

of antivirals for influenza treatment and prophylaxis. All other outbreaks were confirmed or suspected to be norovirus, except one outbreak in Hopewell City, which had 23 patients with an unknown respiratory illness. For norovirus or respiratory outbreaks in nursing homes, control measures include, but are not limited to, the following: hand washing education, cohorting of ill patients, keeping ill staff at home until three days after their symptoms subside, and cleaning contaminated surfaces with disinfectant.

### **Outbreak, Other**

Forty-nine other outbreaks were reported in Virginia during 2004 (see Table 11 on page 54). The etiologic agent in most outbreaks (41, 84%) was confirmed or suspected to be due to viruses, including norovirus, chickenpox, hepatitis, influenza, echovirus and enterovirus. Four methicillin-resistant *Staphylococcus aureus* (MRSA) outbreaks were reported from a federal training facility, a regional jail, and two schools (many of the students were on sports teams, though some non-team members were also infected). A mumps outbreak occurred at a summer choir camp for children from foreign countries. Five camp attendees were reported ill; no outbreak related infections were identified outside of the camp.

### **Outbreak, Waterborne**

Water was the most likely source of exposure for one outbreak reported in Virginia during 2004 (see Table 8). Twenty-two people in the community became ill and four were hospitalized with *Campylobacter jejuni* infection. The town water supply was suspected as the source of exposure.

**Table 8. Waterborne Outbreaks Reported in Virginia, 2004**

<b>Onset Date</b>	<b>Health District</b>	<b>Number of Cases</b>	<b>Etiologic Agent</b>	<b>Vehicle</b>	<b>Place Where Outbreak Occurred</b>
08/15/04	Lord Fairfax	22	<i>Campylobacter jejuni</i>	Town Water Supply Suspected	Community-wide

**Table 9. Foodborne Outbreaks Reported in Virginia, 2004**

Onset Date	Health District	Number of Cases	Etiologic Agent	Vehicle	Place Where Outbreak Occurred	Factors Contributing to Outbreak
02/15/04	Henrico	4	Norovirus	Raw oysters suspected	Restaurant	Unknown
02/16/04	New River	4	<i>Clostridium perfringens</i>	Beef and gravy suspected	Restaurant	Unknown
02/21/04	Chesapeake	21	Norovirus suspected	Unknown	Catered event	Unknown
02/24/04	New River	>19	Norovirus suspected	Unknown	Restaurant	Exposure to vomit
03/04/04	Richmond City	248	Norovirus	Sandwiches	Catered event	Ill food handler suspected
03/22/04	Fairfax	17	Norovirus suspected	Unknown	Restaurant	Unknown
03/24/04	Hampton	33	Norovirus	Unknown	School	Unknown
04/18/04	Chesterfield	8	Norovirus	Unknown	Private home	Unknown
05/18/04	Hampton	13	Unknown	Unknown	Church	Unknown
06/18/04	Multi-state	137 (VA cases=11)	<i>Salmonella</i> ser. Braenderup	Roma tomatoes	Numerous restaurants	Unknown
07/03/04	Multi-state	434 (VA cases=12)	<i>Salmonella</i> ser. Javiana	Roma tomatoes	National chain of gas stations	Contamination likely occurred pre-harvest or at packer.
07/18/04	Arlington	10	Norovirus	Lettuce suspected	Restaurant	Unknown
08/08/04	Crater	20	Norovirus	Unknown	Community center	Unknown
10/23/04	Rappahannock	19	<i>Clostridium perfringens</i> suspected	Crab cakes suspected	School	Time/temperature abuse, sanitation
11/02/04	Chesapeake	31	<i>Clostridium perfringens</i>	Pork barbeque	Residential training center	Time/temperature abuse (improper cooling followed by inadequate reheating)
11/07/04	Central Virginia	13	<i>Clostridium perfringens</i>	Unknown	Private home	Unknown
12/09/04	Crater	45	<i>Salmonella</i> ser. Welteverden	Canned tuna fish	Correctional facility	Time/temperature abuse
12/10/04	Fairfax	32	Norovirus suspected	Unknown	Country club restaurant	Unknown

**Table 10. Nosocomial Outbreaks Reported in Virginia, 2004**

Onset Date	Health District	Number of Cases	Etiologic Agent	Vehicle	Place Where Outbreak Occurred
01/10/04	Henrico	85	Norovirus	Person to Person	Nursing Home
01/15/04	Henrico	53	Norovirus	Person to Person	Nursing Home
01/15/04	Chesterfield	62	Norovirus	Person to Person	Nursing Home and Assisted Living
02/01/04	Henrico	11	Norovirus suspected	Person to Person	Nursing Home
02/06/04	Pittsylvania-Danville	45	Norovirus	Person to Person	Nursing Home
02/08/04	Central Shenandoah	7	Norovirus	Person to Person	Nursing Home
02/08/04	Fairfax	35	Norovirus	Person to Person	Nursing Home
02/09/04	Roanoke City	Unk	Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA)	Person to Person	Hospital
02/09/04	Fairfax	73	Norovirus	Person to Person	Nursing Home
02/11/04	Alexandria	Unk	Norovirus	Person to Person	Nursing Home and Assisted Living
02/11/04	Alleghany	60	Norovirus	Person to Person	Nursing Home
02/11/04	Southside	78	Norovirus	Person to Person	Nursing Home
02/12/04	Central Shenandoah	26	Norovirus	Person to Person	Nursing Home
02/13/04	Arlington	60	Norovirus	Person to Person	Nursing Home
02/14/04	Central Shenandoah	14	Norovirus	Person to Person	Nursing Home
02/16/04	Alexandria	Unk	Norovirus	Person to Person	Nursing Home and Assisted Living
02/17/04	Central Shenandoah	85	Norovirus	Person to Person	Nursing Home
02/18/04	Central Shenandoah	17	Norovirus	Person to Person	Nursing Home
02/19/04	Alexandria	Unk	Norovirus	Person to Person	Nursing Home and Assisted Living
02/20/04	Virginia Beach	40	Norovirus	Person to Person	Nursing Home
02/20/04	Central Shenandoah	39	Norovirus	Person to Person	Nursing Home
02/23/04	Thomas Jefferson	5	Norovirus	Person to Person	Nursing Home
02/28/04	Mount Rogers	46	Norovirus	Person to Person	Nursing Home
03/01/04	Piedmont	Unk	Norovirus	Person to Person	Nursing Home
03/02/04	Crater	23	Unknown respiratory pathogen	Person to Person	Nursing Home
03/06/04	Henrico	9	Norovirus suspected	Person to Person	Nursing Home
03/10/04	Henrico	6	Norovirus suspected	Person to Person	Nursing Home
03/28/04	Thomas Jefferson	12	Norovirus	Person to Person	Nursing Home
04/01/04	Central Virginia	27	Norovirus	Person to Person	Nursing Home
04/04/04	Chesterfield	25	Norovirus	Person to Person	Nursing Home
04/15/04	Alleghany	32	Norovirus suspected	Person to Person	Nursing Home
04/17/04	Central Virginia	15	Norovirus	Person to Person	Nursing Home

Onset Date	Health District	Number of Cases	Etiologic Agent	Vehicle	Place Where Outbreak Occurred
05/24/04	Central Virginia	4	Scabies	Person to Person	Nursing Home
10/27/04	Thomas Jefferson	26	Influenza A	Person to Person	Nursing Home
11/29/04	Three Rivers	21	Norovirus	Person to Person	Nursing Home
12/06/04	Thomas Jefferson	25	Norovirus	Person to Person	Nursing Home
12/07/04	Lord Fairfax	24	Norovirus	Person to Person	Nursing Home
12/16/04	Lord Fairfax	24	Norovirus suspected	Person to Person	Nursing Home
12/17/04	Lord Fairfax	6	Norovirus	Person to Person	Nursing Home
12/24/04	Norfolk	30	Norovirus	Person to Person	Nursing Home
12/24/04	Three Rivers	30	Norovirus	Person to Person	Nursing Home
12/24/04	Thomas Jefferson	89	Norovirus	Person to Person	Nursing Home
12/28/04	Henrico	25	Norovirus suspected	Person to Person	Nursing Home
12/28/04	Henrico	34	Norovirus	Person to Person	Nursing Home and Assisted Living
12/29/04	Loudoun	9	Norovirus suspected	Person to Person	Nursing Home
12/30/04	Henrico	44	Norovirus suspected	Person to Person	Nursing Home

**Table 11. Other Outbreaks Reported in Virginia, 2004**

Onset Date	Health District	Number of Cases	Etiologic Agent	Vehicle	Place Where Outbreak Occurred
01/29/04	Fairfax	31	Norovirus	Person to Person	Child Care Setting
01/31/04	Hanover	71	Varicella (Chickenpox)	Person to Person	Elementary School
02/01/04	Western Tidewater	Unk	Norovirus	Person to Person	Assisted Living
02/05/04	Chesterfield	14	Norovirus	Person to Person	Private Home
02/06/04	Central Shenandoah	28	Norovirus	Person to Person	Assisted Living
02/06/04	Hampton	62	Norovirus suspected	Unknown	High School
02/08/06	Central Shenandoah	7	Norovirus suspected	Person to Person	Assisted Living
02/09/04	Fairfax	40	Norovirus	Person to Person	Adult, Child Day Cares and Independent Living
02/13/04	Chesterfield	125	Norovirus suspected	Person to Person	Elementary School
02/14/04	Arlington	89	Norovirus	Person to Person	Elementary School
02/18/04	Portsmouth	22	Norovirus	Person to Person	Assisted Living
02/19/04	Fairfax	107	Norovirus	Person to Person	Elementary School
02/21/04	Peninsula	38	Norovirus	Person to Person	Assisted Living
02/23/04	Chesterfield	13	Varicella (Chickenpox)	Person to Person	Elementary School
02/25/04	Fairfax	35	Norovirus	Person to Person	Assisted Living
02/29/04	Peninsula	69	Norovirus	Person to Person suspected	College
03/01/04	Henrico	21	Norovirus suspected	Person to Person	Assisted Living

Onset Date	Health District	Number of Cases	Etiologic Agent	Vehicle	Place Where Outbreak Occurred
03/01/04	Arlington	25	Norovirus	Person to Person	Assisted Living
03/01/04	Fairfax	>100	Norovirus	Person to Person	Elementary School
03/01/04	Fairfax	>127	Norovirus suspected	Person to Person	Elementary School
03/03/04	Norfolk	31	Norovirus	Person to Person	Elementary School
03/24/04	Fairfax	19	Norovirus	Person to Person	Assisted Living
04/05/04	Chesterfield	6	<i>Bordetella pertussis</i>	Person to Person	Elementary and Middle Schools
04/05/04	Hampton	4	<i>Bordetella pertussis</i>	Person to Person	Family
04/23/04	Central Virginia	23	Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA)	Person to Person	Regional Jail
05/09/04	Hanover	9	Norovirus	Person to Person	Private Event
05/30/04	Central Shenandoah	19	Unknown	Unknown	Conference Center
06/01/04	Henrico	4	Enterovirus	Person to Person	Child Care Center
06/03/04	Fairfax	16	Norovirus	Person to Person	Elementary School
06/17/04	Loudoun	28	Norovirus	Person to Person	Camp
07/29/04	Portsmouth	8	Hepatitis A	Person to Person	Child Day Care
08/09/04	Piedmont	5	Echovirus 30	Person to person	Community Wide
08/10/04	Central Virginia	18	Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA)	Person to Person	University
08/21/04	Central Virginia	5	Mumps virus	Person to Person	Camp
09/01/04	Central Virginia	6	Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA)	Person to Person	Private School
09/02/04	Rappahannock	58	Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA)	Person to Person	Federal Training Facility
09/06/04	Mount Rogers	14	Enterovirus	Person to Person	Community Wide
11/01/04	Henrico	9	Varicella (Chickenpox)	Person to Person	Elementary School
11/10/04	Piedmont	20	<i>Bordetella pertussis</i>	Person to Person	Community Wide
11/29/04	Lord Fairfax	68	Norovirus	Person to Person	Military Academy
11/30/04	Thomas Jefferson	7	Influenza A	Person to Person	Assisted Living
12/06/04	Loudoun	18	Norovirus suspected	Person to Person	Assisted Living
12/08/04	Three Rivers	16	Norovirus	Person to Person	Retirement Community
12/11/04	Lord Fairfax	25	Norovirus	Person to Person	Assisted Living
12/14/04	Hampton	14	Norovirus	Person to Person	Assisted Living
12/15/04	Thomas Jefferson	Unk	Influenza suspected	Person to Person	Assisted Living
12/23/04	Fairfax	41	Norovirus	Person to Person	Assisted Living
12/27/04	Lord Fairfax	6	Norovirus	Person to Person	Assisted Living
12/27/04	Fairfax	44	Norovirus	Person to Person	Assisted Living