

# VIRGINIA EPIDEMIOLOGY BULLETIN

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## Salmonella enteritidis Outbreaks, Virginia



*Salmonella enteritidis* (SE), most commonly transmitted through shell eggs, continues to be an important public health problem in the United States. From 1993-1997, SE was the most frequently reported cause of foodborne outbreaks, accounting for 7% of all outbreaks reported nationally.<sup>1</sup> Furthermore, outbreaks caused by SE involved more cases and caused more deaths than those due to other enteric pathogens.

A key factor in the transmission of SE among humans and hens is its ability to cause ovarian infections in egg-laying hens, thus contaminating the contents of intact shell eggs.<sup>2</sup> Once present in a flock, the organism is difficult to eliminate. Contamination is estimated to occur in only 1 in 10,000 eggs from a contaminated flock. However, due to the very large size of today's hen houses and

the wide-scale distribution of eggs, contaminated eggs may be distributed to numerous states over a period of months.

Individuals can decrease their risk for SE infection by eating only well-cooked eggs. Nursing homes, hospitals, and commercial kitchens should use pasteurized egg products for recipes that call for raw or lightly cooked eggs or for pooled quantities of eggs (e.g., as needed for scrambled eggs or French toast).

In Virginia, SE was the first or second most commonly reported *Salmonella* serotype each year from 1990-1999. During this 10-year period, it was the confirmed cause of 15 (14%) of the 108 reported foodborne outbreaks. The following article describes three recent SE outbreaks that occurred in our state.

### Restaurant A, Smyth County

On April 3, 1998, two hospitals in the Mount Rogers Health District each reported a laboratory-confirmed case of salmonellosis to their respective local health departments. Initial investigation by the health district determined that both ill persons had eaten at the same restaurant (Restaurant A) in Smyth County. Three days later a third case was reported, and a formal investigation was initiated. Restaurant A is known for its variety of home-cooked meals and desserts and attracts travelers from nearby Interstate 81, as well as local residents.

Additional cases were found by contacting local physicians and hospitals and through patient interviews. Physicians and hospitals were asked to notify the Smyth County Health Department of any individuals presenting with symptoms compatible with salmonellosis. All restaurant employees were asked to submit stool specimens to the state laboratory, the Division of Consolidated Laboratory Services (DCLS), to screen for *Salmonella*. A total of 23 laboratory-confirmed cases of salmonellosis associated with this outbreak were identified, including five employees. Twenty-two of 23 cases were subtyped SE and one was *Salmonella* group D that could not be further subtyped. Illness

occurred from March 28 to April 7, 1998.

A case-control study was initiated to obtain information about symptoms, onset and duration of illness,



food items consumed, and medical

care sought by patients. A case was defined as laboratory-confirmed *Salmonella* infection in any person who ate at Restaurant A between March 27 and April 7. Eighteen ill restaurant patrons ranging in age from 9 to 84 years (median=63 years) were included in the study. Reported symptoms included diarrhea (100%), abdominal cramps (72%), and fever (67%); five persons were hospitalized (Table 1). Twenty-four adult controls were identified during the case interviews.

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Two food items were statistically associated with illness. All of the cases compared to 4% (1/24) of controls ate either chocolate or coconut cream pie (Table 2). These pies were made at the restaurant. The egg yolks were combined with other ingredients, heated until thick and bubbly, and baked in a pie shell. The egg whites were then whipped into a meringue that was spread on top of the baked pie. The entire pie was then placed back into the oven for a very short time to brown the meringue.

Two samples of leftover chocolate pie were available for testing. Both samples grew SE. Isolates from the pie, a restaurant patron, and a restaurant employee were further typed by the Centers for Disease Control and Prevention (CDC) as phage type 8, a fairly common phage type in the United States.

Submitted by Letha Waller RN, Communicable Disease Supervisor and Julia Banks RN, Public Health Nurse Senior, Mount Rogers Health District; and Robert Hackler, Regional Epidemiologist, Office of Epidemiology.

## Restaurant B, Henrico County

On June 1, 1999, a physician telephoned the Henrico County Health Department to report two cases of salmonellosis. Almost simultaneously, an infection control practitioner from a local hospital contacted the health department to report two other cases of salmonellosis that had just been diagnosed. Based on interviews with the four ill persons, the health department determined that all had eaten at Restaurant B, a popular family restaurant located in Henrico County.

Early the next morning, Environmental Health Specialists visited the restaurant. They



found omelette mix held at room temperature and a large container of pooled eggs and a container of egg mix for French toast in the refrigerators. A cook was observed preparing French toast by immersing bread into the egg mix with his bare hands and then placing it on the grill. He proceeded to handle prior-cooked bacon, garnishes, and other items. Based on these findings and the likelihood for ongoing disease transmission, the health director suspended the restaurant's permit.

Almost immediately, the outbreak caught the attention of the media, and other people began calling the health department to report that they had become ill after eating at Restaurant B. Ultimately, 177 persons were identified who had developed a gastrointestinal illness compatible with salmonellosis after eating at Restaurant B. Of these, 124 were diagnosed with laboratory-confirmed salmonellosis and 53 had clinically compatible symptoms. The earliest date of onset for a confirmed case was May 10 and the last confirmed case occurred on June 5 (Figure, page 4).

Eighty-eight cases and 144 controls were enrolled in a case-control study. Eighty cases had SE infection and 8 had *Salmonella* infection (serotype unspecified). A questionnaire that inquired about symptoms and foods eaten at Restaurant B was administered by telephone. Controls were restaurant patrons who had eaten during the same time period but had not become ill.

All 88 cases had experienced diarrhea (Table 1); 80% had seen a physician because



**Table 1. Illness characteristics, *Salmonella enteritidis* outbreaks**

Illness Characteristic	Number (Percent) by Location		
	Smyth County Restaurant (n=18)	Henrico County Restaurant (n=88)	Alexandria Fundraiser (n=81)
Diarrhea	18 (100)	88 (100)	81 (100)
Abdominal pain/Cramps	13 (72)	85 (97)	80 (99)
Fever (temperature range)	12 (67) NA*	70 (80) (99.3°F - 105°F)	63 (78) (100°F - 107°F)
Chills	10 (56)	68 (77)	67 (83)
Headache	2 (11)	67 (76)	68 (84)
Nausea	6 (32)	60 (68)	68 (84)
Vomiting	5 (28)	42 (48)	42 (52)
Bloody diarrhea	NA*	26 (30)	NA*
Incubation period	6 - 50 hours (median=16 hrs)	4 - 144 hours (median=37.5 hrs)	3 - 48 hours (median=15 hrs)
Duration of illness	2 - 15 days (mean=10 days)	NA*	1 - 12 days (median=6 days)
Medical visit (not hospitalized)	7 (39)	70 (80)	47 (58)
Hospitalized	5 (28)	8 (9)	14 (17)

\*NA - Information not available.

Food	Cases (n=18) # (%) who ate food item	Controls (n=24) # (%) who ate food item	Odds Ratio	95% Confidence Interval	p Value
Hamburger	4 (22)	2 (8)	3.1	0.4-38.0	.3752
Mashed potatoes	8 (44)	4 (17)	4.0	0.8-22.1	.1038
Gravy	4 (22)	2 (8)	3.1	0.4-38.0	.3752
French fries	4 (22)	2 (8)	3.1	0.4-38.0	.3752
Coconut pie	9 (50)	0 (0)	Undefined	Undefined	.0001
Chocolate pie	9 (50)	1 (4)	23.0	2.4-1050.3	.0008
Coconut or chocolate pie	18 (100)	1 (4)	Undefined	Undefined	<.0000001

of their symptoms and eight persons were hospitalized (range 1-4 days). The incubation period ranged from 4 hours to 144 hours (median=37.5 hours).

Cases were 10.6 times more likely to have eaten French toast than controls (95% Confidence Interval {CI} 4.3-27.0). Compared to controls, cases were 2.3 times more likely to have eaten eggs (95% CI 1.3-4.2). However, cases were less likely than controls to have described the eggs or egg yolks as being runny (15/46 cases vs. 22/43 controls, Odds Ratio=0.5, 95% CI 0.2-

1.2). Additional food items with elevated odds ratios and that were borderline statistically associated with illness were bacon and ham.

Stool specimens were obtained from 90% (52/58) of Restaurant B employees and submitted to the DCLS. Twenty-two (42%) were positive for SE, including eight cooks. Numerous food items were tested, including French toast batter, cooked French toast, pancake batter, frozen pasteurized egg product, and 240 eggs. SE was isolated from French toast batter and from a cooked piece of French toast. Isolates from human and food specimens were typed as phage type 2. One of the isolates was from a woman who had eaten at Restaurant B on May 8 and became ill on May 10. According to CDC, phage type 2 is rare and at the time of the outbreak, had

occurred in only five other SE outbreaks in the United States.

*Submitted by Patricia Young RN, Nurse Epidemiologist and Michael Campbell, Environmental Health Manager, Henrico County Health District.*

### **Fundraiser Lunch, Alexandria**

On April 14, 2000 a recreation center held a fish fry fundraiser. Tickets were sold primarily to the group's friends and coworkers. On April 19, an individual contacted the Alexandria Health Department after experiencing illness

and hearing in his physician's office that several other fish fry patrons were ill. The

health department initiated an investigation that afternoon.

On the day of the event, lunches were available at the recreation center for pick-up between 10:00 am and 3:00 pm. Event patrons had the option of purchasing a fish sandwich or a platter. The sandwich consisted of fried fish on store-bought bread, while the platter included fried fish, corn bread, green beans, and macaroni and cheese. No drinks, condiments, or desserts were provided. Several people purchased multiple meals and took them back to their respective places of employment for friends and coworkers. Others took lunches home to share with family members.

Teams of health department employees visited the worksites to collect information from event patrons. Almost 200 individuals were interviewed. A case was defined as diarrhea and at least two of the following symptoms: abdominal pain, headache, nausea, fever, chills or vomiting, occurring in a person who ate food from the fish fry, with onset at least three hours after consuming the meal. Eighty-one (42%) of 192 interviewed patrons met the case definition for illness. Sixty-one (75%) of those ill sought

medical care, of whom 14 were hospitalized (Table 1). Eleven (14%) were confirmed with *Salmonella* (9 SE, 2 serotyping not done). While almost half of the cases were still ill at the time of the interview, the average duration of illness among those who had recovered was six days.

The cohort study determined that persons who ate macaroni and cheese were at almost three times the risk of becoming ill compared with those who did not (Relative Risk {RR}=2.9, 95% CI 1.5 - 5.5). Green beans (RR=1.7, 95% CI 1.1 - 2.6) and corn bread (RR=1.6, 95% CI 1.1 - 2.2) were also statistically associated with illness. Individuals who ordered a platter were at greater risk of becoming ill than those who ordered only a fish sandwich (RR=2.6, 95% CI 1.4 - 5.0).

Four individuals prepared all of the food for the event. The primary cook made the macaroni and cheese and the cornbread. The evening prior to the event, she prepared two



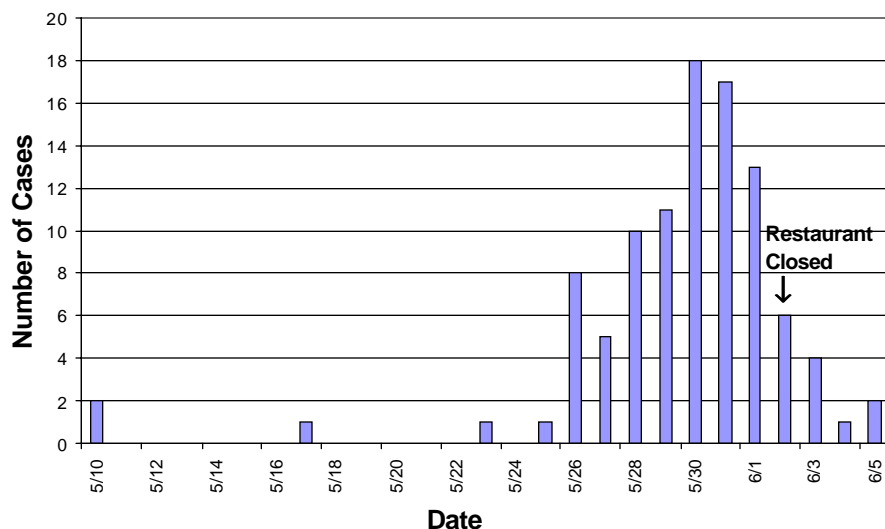
containers of macaroni and cheese by combining shell eggs with milk, then pouring the mixture over previously boiled macaroni, margarine, and shredded cheese. The containers were baked in a 375°F oven for 45-60 minutes until firm, and kept in the home refrigerator overnight. The morning of the event, the cooked macaroni and cheese was reheated and transported to the recreation center, along with containers of boiled macaroni noodles and milk and egg. The milk and egg mixture was stored in the refrigerator and later used when additional pans of macaroni and cheese were assembled and cooked at the recreation center in a 375°F oven for an undetermined amount of time. Two batches of cornbread were assembled and baked in the recreation center oven as well. The cornbread contained eggs from the same shipment as those used in the macaroni and cheese. Deep frying of fish began at about 10:00 am. The green beans had been prepared by two other women in their respective homes. Each used canned green beans, seasoned them with pork or ham hocks, and cooked them on the stove for at least 45 minutes. They were cooled to room temperature, refrigerated overnight, and the next day taken to the recreation center and reheated on the stove. Recreation center staff served most of the food, placing it into styrofoam containers. Three other individuals (patrons) assisted by serving food while they were waiting for their orders.

A recreation center staff member described the kitchen as chaotic. Food was left unrefrigerated for an unknown amount of time during both food preparation and serving. The temperatures to which food were cooked, reheated, and held were not assessed. The kitchen equipment was non-commercial and not designed for events. Inspection after the event found the refrigerator temperature was too high (47°F).

Food samples from leftover meals were collected from two event patrons. SE was detected in cooked fish, green beans, and macaroni and cheese. No food remained at the recreation center. Isolates from human and food specimens were a unique phage type resembling type 20.

Submitted by Cathy Gossman, Environmental Health Specialist Senior, Alexandria Health District and

**Figure. Restaurant B, Number of Cases by Date of Onset**



Denise Sockwell MSPH, Regional Epidemiologist, Office of Epidemiology.

**Discussion**

The types of food served at the events described above and the methods of preparation support the conclusion that foods made with shell eggs were the likely source of each outbreak. In all situations there was evidence of undercooked eggs; other factors such as pooling large quantities of eggs, cross-contamination, and other poor foodhandling practices played a role in some of the outbreaks.

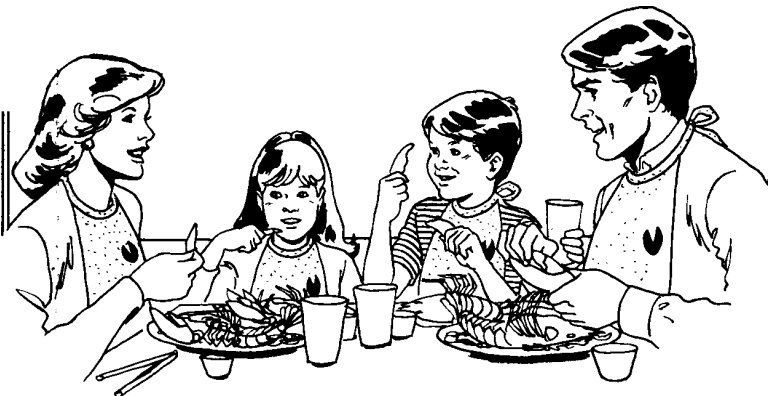
In the Smyth County restaurant outbreak, illness occurred following consumption of cream pies. While the pie fillings were well cooked, the light browning of the meringues would not have been sufficient to kill the organism. Because the baker was one of the employees who tested positive for SE, contamination by a foodhandler cannot be completely ruled out, however, it is unlikely that a pie could be so extensively contaminated either during or after preparation.

Of particular interest in the Henrico County restaurant outbreak is that occasional cases associated with the restaurant began occurring several weeks before the explosion of cases over Memorial Day weekend. The phage typing proved this. That is, SE isolates from stool specimens from the

first known cases in early May had the identical phage type as isolates from later patrons, restaurant workers, and food items.

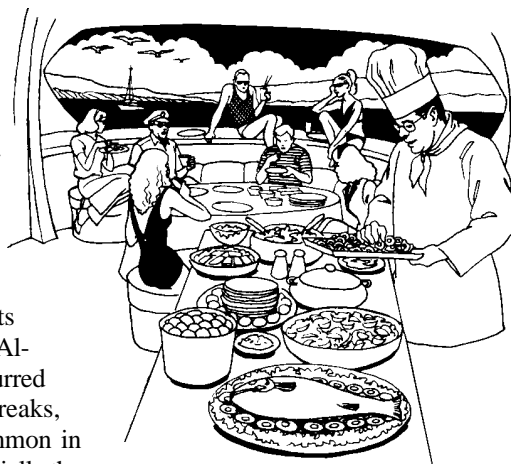
In this outbreak, the propagation of cases over an extended period of time made it impossible to determine exactly how the outbreak started. Most likely, a contaminated egg(s) was delivered to the restaurant sometime in early May, and due to improper handling and cooking practices, the chain of disease transmission began. By late May, there likely were multiple contaminated foods (such as French toast batter, ham, and cooked bacon) due to poor foodhandling practices, cross-contamination, and numerous infected restaurant employees. Practices such as pooling large quantities of raw eggs and allowing the pooled product to sit at room temperature contributed to the outbreak.

The macaroni and cheese cooked at the chef's home for the Alexandria fundraiser was likely well-cooked. However, that prepared at the recreation center appears not to have been well-done, and was described as "runny" by several patrons. Thus, some persons likely became ill from consuming an undercooked product. This, however, cannot account for all of the illnesses. Multiple opportunities existed on site for cross-contamination of cooked foods with raw or undercooked egg product, including untrained food handlers, inadequate hand washing facilities, utensils potentially used for both food preparation and serving, and spillage during transportation of the meals. The finding of SE in well-cooked foods, particularly



boiled beans and fried fish, proves that cross-contamination was an important factor in this outbreak. Temperature abuse, allowing proliferation of the organism, also occurred.

In conclusion, SE is a common cause of foodborne illness in Virginia and in the United States. Illness is often severe, resulting in physician visits and hospitalizations. Although no deaths occurred in any of these outbreaks, deaths are not uncommon in outbreaks of SE, especially those involving the very young or the elderly. Although measures are being taken on a na-



tional basis to improve the safety of eggs, at this time, undercooked and raw eggs should be considered potentially hazardous foods and should not be consumed, especially by those most at risk for severe disease.

References

1. CDC. Surveillance for foodborne disease outbreaks-United States, 1993-1997. *MMWR* 2000;49 (No. SS-1):1-62.
2. Alterkruse SF, Cohen ML, and Swerdlow DL. Emerging foodborne diseases. *Emerging Infectious Disease* 1997;3:285-93.

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**From the Division of Consolidated Laboratory Services:** Judith Carroll, Sarah Henderson, Lizbeth Johnson MT, Mary Mismas, Daksha Patel MT, David Peery, Tanea Reed, and Denise Toney PhD.

## Salmonella Guidelines for Virginia Physicians

- ✓ *Salmonella* is a reportable condition. Reports should be made on the Virginia Department of Health Confidential Morbidity Report form (Form Epi-1) to your local health department. Local health departments investigate reported cases to determine the source of infection and to take measures to prevent further transmission.
- ✓ It is important to obtain cultures of ill patients to confirm the diagnosis of *Salmonella*. Public health investigations depend on these finding for case followup, outbreak investigations, and food trace-backs.
- ✓ Suspected outbreaks (2 or more individuals with the same condition that may be related to the same source) should be telephone-reported to your local health department. As described in the accompanying article, initial reports of very few cases can signal significant outbreaks. Early reporting can prevent additional cases from occurring.
- ✓ Symptomatic individuals should avoid high risk situations such as foodhandling, daycare settings, and care of hospitalized or debilitated patients. Asymptomatic individuals may be excluded from high risk situations at the discretion of the local health department.
- ✓ Depending on the serotype, approximately 1% of infected adults

and 5% of children under 5 years old may excrete the organism for more than 1 year.

- ✓ The disease is usually self-limited with symptoms abating in 5-7 days. Treatment of uncomplicated enterocolitis in a patient with no impairment of host defenses is generally supportive using rehydration as necessary. Antibiotics tend to prolong the excretion of the organism in the stool and may lead to resistant strains or more severe infections. Antibiotics are indicated for infants under 2 months, the elderly, the debilitated, those with sickle cell disease, persons infected with HIV, and patients with continued or high fever or manifestations of extraintestinal infection.
- ✓ Hospital laboratories in Virginia are required to send *Salmonella* isolates to the Division of Consolidated Laboratory Services (DCLS). Other laboratories conducting business in Virginia or receiving specimens from Virginia residents are requested to send *Salmonella* isolates to DCLS. All *Salmonella* isolates are serotyped and results are reported to the submitter. In addition, DCLS performs molecular typing routinely on some serotypes and always when an outbreak is suspected. This typing is an invaluable aid in epidemiologic investigations.

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## Impact of the 2001 General Assembly on Epidemiology

The 2001 Session of the Virginia General Assembly considered over 2600 bills and resolutions. Of those bills and resolutions, over 130 had the potential to impact public health in the Commonwealth; the Virginia Department of Health (VDH) was responsible for their tracking. At the end of the Session only four laws were passed that will directly impact communicable disease control in Virginia.

**HB 2090** establishes definitions for several parameters useful in control of **tuberculosis (TB)**. In addition, it expands the current TB disease reporting requirements and specifies the minimal information that must be reported for each case.

TB is defined as disease caused by tubercle bacilli, members of the *Mycobacterium tuberculosis* complex. "Active TB disease" is defined as laboratory-confirmed disease (detection of tubercle bacilli in sputum or other bodily fluid or tissue by culture or other definitive diagnostic test), as well as suspected disease (based on a positive smear and/or supportive clinical and radioactive evidence of active disease). Active TB disease, once diagnosed, is considered present until either an alternate diagnosis has been established or both of the following criteria have been met: 1) the patient has received a complete course of antituberculous chemotherapy in accordance with guidelines of the American Thoracic Society and the Centers for Disease Control and Prevention (CDC) and 2) three successive cultures of sputum or other bodily fluid or tissue collected at intervals of no less than one week apart demonstrate no viable tubercle bacilli. These provisions enable the Commissioner of Health to require and enforce treatment of TB until cured and to apply existing isolation and detention laws, when necessary, to those nonadherent patients with suspected or clinically-defined TB disease.

The bill requires physicians to report all cases of confirmed or suspected TB disease. In addition to the

initial disease report, which should include basic demographic, clinical, and laboratory information, a follow-up report is required when treatment has ceased (either because treatment has been completed or because the patient has moved, missed appointments, or defaulted from treatment). Physicians who assume responsibility for care of a patient with active TB disease also are required to develop and maintain written treatment and adherence plans. These plans must be submitted to the local health director upon request and are subject to his approval. The Commissioner has the ultimate authority to settle any disputes between treating physicians and local health directors. Hospitals and other facilities providing inpatient treatment and correctional facilities providing care to patients with active TB disease are required in all cases to submit the treatment plans to the local health director for his approval prior to discharge or release. If nonadherence is suspected, the facility and the health director may request the Commissioner to issue an emergency detention order under existing sections of the Code of Virginia.

Clinical laboratories are required to report all results suggestive or diagnostic of active TB disease. In addition, laboratories must submit a viable specimen to the Virginia Department of Consolidated Laboratory Services so that drug susceptibility testing may be performed. Laboratories may submit results of drug susceptibility testing in lieu of the specimen. This provision applies to all laboratories operating in the Commonwealth, regardless of whether the testing is done at an in-state or at an out-of-state laboratory.

In summary, these changes will improve the ability of the local health directors and the Commissioner to oversee the adequacy and successful treatment of persons with TB disease. The enhanced reporting requirements improve the ability of the health department to assist private providers in

the management of persons with TB. The requirement that cultures be submitted for drug susceptibility testing will help ensure that Virginians receive the most appropriate treatment for TB and thereby help prevent the emergence of multidrug-resistant TB in the state.

**HB2762** requires all incoming full-time students, enrolled in any four-year public institution of higher education to be vaccinated against **meningococcal disease**. The bill also provides for a waiver to the requirement if the student or his parent, after receiving detailed information from the institution on the risks of the disease and the availability of vaccine, elects that the student not be vaccinated. Vaccination or waiver must occur prior to enrollment. The bill is consistent with the recommendations of the Advisory Committee on Immunization Practices, the American Academy of Pediatrics, and the American College Health Association. The cost of the vaccination is to be paid by incoming students. Private colleges and universities are encouraged to provide information about the risks associated with meningococcal disease and the availability and effectiveness of the vaccine.

**HB1823** requires local ordinances regulating **tattooing or body piercing**, where they exist, to specify procedures for enforcement of compliance with disease control and disclosure requirements; it includes authorization for unannounced inspections. In these localities, a person performing body tattooing or body piercing must comply with the CDC's guidelines for Universal Blood and Body Fluid Precautions and provide clients with disclosure of the risks associated with invasive procedures.

Seven localities in Virginia already have local ordinances that regulate tattooing: Fairfax County, Richmond City, Staunton, Petersburg, Norfolk, Franklin City, and Emporia. In most of these localities, the ordinances require enforcement by local health department personnel. The regulations in

**Cases of Selected Notifiable Diseases Reported in Virginia\***

Disease	Total Cases Reported, December 2000						Total Cases Reported Statewide, January through December		
	State	Regions					This Year	Last Year	5 Yr Avg
		NW	N	SW	C	E			
<b>AIDS</b>	65	0	12	11	5	37	642	717	905
<b>Campylobacteriosis</b>	37	10	8	7	5	7	494	555	578
<b>E. coli O157:H7</b>	5	0	2	1	2	0	61	65	57
<b>Giardiasis</b>	36	4	15	11	5	1	357	383	333
<b>Gonorrhea</b>	1044	56	84	125	316	463	8803	7884	7935
<b>Hepatitis A</b>	12	1	6	3	1	1	130	146	169
<b>B, acute</b>	14	2	2	1	8	1	138	75	97
<b>C/NANB, acute</b>	0	0	0	0	0	0	3	10	16
<b>HIV Infection</b>	70	0	18	9	23	20	617	729	822
<b>Lead in Children†</b>	82	5	7	15	33	22	670	373	582
<b>Legionellosis</b>	4	1	2	1	0	0	31	28	24
<b>Lyme Disease</b>	9	2	4	0	2	1	133	109	63
<b>Measles</b>	0	0	0	0	0	0	2	13	4
<b>Meningococcal Infection</b>	1	0	0	0	0	1	37	45	47
<b>Mumps</b>	1	0	0	0	0	1	9	10	13
<b>Pertussis</b>	26	20	1	0	0	5	97	29	39
<b>Rabies in Animals</b>	43	7	12	8	7	9	486	483	485
<b>Rocky Mountain Spotted Fever</b>	2	1	0	1	0	0	7	15	25
<b>Rubella</b>	0	0	0	0	0	0	0	0	1
<b>Salmonellosis</b>	80	18	27	11	14	10	848	1118	990
<b>Shigellosis</b>	52	0	8	42	1	1	394	116	309
<b>Syphilis, Early§</b>	35	2	11	6	2	14	236	317	581
<b>Tuberculosis</b>	20	0	13	1	3	3	216	247	276

*Localities Reporting Animal Rabies This Month:* Accomack 1 skunk; Alexandria 1 bat, 1 skunk; Augusta 1 raccoon, 1 skunk; Bath 1 skunk; Botetourt 1 raccoon, 1 skunk; Buckingham 1 skunk; Caroline 1 raccoon; Chesapeake 1 raccoon; Charles City 1 cat; Clifton Forge 1 skunk; Fairfax 1 bat, 2 raccoons, 4 skunks; Fauquier 1 fox; Franklin County 1 raccoon; Gloucester 1 fox; Halifax 1 raccoon; Hanover 1 raccoon; Henrico 1 fox, 1 raccoon; Highland 1 skunk; Lee 1 dog; Lynchburg 1 skunk; Nelson 1 skunk; Northampton 1 raccoon; Prince George 1 raccoon; Prince William 2 raccoons, 1 skunk; Pulaski 1 dog, 1 raccoon; Virginia Beach 1 fox, 1 raccoon; York 4 raccoons.

*Occupational Illnesses:* Asbestosis 53; Cadmium Exposure 1; Lead Exposure 12; Mesothelioma 2; Pneumoconiosis 3.

\*Data for 2000 are provisional. †Elevated blood lead levels  $\geq 10\mu\text{g/dL}$ .

§Includes primary, secondary, and early latent.

Fairfax, Staunton, and Petersburg already allow unannounced inspections. Hampton, Chesapeake, and Virginia Beach have ordinances that specifically prohibit the operation of tattoo parlors.

**HB2152** allows for any county that has adopted the urban county executive form of government (i.e., Fairfax County) to adopt an ordinance creating a program for the distribution of **oral rabies vaccine** to control wildlife rabies. The bill includes provisions that allow for the distribution of oral rabies vaccine on private property if affected

property owners have been notified and have an opportunity to opt out of the program. The Fairfax County Board of Supervisors asked for the legislation because the effort required and cost of the program can be substantially reduced if landowners can be notified and given an opportunity to opt out instead of the county having to obtain individual permission from each landowner. The bill streamlines vaccine distribution and makes it more likely that the program will successfully reduce rabies. Such an approach will

result in a larger proportion of land being covered by vaccine and a more effective program to protect the public health.

The full text of these bills is available at <leg1.state.va.us/lis.htm>. Click on *Bills and Resolutions* and then type the bill number into the blank space. Select the final full text entry (enrolled bill text or Acts of Assembly Chapter text).

**Cases of Selected Notifiable Diseases Reported in Virginia\***

Total Cases Reported, January 2001

Total Cases Reported Statewide,  
January

Disease	Regions						Total Cases Reported Statewide, January		
	State	NW	N	SW	C	E	This Year	Last Year	5 Yr Avg
<b>AIDS</b>	35	13	6	3	2	11	35	50	56
<b>Campylobacteriosis</b>	16	7	4	2	0	3	16	6	14
<b><i>E. coli</i> O157:H7</b>	0	0	0	0	0	0	0	1	1
<b>Giardiasis</b>	18	2	7	3	4	2	18	20	14
<b>Gonorrhea</b>	804	19	62	52	389	282	804	751	779
<b>Hepatitis A</b>	9	1	5	1	0	2	9	3	6
<b>B, acute</b>	6	0	0	2	3	1	6	6	3
<b>C/NANB, acute</b>	0	0	0	0	0	0	0	0	0
<b>HIV Infection</b>	46	18	10	2	4	12	46	70	48
<b>Lead in Children<sup>†</sup></b>	13	0	4	3	4	2	13	25	36
<b>Legionellosis</b>	1	0	1	0	0	0	1	0	1
<b>Lyme Disease</b>	1	0	1	0	0	0	1	0	0
<b>Measles</b>	0	0	0	0	0	0	0	0	0
<b>Meningococcal Infection</b>	3	0	0	0	1	2	3	5	3
<b>Mumps</b>	0	0	0	0	0	0	0	0	0
<b>Pertussis</b>	0	0	0	0	0	0	0	4	1
<b>Rabies in Animals</b>	19	9	0	4	1	5	19	34	26
<b>Rocky Mountain Spotted Fever</b>	0	0	0	0	0	0	0	0	0
<b>Rubella</b>	0	0	0	0	0	0	0	0	0
<b>Salmonellosis</b>	31	5	9	7	4	6	31	16	31
<b>Shigellosis</b>	4	0	2	2	0	0	4	3	8
<b>Syphilis, Early<sup>§</sup></b>	14	0	3	6	2	3	14	31	49
<b>Tuberculosis</b>	0	0	0	0	0	0	0	0	19

*Localities Reporting Animal Rabies This Month:* Accomack 1 cat; Augusta 1 skunk; Bedford 1 raccoon; Clarke 1 raccoon; Fauquier 2 raccoons; Franklin County 1 skunk; Hampton 3 raccoons; Henry 1 fox; Highland 1 skunk; Orange 1 raccoon; Page 2 skunks; Pittsylvania 1 skunk; Richmond City 1 raccoon; Rockingham 1 horse; York 1 raccoon.

*Occupational Illnesses:* Asbestosis 23; Lead Exposure 3; Pneumoconiosis 6.

\*Data for 2001 are provisional. †Elevated blood lead levels  $\geq 10\mu\text{g/dL}$ .

§Includes primary, secondary, and early latent.

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