

EPIDEMIOLOGY BULLETIN

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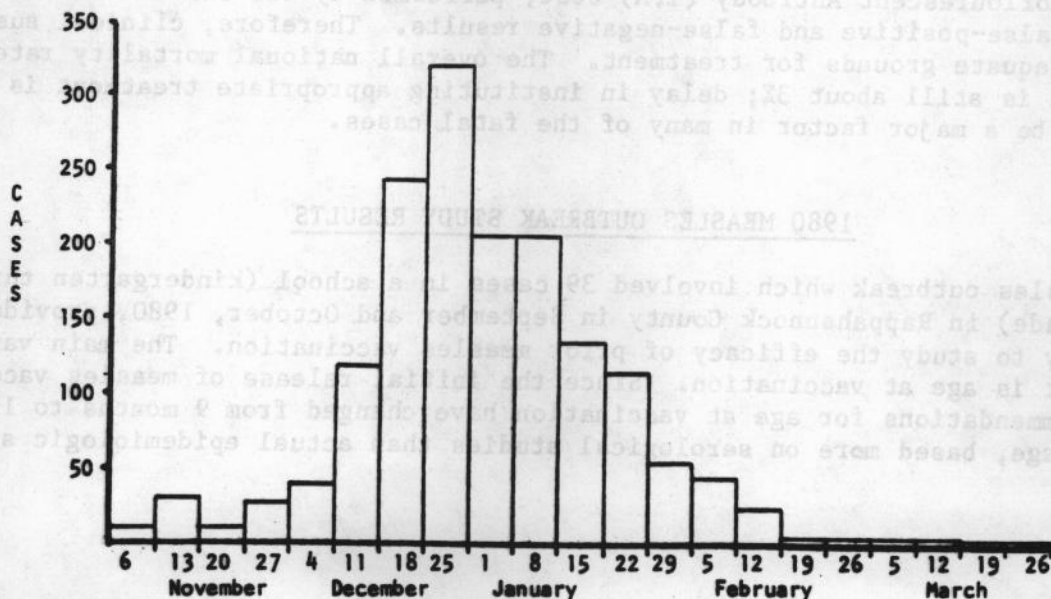
INFLUENZA SURVEILLANCE 1980-81

Influenza surveillance reports from this past winter (see graph) showed the bulk of the outbreak to have occurred between mid-December and mid-January, with peak activity the week of December 25th. Of approximately 100 seroconversions to influenza viruses documented by the Division of Consolidated Laboratory Services, 65% were A/Bangkok-like (H3N2), 18% A/Brazil-like (H1N1), 15% A (unspecified), and 1% B. This represents a marked change from last year, when influenza B virus was most prevalent.

Nationally, the Centers for Disease Control's surveillance of "pneumonia and influenza deaths in 121 cities" showed a peak in mid-January, which is consistent with peak influenza illness having occurred in late December as noted in Virginia. The influenza strains noted above were typical of the predominant isolates nationally. Detailed antigenic analysis at the WHO Collaborating Center for influenza (CDC, Atlanta) reflects the characteristic ability of influenza strains to change (antigenic drift)-year to year. For example, this year's A (H3N2) is intermediate between A/Texas/1/77 and A/Bangkok/1/79, and the A (H1N1) is a variant of A/Brazil/78 which was itself a variant of A/USSR/77.

The most important use of influenza surveillance data is in formulating vaccine composition for the following year. The 1980-81 vaccine did indeed contain appropriate antigens for the past influenza season.

FLU SYNDROMES REPORTED BY WEEK FROM 25 SENTINEL PHYSICIANS



RICHMOND CITY SHIGELLOSIS

Richmond City has been experiencing a significant outbreak of Shigella sonnei gastroenteritis in 1981. A total of 288 cases have been reported through the first four months of the year, as opposed to a baseline of only 5 cases per year for the period 1976-1980. The dramatic increase began in late March, peaked in mid-April, and now appears to be leveling off. The majority of the cases are in children: 56% in the 0-4 year age group, and an additional 30% in the 5-9 group. A major investigation by the Richmond City Health Department has revealed that many day-care centers in the area are involved in the spread of the disease. Nearly one-third of the cases have occurred in children attending day-care centers. The secondary attack rate in households with an affected child is approximately 35%.

Control efforts, coordinated by the State and City Health Departments and the Medical College of Virginia, have revolved around antibiotic treatment of essentially all culture-positive individuals. Control within a family requires screening of all household members. Day-care centers are being screened, and culture-positive children excluded until two follow-up cultures taken 24 hours apart off antibiotics are negative.

During recent years, urban area day-care centers have frequently become involved in outbreaks of shigellosis once the disease has been introduced into the community. The problem in Richmond emphasizes the extreme communicability of the disease when personal hygiene is imperfect, as in young children. Also, many cases are mild, but followed by a more prolonged period of carriage of the organism, if untreated. The S. sonnei strain in Richmond is ampicillin resistant, which has not been true of other strains around the state. Reasons for the general increase in shigellosis in Virginia this year are unknown.

CLINICIAN ALERT: ROCKY MOUNTAIN SPOTTED FEVER

April represents the first month of the Rocky Mountain spotted fever (RMSF) season, which extends into October. Already the first cases are being reported to the State Health Department. Virginia accounts for roughly 10% of the 1000 cases reported nationally on an annual basis. The symptom triad of severe headache, myalgia, and high fever, with (usually) later onset of rash should make one highly suspicious of RMSF, and lead to early treatment with one of the two antibiotics (tetracycline, chloramphenicol) which are effective against the disease. Treatment should not be delayed until results of serologic testing are available. A word of caution about serologic testing: all tests (including the most sensitive and specific Immunofluorescent Antibody (IFA) test, performed by the state laboratory) give both false-positive and false-negative results. Therefore, clinical suspicion alone is adequate grounds for treatment. The overall national mortality rate for the disease is still about 3%; delay in instituting appropriate treatment is thought to be a major factor in many of the fatal cases.

1980 MEASLES OUTBREAK STUDY RESULTS

A measles outbreak which involved 39 cases in a school (kindergarten through twelfth grade) in Rappahannock County in September and October, 1980, provided the opportunity to study the efficacy of prior measles vaccination. The main variable of interest is age at vaccination. Since the initial release of measles vaccine in 1963, recommendations for age at vaccination have changed from 9 months to 15 months of age, based more on serological studies than actual epidemiologic studies

of vaccine efficacy. In this study, the exact date(s) of measles vaccination(s) were obtained for 34 cases and 66 grade, age, and sex-matched controls. The results (table) show that the risk of measles was 1.4 times greater in those vaccinated prior to 15 months of age versus 15 months or greater. Vaccine efficacy was correspondingly lower in the former group, 82% versus 87%. Although the results are not statistically significant because of small numbers involved, they are quite consistent with several recent published and unpublished studies done around the country. However, neither the Immunization Practices Advisory Committee (ACIP) of the Public Health Service nor the Infectious Diseases Committee of the American Academy of Pediatrics now recommends revaccination for the 12-14 month age group.

MEASLES RISK AND VACCINE EFFICACY

Age at Vaccination (mo.)	Cases (no.)	Controls (no.)	Relative Risk	Vaccine Efficacy (%)
<12	6	13	1.3	83.4
12-14	9	18	1.4	82.3
≥15	12	34	1.0	87.0
Unvaccinated	7	1	--	---

Since the outbreak last fall, of approximately 100 paired serologic samples submitted to the State Laboratory from children with illnesses resembling measles, only three have been positive. All three of those patients attended the same school and became ill the same day. Clearly, the clinical diagnosis of sporadic "measles" cases made in the absence of a community outbreak may not be very dependable. Serologic confirmation is necessary for each of those sporadic cases. Measles elimination, or at a minimum a high degree of control, seems a realistic goal as long as physicians seeing a suspected case continue to notify their local health departments immediately. A continued aggressive surveillance effort focusing on early serologic diagnosis and local health department notification are crucial to achieving these goals.

MAY IS HIGH BLOOD PRESSURE MONTH

The 1980 Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure, which presents consensus recommendations of representatives of professional organizations interested in hypertension, is an update of the 1976 recommendations for the management of patients with essential hypertension. This revision addresses the following additional points: management of mild hypertension; therapeutic guidelines for treating elderly hypertensives; patient education for therapy maintenance; the role of nondrug therapies in high blood pressure treatment; new drugs for use in stepped care therapy; and management of hypertension in special groups.

Major conclusions of the report are: long term reduction of blood pressure decreases overall mortality at all levels of hypertension, including "mild" hypertension with diastolic blood pressure between 90 and 104 mm Hg; the initial therapeutic goal for each patient should be to achieve and maintain diastolic pressures at less than 90 mm Hg; and, the major problem in controlling hypertension is long-term adherence to therapy, which requires a special commitment from practitioners as well as patients. Copies of the full report are available from the Bureau of Chronic Disease Control, Department of Health, 109 Governor Street, Room 719-A, Richmond, Virginia 23219, (804/786-4065).

MONTH: MARCH

DISEASE	STATE					REGIONS				
	THIS MONTH	LAST MONTH	TOTAL TO DATE		MEAN 5 YEAR TO DATE	THIS MONTH				
			19 81	19 80		N.W.	N.	S.W.	C.	E.
CHICKENPOX	470	163	265	43	311.6	13	37	34	26	36
MEASLES		3	3	129	362.4					
MUMPS	16	22	51	29	56.8	1	1	3	2	9
PERTUSSIS		2	2	2	3.4					
RUBELLA	1		1	4	66.4					1
MENINGITIS - ASEPTIC	5	6	26	20	17.2			4	1	
BACTERIAL	29	15	75	48	37.6	7	6	6	2	8
ENCEPHALITIS - INFECTIOUS	2	1	11	1	3.6		1	1		
POST-INFECTIOUS			2	1	1.6					
HEPATITIS A (INFECTIOUS)	18	20	53	80	74.6		5	2	6	5
B (SERUM)	35	36	99	135	95.0	2	10	5	9	9
SALMONELLOSIS	89	63	249	145	137.4	8	19	15	21	26
SHIGELLOSIS	102	41	154	39	35.2	32	2	9	58	1
TUBERCULOSIS - PULMONARY	49	49	127	134						
EXTRA-PULMONARY	4	10	21	23						
SYPHILIS (PRIMARY & SECONDARY)	53	75	175	124	146.4	1	15	2	7	28
GONORRHEA	1687	1565	5214	4444	5345.6					
ROCKY MOUNTAIN SPOTTED FEVER					0.2					
RABIES IN ANIMALS	6	3	15		4.4	5		1		
MENINGOCOCCAL INFECTIONS	15	13	35	15	19.2		3	2	2	8
INFLUENZA	297	870	4689	530	3827.2	4	108	136	33	16
MALARIA	3	4	9	11	5.2	1	1		1	
OTHER: <i>KAWASAKI DISEASE</i>	3	1	8	5	*			1	2	
<i>REYE'S SYNDROME</i>	1	3	7	16	6.2		1			

COUNTIES REPORTING ANIMAL RABIES: Floud - 1 cow, Page - 3 skunks, Shenandoah - 1 raccoon & 1 skunk
 OCCUPATIONAL ILLNESSES: Occupational pneumoconioses 10, Occupational dermatoses 6, Occupational hearing loss 7, Asbestosis 2

*Not available before 1978.

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