EPIDEMIOLOGY BULLETIN

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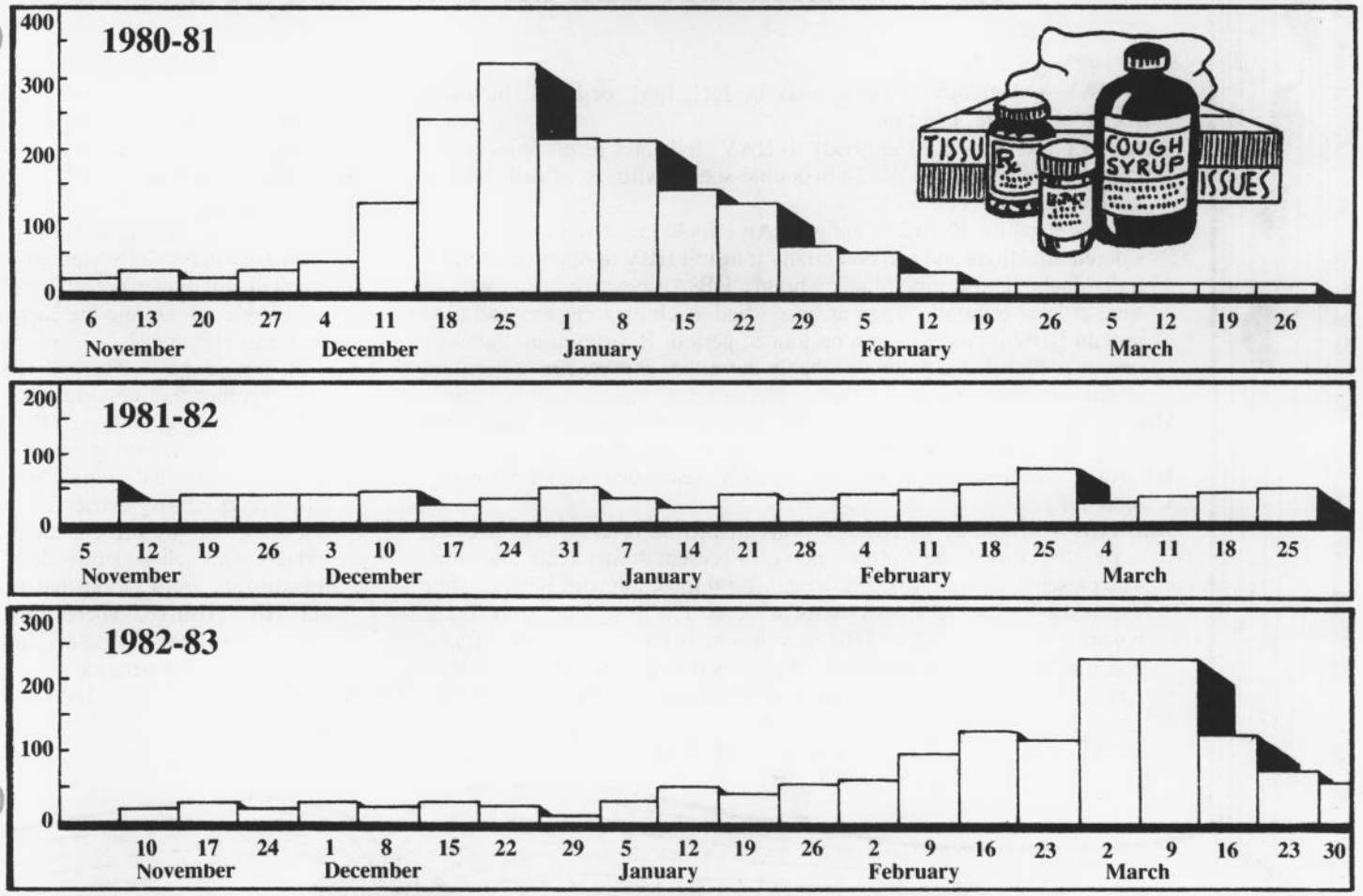
Influenza Surveillance, 1982-83

This past spring witnessed one of the latest influenza seasons in recent years. Reports of illness from 36 "sentinel physicians" from different regions of the state demonstrated a peak in epidemic influenza between February 23 and March 9 (Figure 1). By comparison, there was no widespread outbreak of influenza in 1981-82; the influenza epidemic of 1980-81 peaked in late December (Figure 1).

The severity of the flu season was approximately average for an epidemic year. The Division of Consolidated Laboratory

Continued on page 2

Cases of Flu Syndrome Reported by Sentinel Physicians* in Virginia **Figure 1**



* 25 physicians reporting in 1980-81, 36 reporting in 1981-82 and 1982-83.

Influenza, *continued*

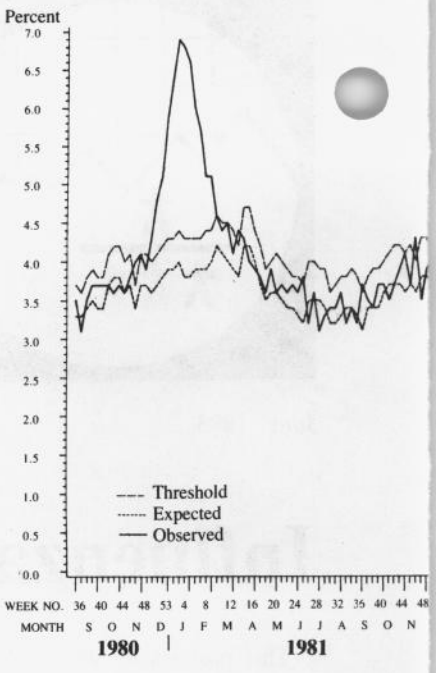
Services (DCLS) documented 73 influenza seroconversions and virus isolations from around the State; almost all were type A/Bangkok (H3N2) with a few type A/England.

Nationally, there was moderate influenza activity with regional and statewide outbreaks. The Centers for Disease Control pneumonia and influenza mortality surveillance data from 121 U.S. cities showed a low, late peak in mortality (Figure 2). As in Virginia, most of the influenza nationally was type A (H3N2), closely related to type A/Bangkok.

(Reported by Brandon S. Centerwall, M.D., M.P.H, Division of Epidemiology.)

Figure 2

Observed and Expected Ratio of Deaths Attributed to Pneumonia and Influenza in 121 Cities — United States, 1980-83



Serologic Results in Hepatitis

I. Nomenclature and interpretation of individual test r

HAV— Hepatitis A virus.

Anti-HAV— Antibody to HAV (may be IgG, IgM, or both). Indicates recent or remote infection.

Anti-HAV (IGM)— IgM antibody to HAV. Indicates recent infection.

HBV— Hepatitis B virus. A 42-nm double-shelled virus, originally known as the Dane particle.

HBsAg— Hepatitis B surface antigen. An HBsAg-positive person is considered infectious and can potentially transmit HBV to other susceptible individuals. Those individuals who are HBsAg positive at 2 points in time at least 6 months apart are classified as chronic carriers and may remain HBsAg positive for a prolonged period. If serum transaminases remain elevated, the patient probably has either chronic active hepatitis or chronic persistent hepatitis.

HBcAg— Hepatitis B core antigen. The antigen found within the core of the virus. No commercial test is available to measure this.

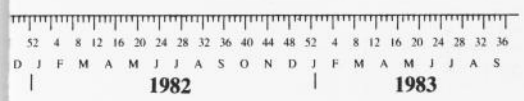
HBeAg— The e antigen, which is closely associated with hepatitis B infectivity.

Anti-HBs— Antibody to HBsAg. This marker is usually first detected during the convalescent phase and is not present during acute infection. The presence of anti-HBs following natural infection with HBV or after vaccination with HBV vaccine is associated with immunity to future hepatitis B infection. Anti-HBs may also be passively transferred transplacentally or by administration of hepatitis B immune globulin (HBIG). Antibody levels and protection afforded by passively transferred antibody are temporary and will be present o individuals exposed to HBV develop low l serologic marker of exposure. Whether further infection is not yet clear.

Anti-HBc— Antibody to HBcAg. In almos present by the time of onset of clinical illne and remain so as long as there is ongoing H body has successfully cleared the hepatit drop but will remain detectable for many y the individual. During the early convales tion, anti-HBc may be the only detectable ''window phase''). The anti-HBc test res only whether the individual has ever bee interpreted along with the HBsAg and an information concerning infectivity or ma control. Some individuals who are ant ''low-level HBsAg carriers,'' i.e., HBsA not detectable by present tests. There ha viduals who subsequently developed acu transfusions from blood that was HBsA anti-HBc positive. There are no report developed clinical hepatitis from smalle stick) from such persons.

Anti-HBe— Antibody to HBeAg.

*Adapted from: Centers for Disease Control: Hepatitis Surveillance Report No. 47, Issued December 1981.



results*

nly for several months. Some
evels of Anti-HBs as their only
such patients are immune to

t all acute cases, anti-HBc is
ss. Titers of anti-HBc are high
BV viral replication. After the
is B infection, anti-HBc titers
ears, and perhaps for the life of
cence phase of an HBV infec-
serologic marker (the so-called
ult alone can tell the clinician
n infected. This test must be
ti-HBs tests for one to obtain
ake decisions about infection
i-HBc positive only may be
g may be present in quantities
ve been case reports of indi-
te hepatitis B after receiving
g and anti-HBs negative, but
s as yet of individuals who
r exposures (such as needle-

II. Interpretation of Combined Results**

Hepatitis A

Anti-HAV	Anti-HAV (IgM)	Interpretation
—	—	Susceptible; never had hepatitis A.
+	—	Immune; infection with hepatitis A at some time in the past.
+	+	Acute infection with hepatitis A within previous 4 months.

Hepatitis B

HBsAg	Anti-HBc	Anti-HBs	Interpretation
—	—	—	Susceptible; never had hepatitis B.
+	—	—	Incubating hepatitis B virus. Potentially infectious.
+	+	—	Currently infected with hepatitis B virus. Acute case or carrier. Potentially infectious.
+	+	+	
—	+	—	Transient state found in convalescent period of hepatitis B (window phase), or long-term persistence in the absence of anti-HBs. Probably not infectious except under circumstances in which a large dose is involved, such as a blood transfusion.
—	+	+	Immune; previous infection with hepatitis B.
—	—	+	Immunization-like response against hepatitis B; not infectious.

Non-A, Non-B Hepatitis

Non-A, non-B hepatitis remains a diagnosis of exclusion. Acute non-A, non-B hepatitis should be considered in the absence of serologic markers for either acute hepatitis A or acute hepatitis B, and when other possible causes of liver injury (medications, alcohol abuse, hepatotoxins, congestive heart failure, metastatic carcinoma, other infections such as cytomegalovirus and Epstein-Barr virus) can be excluded.

(Reported by A. Martin Cader, M.D., Bureau of Communicable Disease Control.)

**Adapted from: Centers for Disease Control: Hepatitis Surveillance Report No. 48, Issued June 1982.

Month: June, 1983

Disease	State					Region				
	This Month	Last Month	Total to Date 1983	Total to Date 1982	Mean 5 Year To Date	This Month N.W.	N.	S.W.	C.	E.
Measles	1	9	22	14	625	1	0	0	0	0
Mumps	1	1	21	30	69	0	0	0	0	1
Pertussis	3	14	39	9	5	0	1	0	2	0
Rubella	0	0	1	11	92	0	0	0	0	0
Meningitis—Aseptic	8	6	62	43	45	0	1	4	0	3
Other Bacterial	18	21	141	99	94	2	4	4	2	6
Hepatitis A (Infectious)	9	6	62	97	119	0	0	5	1	3
B (Serum)	45	27	274	220	219	6	17	8	6	8
Non-A, Non-B	6	5	44	36	*22	1	1	0	4	0
Salmonellosis	116	84	503	557	483	22	25	14	32	23
Shigellosis	6	8	63	73	249	2	1	0	0	3
Campylobacter Infections	38	40	197	113	*58	10	12	2	3	11
Tuberculosis	26	51	217	338	—	—	—	—	—	—
Syphilis (Primary & Secondary)	38	44	285	314	289	3	3	1	10	21
Gonorrhea	1539	1467	9248	10,029	10,382	—	—	—	—	—
Rocky Mountain Spotted Fever	11	4	19	19	29	4	1	1	4	2
Rabies in Animals	63	67	404	250	60	11	52	0	0	0
Meningococcal Infections	7	9	49	36	45	0	1	3	2	1
Influenza	13	40	861	299	2239	5	2	6	0	0
Toxic Shock Syndrome	0	1	4	3	—	0	0	0	0	0
Reyes Syndrome	0	0	5	2	10	0	0	0	0	0
Legionellosis	1	2	14	5	6	1	0	0	0	0
Kawasaki's Disease	3	5	28	6	10	0	1	0	1	1

*3 years

Counties Reporting Animal Rabies: Alexandria 1 raccoon; Arlington 1 raccoon; Augusta 1 raccoon; Culpeper 1 raccoon; Fairfax 2 foxes, 3 bats, 37 raccoons, 2 groundhogs; Loudoun 1 cat, 1 bat, 4 raccoons; Orange 1 skunk, 2 raccoons; Page 1 skunk; Rockingham 1 raccoon; Shenandoah 1 raccoon; Spotsylvania 3 raccoons.

Occupational Illnesses: Occupational pneumoconioses 9; Occupational hearing loss 4; Asbestosis 1.

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