



Division of Public Health

<http://health.state.ga.us>

Kathleen E. Toomey, M.D., M.P.H.

Director

State Health Officer

Epidemiology Branch

<http://health.state.ga.us/epi>

Paul A. Blake, M.D., M.P.H.

Director

State Epidemiologist

Mel Ralston

Public Health Advisor

Georgia Epidemiology Report Editorial Board

Carol A. Hoban, M.S., M.P.H. - Editor

Kathryn E. Arnold, M.D.

Paul A. Blake, M.D., M.P.H.

Susan Lance-Parker, D.V.M., Ph.D.

Kathleen E. Toomey, M.D., M.P.H.

Angela Alexander - Mailing List

Jimmy Clanton, Jr. - Graphic Designer



**Georgia Department of
Human Resources
Division of Public Health
Epidemiology Branch
Two Peachtree St., N.W.
Atlanta, GA 30303-3186
Phone: (404) 657-2588
Fax: (404) 657-7517**

Please send comments to:

Gaepinfo@dhr.state.ga.us

The *Georgia Epidemiology Report* is a publication of the Epidemiology Branch, Division of Public Health, Georgia Department of Human Resources

West Nile Virus Update

West Nile virus (WNV) is transmitted from wild birds to humans, horses, and other animals by bites of infected mosquitoes. The virus was first detected in the US in 1999 when it caused an outbreak of encephalitis among humans, horses, and birds in the New York City area. Surveillance data collected during 2000 indicate that the virus is now endemic in the northeastern US and it has been detected in 12 states along the Atlantic Coast (VT, NH, MA, RI, CT, NY, NJ, PA, MD, Washington DC, VA, and NC). As of April 1, 2001 WNV has not been detected in Georgia. However, a WNV-infected crow was collected approximately 40 miles southwest of Raleigh, NC in late September 2000 and it is likely that we will have WNV activity in Georgia during 2001.

In response to the 1999 outbreak, the Centers for Disease Control and Prevention (CDC) distributed funds to public health agencies in states that were considered most likely to see WNV activity during 2000. The Georgia Division of Public Health (GDPH) received approximately \$197,000 to perform surveillance for arbovirus infections in birds, horses, and humans during the 2000/2001 season. We expect to receive similar funding for 2001/2002 and all surveillance programs will be continued. The purpose of these surveillance programs is to detect the virus so control measures may be instituted before human infections occur.

Avian/Equine/Human Surveillance

When WNV emerges in Georgia it will probably be detected first in birds. Dead bird surveillance has been a very sensitive indicator of local epizootic transmission of WNV in the Northeast and could play a significant role in predicting human risk of infection. In Georgia, reports of dead bird sightings are recorded by local health departments. Some dead birds are collected and tested for the presence of WNV and other arboviruses. Initially just dead crows and bluejays were accepted for testing, but now any bird that is fresh (dead <24 hours) and in good condition (no signs of decomposition) may be tested. To date nearly 200 dead birds have been submitted, all with negative virus isolation results.

To supplement dead bird surveillance, active surveillance for arbovirus infections in live birds is performed by the Southeastern Cooperative Wildlife Diseases Study (SCWDS) at the University of Georgia College of Veterinary Medicine. Collection of several species of resident and migratory birds is conducted in Coastal, Coastal Plain and Piedmont regions of the state. Blood is collected and tested for the presence of arboviruses as well as for antibodies to WNV and other arboviruses. Nearly 2000 birds have been sampled to date and more than 1900 of them have been negative (results of the remainder are pending).

While dead bird surveillance is useful in densely populated urban areas, it may not be a sensitive indicator of WNV transmission in rural areas. In these areas, other indicators such as equine surveillance might be required to detect and monitor WNV activity. Large animal veterinarians throughout Georgia are encouraged to seek diagnostic support from Tifton or Athens Veterinary Diagnostic Laboratories for all horses with clinical CNS disease manifestations. Testing is provided free of charge for horses exhibiting clinical signs of encephalitis and includes screening for WNV and other arboviruses after rabies has been ruled out.

Most human WNV infections are mild or asymptomatic. CNS involvement is rare and predominantly affects elderly or immunocompromised individuals. To detect clinical cases of West Nile encephalitis, active surveillance for human viral encephalitis is being performed in 5 health districts in Coastal and South Georgia (48 counties) and passive surveillance for arboviral encephalitis is conducted in the rest of Georgia. Passive surveillance has been facilitated by the Georgia Public Health Laboratory's (GPHL) ability to test CSF or paired sera from patients with symptoms of encephalitis, meningitis, or Guillain-Barré Syndrome for antibodies to a panel of arboviruses. The panel includes capture ELISA to detect IgM antibodies to WNV and IFA detection of IgG or IgM antibody to St. Louis encephalitis, eastern equine encephalitis, western equine encephalitis, and California group viruses.

Control Measures

Public education is the best way to prevent infections with WNV or other mosquito-transmitted diseases. A vector-based webpage (<http://health.state.ga.us/epi/vbd.shtml>) has been established to provide up-to-date information about vector-borne diseases to the public and to healthcare providers. Information about WNV and other arboviruses is also disseminated at in-service trainings and professional meetings.

A statewide arbovirus response plan is currently being developed by a group of representatives from GDPH, the Georgia Department of Agriculture, Georgia Emergency Management Agency, Department of Natural Resources, and other state and federal agencies. Some health districts in the state have also developed and instituted their own plans to prevent arboviral disease and to respond if an arbovirus does appear in their jurisdictions. These plans emphasize the importance of educating the public about how to avoid mosquito bites and how to eliminate mosquito breeding habitats (i.e. standing water).

What to Expect in 2001

WNV successfully established itself throughout the northeastern US within just one year after its first appearance in New York City. The virus's emergence has taken some surprising twists; numerous non-*Culex*

mosquito species are competent vectors and the virus is already known to cause illness in various species of birds and other animals.

Information collected about WNV in the northeastern states during 1999 and 2000 provides a foundation on which other states can base their detection and response protocols. However, we cannot completely rely on a single year of data collected in only one region of the country. The virus might have a greater public health impact in the South because the warmer climate allows for a longer season of mosquito activity, the different species and densities of birds may be more efficient virus reservoirs, and we have some very aggressive mosquito species that could be competent vectors. There is still much to be learned about WNV, including how to perform surveillance for it, and how to minimize its effects on human and animal populations.

For WNV updates and more specific information about these surveillance programs (including forms and instructions for submission of samples), please visit the vector-borne disease webpage.

This article was written by:
Catherine Rebmann, M.P.H.
Stacy Kramer, M.P.H.
David Stallknecht, Ph.D. (SCWDS, UGA College of Veterinary Medicine)

New tests for identifying *E. coli* O157 and other Shiga Toxin producing *E. coli* - New Notifiable Condition in Georgia

Outbreaks of hemolytic uremic syndrome (HUS) and bloody diarrhea such as the one associated with a water park in Cobb County in 1998 have maintained *E. coli* O157 as a focus of the nation's attention. The bloody diarrhea and HUS caused by *E. coli* O157 result from the Shiga toxins that the organism produces. Although *E. coli* O157 is the serotype most often incriminated, some other *E. coli* serotypes can also produce Shiga toxins. For example, *E. coli* O111:H8 is a Shiga toxin producing *E. coli* (STEC) that caused an outbreak of bloody diarrhea and HUS in a group of teenage campers in Texas in 1999.¹ Non-O157 STEC are thought to have symptoms, exposures, and transmission vehicles similar to those of *E. coli* O157.

Special culture media that include sorbitol are required for isolating *E. coli* O157; however, this technique can miss certain STEC since some of these *E. coli* ferment sorbitol.² Stool containing either *E. coli* O157 or non-O157 STEC can be identified by testing for the presence of the Shiga toxin using a commercially available EIA kit. Some laboratories are beginning to use this test instead of a culture to identify STEC. Due to the increasing importance of STEC as a public health issue, the state of Georgia has made positive Shiga toxin tests reportable as of February 21, 2001. All laboratories should now report any Shiga-toxin positive results to the Notifiable Disease Epidemiology Section of the Georgia Division of Public Health immediately by calling the county, district, or state health office (404-657-2588).

The Georgia Division of Public Health will follow up on all cases with positive Shiga toxin testing to identify possible exposures and to implement measures that will decrease further spread of the organism. Since it is still important to identify which serotype of *E. coli* is causing the infection to help recognize outbreaks, all Shiga toxin positive stool specimens and *E. coli* isolates should be submitted to the Georgia Public Health Lab for further testing, e.g. culture, serotyping, and pulsed-field gel electrophoresis (PFGE).

References:

¹*Escherichia coli* O111:H8 Outbreak Among Teenage Campers – Texas, 1999. *Morbidity and Mortality Weekly Report*. 2000; 49:321-4.

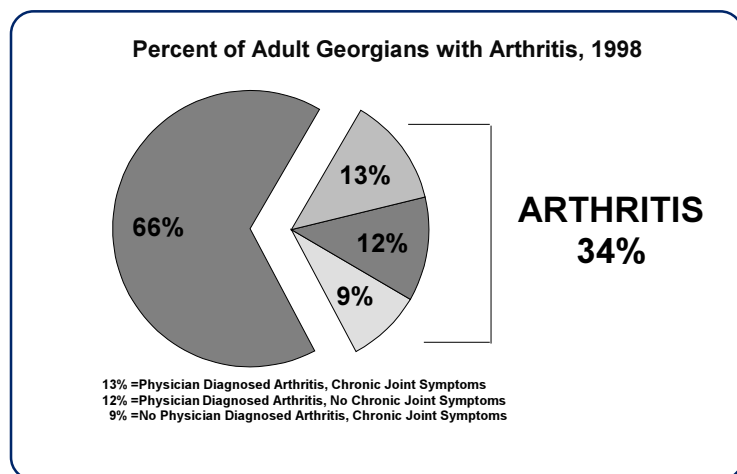
²Fey P, Wickert R, Rupp M, Safranek T, and Hinrichs S. Prevalence of non-O157:H7 Shiga toxin-producing *Escherichia coli* in diarrheal stool samples from Nebraska. *Emerging Infectious Disease*. 2000; 6:530-3.

Authors: Bill MacKenzie, M.D. and Stepy Thomas, M.S.P.H.

Highlights from the Georgia Arthritis Report, 2000

Arthritis is a Major Public Health Issue in Georgia:

- Arthritis affects 1 out of every 3 adult Georgians (34%) or approximately 1.8 million people.
- The 34% of people who report arthritis include the following:
 - 13% who have been told by a physician they have arthritis and report chronic joint symptoms (pain, aching, stiffness or swelling in or around a joint on most days for at least one month over a 12-month period).
 - 12% who have been told by a physician they have arthritis, but do not report chronic joint symptoms.
 - 9% who have not been told by a physician they have arthritis, but do report chronic joint symptoms.



Prevalence of adult Georgians with arthritis by age, race, sex, education, income, geography:

- The prevalence of arthritis increases with age, rising from 13% among those 18-24 years old, to 62% among those 65 years and older. However, while older people as a group are more likely to be affected than younger people, over half of the 1.8 million Georgians with arthritis are less than 55 years old.
- The prevalence of arthritis is higher among whites (37%) than among blacks (27%).
- Arthritis is more common among females (38%) than males (29%).
- Half (51%) of people with less than a 12th grade education report arthritis. Among people with a 12th grade education or greater, 28-32% report arthritis.
- People with less than \$20,000 a year in household income report a higher prevalence of arthritis (42%) when compared to households with lower income levels (28-33%).
- The prevalence of arthritis is evenly distributed across regions of Georgia.

Arthritis awareness and impact in Georgia among people who report arthritis:

- 68% do not know the type of their condition
- 77% are not under a physician's care for arthritis

When comparing people with arthritis to people without arthritis:

- People with arthritis are almost 2 times more likely to report days of poor physical health and about 1.5 times more likely to report days of poor mental health.

- People with arthritis are also 3 times more likely to report fair/poor health status.

While there are many forms of arthritis, some types are curable and all can be helped. Early diagnosis and appropriate, ongoing arthritis management are known to reduce or improve long-term discomfort and disability as well as improve emotional health and overall quality of life. These data indicate many are not receiving arthritis-related health care nor adequately self-managing their disease.

Behavioral characteristics among people with arthritis

- People with arthritis are more likely to be inactive (34%) when compared to people without arthritis (26%).
- Also, among people with arthritis, 41% are classified as overweight, while 28% of those without arthritis are overweight.

The level of discomfort and disability people with arthritis regularly experience is directly impacted by lifestyle. Regular physical activity (as appropriate for condition) and maintaining an appropriate body weight can be helpful in keeping arthritis-related discomfort to a minimum, while maximizing physical ability with most types of arthritis. These data suggest people with arthritis are less likely to engage in healthy behaviors, thereby affecting their arthritis and their overall health status.

About the Georgia Arthritis Report, 2000

The Georgia Arthritis Report, 2000 was written as a collaborative effort between the Division of Public Health, Georgia Department of Human Resources and the Arthritis Foundation, Georgia Chapter. The source for all statistics used in the report is the 1998 Behavioral Risk Factor Surveillance System (BRFSS), a telephone survey which samples adults 18 and older each year about their health behaviors and conditions.

The Georgia Arthritis Report, 2000 was written to assist health professionals, volunteers and staff of arthritis organizations, community groups, and others who are working to reduce the burden of arthritis throughout Georgia. Currently, the Georgia Arthritis Action Plan (GAAP), a collaborative intervention and public health planning effort to reduce the burden of arthritis, incorporated 2 main objectives into their health plan based on findings from the Georgia Arthritis Report, 2000. These activities are currently being piloted in Columbus, GA.

To obtain a copy of the Georgia Arthritis Report 2000, please contact:
The Arthritis Foundation (Georgia Chapter)
550 Pharr Road, Suite 550
Atlanta, GA 30305
(404) 237-8771

Submitted by:

Jennifer McGinnis, M.S.P.H. Director, Arthritis Surveillance & Epidemiology
The Arthritis Foundation (Georgia Chapter)
Kenneth E. Powell, M.D., M.P.H. Chief: Chronic Disease, Injury, and Environmental Epidemiology Unit
Division of Public Health, Georgia Department of Human Resources

Primary Contact:

Jennifer McGinnis
Phone: 404-657-2577/404-237-8771
Fax: 404-657-7517



April 2001

Volume 17 Number 04

Reported Cases of Selected Notifiable Diseases in Georgia Profile* for January 2000

Selected Notifiable Diseases	Total Reported for January 2001	Previous 3 Months Total Ending in January			Previous 12 Months Total Ending in January		
	2000	1999	2000	2001	1999	2000	2001
Campylobacteriosis	25	162	107	91	768	701	609
<i>Chlamydia trachomatis</i>	2886	5511	6438	7689	25119	32138	31450
Cryptosporidiosis	10	40	33	29	159	166	184
<i>E. coli</i> O157:H7	0	10	12	4	84	43	41
Giardiasis	87	302	335	259	1251	1344	1200
Gonorrhea	1496	4173	4615	4544	20415	22308	19872
<i>Haemophilus influenzae</i> (invasive)	12	24	29	35	66	86	84
Hepatitis A (acute)	57	193	62	137	870	443	417
Hepatitis B (acute)	41	44	60	115	197	237	337
Legionellosis	1	0	2	2	8	6	10
Lyme Disease	0	0	0	0	4	0	0
Meningococcal Disease (invasive)	8	19	22	17	87	78	51
Mumps	0	1	1	0	2	5	1
Pertussis	0	5	18	3	38	61	36
Rubella	0	0	0	0	0	0	0
Salmonellosis	117	393	357	327	1858	1955	1732
Shigellosis	17	150	50	79	1092	270	339
Syphilis - Primary	7	33	25	22	129	139	120
Syphilis - Secondary	13	73	72	46	254	280	265
Syphilis - Early Latent	44	216	134	110	860	647	531
Syphilis - Other**	40	184	174	140	885	760	681
Syphilis - Congenital	2	7	1	3	18	14	18
Tuberculosis	20	154	166	200	624	646	712

* The cumulative numbers in the above table reflect the date the disease was first diagnosed rather than the date the report was received at the state office, and therefore are subject to change over time due to late reporting. The 3 month delay in the disease profile for a given month is designed to minimize any changes that may occur. This method of summarizing data is expected to provide a better overall measure of disease trends and patterns in Georgia.

** Other syphilis includes latent (unknown duration), late latent, late with symptomatic manifestations, and neurosyphilis.

AIDS Profile Update

Reporting Period	Total Cases Reported*	Percent	Risk Group Distribution (%)					Race Distribution (%)			
		Female	MSM	IDU	MSM&IDU	HS	Blood	Unknown	White	Black	Other
<u>Latest 12 Months:</u> 02/00-01/01	1217	26.7	28.7	10.2	2.0	12.3	2.1	44.8	19.1	77.2	3.8
<u>Five Years Ago:</u> 02/95-01/96	2270	19.2	46.7	20.5	5.3	16.7	1.3	9.5	34.8	62.1	3.2
<u>Cumulative:</u> 7/81-01/01	22725	16.7	48.7	18.4	5.6	13.0	1.9	12.3	35.9	62.0	2.1

MSM - Men having sex with men IDU - Injection drug users HS - Heterosexual

* Case totals are accumulated by date of report to the Epidemiology Section