

EPIDEMIOLOGY BULLETIN

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INFLUENZA

Reports of several local outbreaks of flu-like illness were received by the Division of Epidemiology during the last half of February. Other evidence also points to the presence of influenza in Virginia. A number of sentinel physicians and hospital clinics plus one emergency room, one local health department clinic, and one nursing home provide this division with weekly flu reports from around the state. Reports from private physicians are plotted on the accompanying graph, and illustrate the recent increase in flu syndromes seen. A more dramatic increase can be seen in the number of flu kits (for viral isolation) sent out by the Division of Consolidated Laboratories. These kits are usually sent out to health departments and physicians, at their request, when clinical influenza activity is noted.

Influenza B viruses were recently isolated from two patients at the University of Virginia Hospital, and the Division of Consolidated Laboratories has recently detected three patients with seroconversions to influenza: one to type A and two to type B. Nationally, the Center for Disease Control (CDC) has reported influenza B activity in many states and influenza A(H₁N₁) in Maryland. Reports indicate that influenza B is affecting mainly children and young adults. The influenza B activity does not appear, from CDC reports, to be due to any single influenza B virus. The strain which appears to be most responsible for flu this season is the B/Singapore/222/79 strain. This strain differs antigenically from the prototype B/Hong Kong/5/72 strain, but it is not known if this difference will mean that the 1979-80 influenza vaccine, which contains the B/Hong Kong antigen, is not protective. Vaccine efficacy studies will be needed to answer this question.

Reye's syndrome cases have been temporally and geographically associated with influenza B activity in past years, and to date the Division has received reports of six cases in the state since January 1, 1980. There were twenty cases (five fatal) reported statewide during 1979.

LEGIONNAIRES' DISEASE IN VIRGINIA, 1979

A total of 18 confirmed cases of Legionnaires' Disease (LD) have been reported to date for the year 1979. Although the number of cases increased from four in 1977 to 17 in 1978, this was probably due to increased awareness of the disease and increased availability of diagnostic tests rather than a true increase in incidence. A confirmed case is defined as one which meets any of three laboratory criteria: (a) a four-fold reciprocal titer rise to ≥ 128 in paired sera, measured by indirect fluorescent antibody (IFA) techniques; (b) demonstration of the LD bacterium by direct fluorescent antibody (FA) staining in lung tissue (obtained by biopsy or postmortem), sputum, bronchial lavage material, or pleural fluid; (c) cultures from sputum, pleural fluid

LEGIONNAIRES DISEASE IN VIRGINIA, 1979 Continued

or lung tissue. Patients whose serum reacts at a titer of $\geq 1:256$ but in whom a four-fold rise in titer is not demonstrated are classified as possible cases. The statistical analysis below is restricted to confirmed cases.

A standard epidemiological questionnaire was completed on 14 of the 18 confirmed cases identified through review of results of laboratory tests for LD. The month of onset of illness was known, however, for all 18 cases. August and September had the greatest number of cases, with three and five cases respectively. Fifteen of the eighteen cases, or 83%, occurred from May through October, confirming the observed seasonality of LD. Listed below are the five public health regions within the state and the geographic distribution (by home of residence) of the 1979 cases:

Region I (Northwest):	4
Region II (North):	1
Region III (Southwest):	4
Region IV (Central):	2
Region V (East)	5
Unknown:	2
TOTAL	18

A male predominance was again noted in 1979: thirteen cases (72%) were male and five (28%) were female. Race was unknown for four cases, was white for eleven and black for three. All of the 18 cases had pneumonia. No single occupational category appeared to be at increased risk: truck driver (2), unemployed (2), engineer (1), retired (1), logging (1), letter carrier (1), attorney (1), bookkeeper (1), jeweler (1), barber (1), farmer (1), unknown (3).

Possible sources of exposure during the two weeks before onset of illness were determined for a variable number of cases. Seven of twelve (58%) were within eyesight of excavation or construction, three of ten (30%) travelled overnight, three of eleven (27%) were hospital visitors or patients and one of twelve (8%) attended a convention.

Seven of thirteen respondents (54%) were smokers (≥ 10 cigarettes/day), two of thirteen (15%) were immunosuppressed, two of fourteen (14%) indicated they had underlying diabetes mellitus, one of thirteen (8%) had chronic bronchitis, and one of fourteen (7%) had been on renal dialysis and had recently received a renal transplant. None of fourteen respondents had known carcinoma.

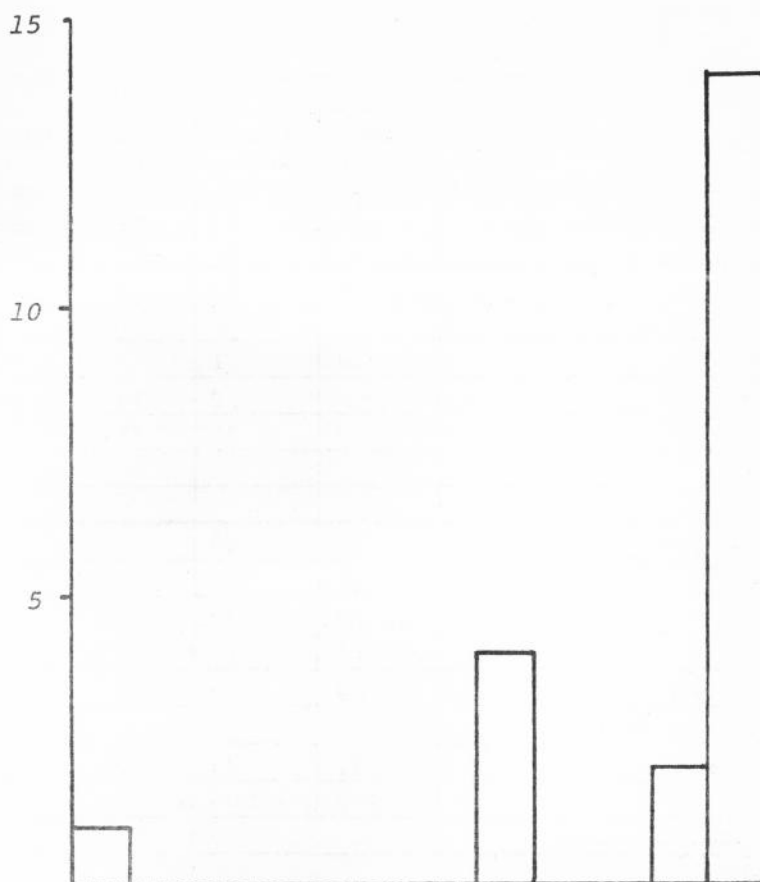
Four of fourteen (29%) cases required a respirator, one of fourteen (7%) developed renal failure as a complication of LD, and three of sixteen (19%) had a fatal outcome.

MEASLES OUTBREAK FOLLOW-UP

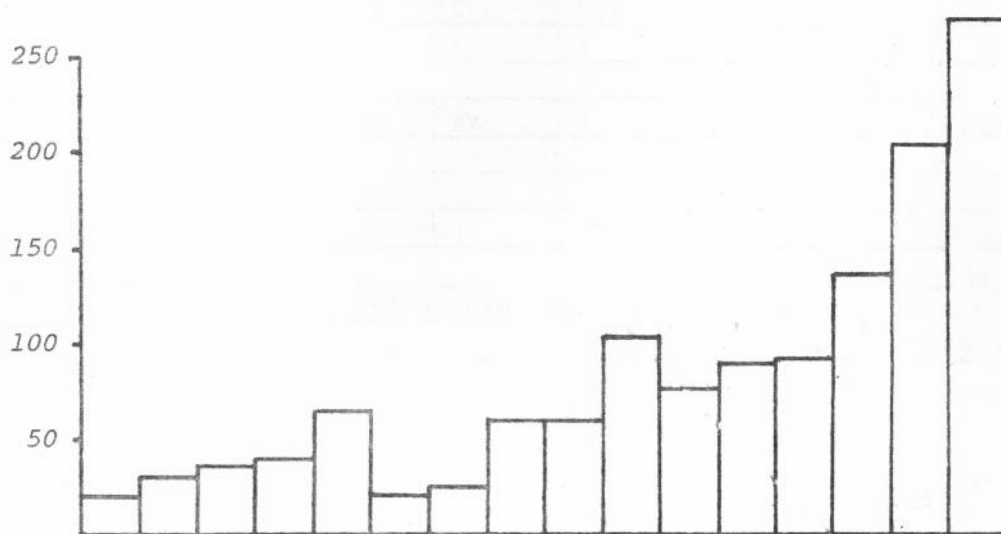
A total of 58 cases of rubeola have been reported (8 serologically confirmed) from Halifax (57 cases) and Mecklenburg (1 case) counties. Local health department personnel and Immunization Activities staff conducted clinics in all schools in both counties February 5, 12, 13. Immunizations were administered to 3930 students in Halifax and 3507 students in Mecklenburg. The date of onset of the last reported case was February 16.

Suspected outbreaks of rubeola have been identified on two military bases: Ft. Eustis (10 cases) and Ft. Belvoir (8 cases). The index case at each site has been traced to a military installation in another state. Both Virginia bases held immunization programs for susceptibles during the week of February 25. Investigation has not revealed any spread, to date, into the surrounding communities.

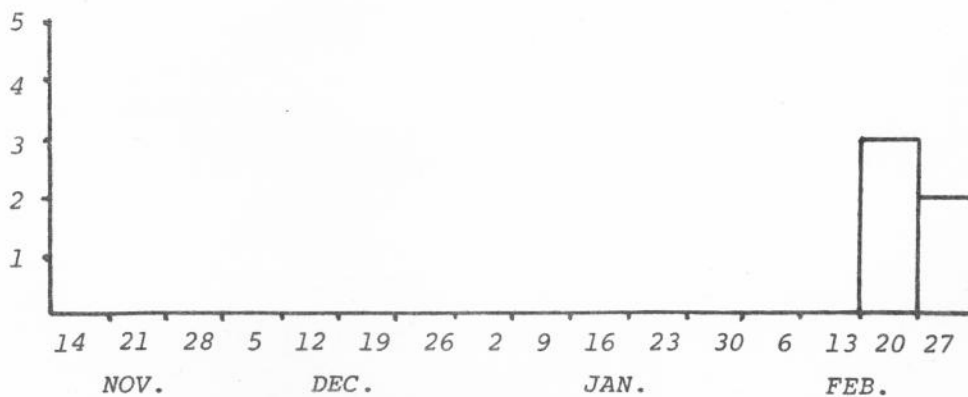
FLU KITS
SENT OUT
FROM STATE
LAB



SENTINEL
PHYSICIANS
FLU SYNDROMES
PER WEEK



INFLUENZA
ISOLATIONS OR
SEROCONVERSIONS



MONTH: FEBRUARY

DISEASE	STATE					REGIONS				
	THIS MONTH	LAST MONTH	TOTAL TO DATE		MEAN 5 YEAR TO DATE	THIS MONTH				
			1980	1979		N.W.	N.	S.W.	C.	
CHICKENPOX	26	17	43	268	224.0	1		1	10	14
MEASLES	54	12	66	13	105.6	1			52	1
MUMPS	8	10	18	25	68.4			2	6	
PERTUSSIS		2	2	6	3.0					
RUBELLA	2	1	3	2	23.8			1		1
MENINGITIS - ASEPTIC	2	12	14	13	11.6				1	1
BACTERIAL	10	25	35	38	24.4	2	3	1	2	2
ENCEPHALITIS - INFECTIOUS				5	2.8					
POST-INFECTIOUS					0.6					
HEPATITIS A (INFECTIOUS)	27	30	57	40	49.2	1	2	6	15	3
B (SERUM)	37	61	98	54	47.0	1	8	13	9	6
SALMONELLOSIS	57	40	97	98	82.2	8	8	6	18	17
SHIGELLOSIS	17	15	32	63	22.8		12	4	1	
TUBERCULOSIS - PULMONARY	29	40	69	74	99.0	5	6	13	6	13
EXTRA-PULMONARY	4	7	11	20	14.6			1	3	2
SYPHILIS (PRIMARY & SECONDARY)	51	38	89	94	102.4	4	4	10	17	26
GONORRHEA	1,495	1,565	3,060	3,367	3671.8					
ROCKY MOUNTAIN SPOTTED FEVER					0.2					
RABIES IN ANIMALS					8.2					
MENINGOCOCCAL INFECTIONS	5	6	11	19	9.6		1	1	1	2
INFLUENZA	132	37	169	72	2943.2		1	106	25	
MALARIA	4	3	7	5	2.8		4			
OTHER: REYE'S SYNDROME	1		1	2	1.4					1
INFLUENZA SEROCONVERSIONS	3	NA	NA	NA	NA		2		1	

COUNTIES REPORTING ANIMAL RABIES: _____
 OCCUPATIONAL ILLNESSES: Occupational pneumoconioses 17; Occupational dermatitis 3;
Occupational hearing loss 2; Asbestosis 1.

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