T. vaginalis was recovered from two 13 year olds, both of whom had an abnormal vaginal discharge.

Of note was the isolation of C. tropicalis as the predominant candidal species among the girls under 2 years of age and its absence among older girls. Also of interest was the relatively low rate of colonization with C. vaginale and Candida species among 3 to 10 year old girls, suggesting that the prepubertal vaginal may not provide a favorable environment for microorganisms which are frequently present in the adult vagina.

387 RELATIONSHIP OF BIRTHWEIGHT TO RISK OF INFANTILE OBESITY. Gail G. Harrison*, Morissa White* & J.B. Goldsby*, University of Ariz. College of Medicine, Dept. of Family and Community Medicine, Tucson; Ariz. Dept. of Health Services, Phoenix; CDC,USPHS,Atlanta. (Spon. by Grant Morrow III).

Data were analyzed on weight-for-height and birthweight of over 17,000 infants age 1 to 24 months in Arizona. Birthweights between 2500 and 3500 grams were associated with a significantly lower risk of obesity (defined as over the 94th %ile of weight-for-height for age and sex) than lower or higher birthweights. This pattern was especially marked for Black infants and was less marked but also significant (p<.05) for Whites and Spanish-Americans. The relationship did not hold for American Indians, for whom risk of obesity increased linearly with birthweight.

PERCENT OVER 94th PERCENTILE WEIGHT-FOR-HEIGHT

	Birthweight (gm)			
	<2500	2500-2999	3000-3499	3500+
All (N=17,964)	16.4	13.0	14.2	19.2
Black (N=1425)	26.6	11.5	24.2	23.6
White (N=3851)	13.3	10.6	13.2	14.5
Spanish-American(N=6792)	17.3	13.2	17.4	18.8
American-Indian(N=5368)	13.3	15.2	21.0	22.1

Birthweight reflects in part the degree to which the fetal phenotype is buffered against environmental stress. Thus infants whose birthweights are far from the mean may be relative developmental hyper-responders and thus, in an environment which overfeeds, at higher risk of obesity.

388 DOWN'S SYNDROME: SHIFTING PATTERNS IN MATERNAL AGE L.B. Holmes, Genetics Unit, Mass. Gen. Hosp., Boston, MA.

The basis for recommending prenatal diagnosis for women 35 or older has been that they have most of the infants with Down's syndrome. The cost of testing these mothers has been considered less than the institutional care of many of their infants. We found this is no longer true. Infants with Down's syndrome are more likely to be born to mothers less than 35. This trend is also true of patients with Down's syndrome at institutions.

Among 18,155 infants born from 1972 to 1975 at the Boston Hospital for Women, there were 20 with Down's syndrome. All had trisomy 21. 65% were born to women less than 35. Only 35% were born to women 35 or older. 7% of all mothers were 35 or older.

In reviewing the ages of the parents of 187 persons with Down's syndrome living in an institution for the retarded, we found a steady decline in the parental ages between the 1920's and the 1960's.

Date of Birth	No. Patients	Av. Mat. Age	% Mothers ≥ 35 Years	Av. Pat. Age
1920-1929	22	36 yrs.	70%	39 yrs.
1930-1939	34	36	64	39
1940-1949	35	35	56	39
1950-1959	81	34	47	36
1960-1969	15	29.5	20	34

If most infants with Down's syndrome are to be identified by prenatal diagnosis, current recommendations for the ages at which routine prenatal testing is recommended must be changed.

389 ESTIMATED RATES OF DOWN'S SYNDROME IN LIVEBIRTHS BY SINGLE YEAR MATERNAL AGE INTERVAL BETWEEN 20-49 AND IMPLICATIONS FOR COST-BENEFIT ANALYSIS OF PRENATAL DIAGNOSIS PROGRAMS. Ernest B. Hook, Agneta Lindsjö, Birth Defects Institute, N.Y.S. Department of Health, (and Albany Medical College) Albany, New York and Eskilstuna, Sweden.

Data from multiple sources on the rates of Down's syndrome (DS) in livebirths by one year interval have been analyzed. In these, from about age 33 on, the graphed rates of DS appear consistent with a logarithmic increase with age; between ages 20-30 more consistent with a linear increase. Weighted least squares linear regression analyses of the observed rates were carried out. For data on 420 DS in 300,632 livebirths in Sweden, to mothers age 20-49, 1968-1970, the results were 20-30: $y = .0266x + .1512$; 33-49: $\ln y = .2401x - 7.4150$; where x = age in years at last birthday at birth of child and y = estimated rate of DS per 1000 livebirths. Rates at ages 31 and 32 were interpolated between the two intervals as $.993 \times 10^{-3}$ and 1.264×10^{-3} . For cost benefit analysis, marginal and total-program "break-even" maternal ages can be distinguished. Re the former, if c = average costs of diagnostic procedures and d = the total estimated costs to society of a DS birth that may be averted, the marginal break-even age may be approximated by determining that age x for which $c = dy$; if e.g. $d = 100,000$ and $c = 400$, then $y = 4$ (per 1000), and $x = 36.7$ using the model derived from the Swedish data (ignoring costs of pregnancy termination, ignoring non DS cases, and assuming all DS diagnosed result in termination). Women aged x in this analysis would have mean age about $x-0.3$ at conception.

390 PREDICTABILITY OF RECURRENCE RATE OF URINARY TRACT INFECTIONS BASED ON ANTIBODY COATED BACTERIA TESTING. Abdollah Iravani, Norman D. Pryor, George A. Richard (Spon. by Martin Schulkind). Univ. of Florida, College of Med. Department of Pediatrics, Gainesville.

During the past two years on 324 occasions college coeds with symptoms of urinary tract infections were evaluated with at least two urine cultures and a non-invasive test of localization (fluorescent antibody coated bacteria). They were subsequently treated with either Gantrisin (93) or Keflex (231) for periods of 3, 7, 10, 14 or 21 days.

The recurrence rate one week post therapy for the separate and combined groups were as follows:

	Gantrisin	Keflex	Combined
FA(+)	4.1% (2/49)	8.7% (9/104)	7.2% (11/153)
FA(-)	2.3% (1/44)	3.9% (5/127)	3.5% (6/171)
p	n.s.	n.s.	n.s.

It appears that urine demonstrating fluorescent antibody coated bacteria (kidney infection) is not associated with a greater propensity of recurrent infection than is urine with negative testing for fluorescent antibody coated bacteria (bladder infection). Comparable results were obtained utilizing depressed concentrating ability as a test of upper tract infection.