



Influenza

Epidemics of influenza usually occur during the winter, causing an average of 226,000 hospitalizations for influenza-related complications and 36,000 deaths per year in the United States. While influenza infects persons of all ages, rates of influenza complications requiring hospitalization are highest among children under two years of age, the elderly, and persons with certain chronic medical conditions. Most influenza-related deaths occur among the elderly. Prevention strategies are designed to prevent disease in these high-risk populations.

Preventing Influenza

Annual influenza vaccination is the most effective way to prevent influenza and its complications. New for the 2005-06 season, the Advisory Committee on Immunization Practices (ACIP) now recommends annual influenza vaccination for persons with any condition (e.g., cognitive dysfunction, spinal cord injuries, seizure disorders, or other neuromuscular disorders) that can compromise respiratory function or the handling of respiratory secretions or that can increase the risk for aspiration (1). ACIP also emphasizes that health-care workers should be vaccinated against influenza annually. For this season, CDC is recommending that certain groups defer vaccination with trivalent inactivated influenza vaccine (TIV) until

October 24, 2005 due to uncertainties related to vaccine supply (2, 3). Live attenuated influenza vaccine (LAIV) may be administered at any time to persons aged 5-49 years. Healthcare providers who will have vaccine available may register at <http://www.immunizeadultga.org> so that Georgians seeking vaccine can find providers in their community. The Georgia Division of Public Health (GDPH) will monitor the website during influenza season to know where influenza vaccine may be available.

Vaccine Supply

Disruptions in vaccine supply during recent influenza seasons have required modifications in ACIP recommendations. Supplemental recommendations for the prioritization of inactivated influenza vaccine in times of shortage have been issued (2). Four vaccine manufacturers are expected to produce vaccine for the U.S. market this season. While 89-97 million doses are projected, the precise number and timing of doses remains unknown. On September 2, 2005, CDC recommended that TIV be given to certain priority groups as described in Table 1 until October 24, 2005. Beginning October 24, 2005, all persons will be eligible to receive TIV (3). State and local public health staff will work closely with private health care providers in the event of a vaccine shortfall in Georgia

Table 1. Target Groups for Annual Influenza Vaccination*

Priority Groups for TIV until October 24, 2005

Persons at High Risk for Influenza-Related Complications:

- Persons aged ≥ 65 years
- Residents of long-term care facilities that house persons of any age with chronic medical conditions
- Adults and children with chronic pulmonary or cardiovascular disorders, including asthma (not including hypertension)
- Adults and children who have required medical follow-up or hospitalization during the preceding year because of chronic metabolic diseases (including diabetes mellitus), kidney dysfunction, hemoglobinopathies, or immune system problems (immunosuppressed or immunocompromised)
- Adults and children with any condition (e.g., cognitive dysfunction, spinal cord injuries, seizure disorders, or other neuromuscular disorders) that can compromise respiratory function or the handling of respiratory secretions or that can increase the risk for aspiration
- Children and teenagers (aged 6 months – 18 years) who are receiving long-term aspirin therapy and, therefore, might be at risk for developing Reye syndrome after influenza infection
- Women who will be pregnant during the influenza season
- Children aged 6-23 months

Health-care Workers

- Physicians, nurses, and other personnel in hospital and outpatient-care settings, including emergency response workers
- Employees of long-term care facilities who have contact with patients or residents

Persons Who Can Transmit Influenza to Those at High Risk:

- Household contacts and out-of-home caregivers of children aged <6 months

Additional Priority Groups for TIV Vaccination beginning October 24, 2005

Healthy Persons Aged 50-64 Years

- Vaccination is recommended for persons aged 50-64 years because this group has a large proportion of persons with high-risk conditions.

Persons Who Can Transmit Influenza to Those at High Risk:

- Employees of assisted living and other residences for persons in high-risk groups
- Persons who provide home care to persons in high-risk groups
- Household members (including children) of persons in high-risk groups
- Household contacts and out-of-home caretakers of children 6-23 months of age

Use of LAIV

May be administered at any time for vaccination of nonpregnant healthy persons aged 5–49 years, including most health-care personnel, other persons in close contact with groups at high risk for influenza-related complications, and others desiring protection against influenza.

Persons Who Should Not Be Vaccinated

- Persons known to have anaphylactic hypersensitivity to eggs or to other components of the influenza vaccine without first consulting a physician*
- Persons with acute febrile illness usually should not be vaccinated until their symptoms have abated*

* For complete references see 1, 2, 3.

The Georgia Epidemiology Report Via E-Mail

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to assess the local vaccine supply and to augment vaccine availability for members of vaccine priority groups wherever possible. Updated information as the season progresses will be available on the GDPH website <http://health.state.ga.us/epi/flu/index.asp>.

Overview of Influenza Surveillance in Georgia

GDPH monitors influenza activity via a sentinel provider network, part of a nationwide surveillance network coordinated by the CDC. Weekly during influenza season, volunteer sentinel healthcare providers report the total number of patient visits and the number of those patient visits with influenza-like illness (ILI), defined as fever $>100^{\circ}$ F AND cough and/or sore throat. Sentinel providers also submit throat or nasopharyngeal swabs from representative patients with ILI several times during the season for testing at the Georgia Public Health Laboratory (GPHL). The sentinel network is not used to determine the precise number of influenza illnesses during a given season. However, the illness data coupled with the results of virology testing help estimate influenza disease activity and distribution, and provide specimens for virology surveillance and strain selection for next year's influenza vaccine. During the influenza season, Georgia influenza activity is posted weekly on the GDPH website, at <http://health.state.ga.us/epi/flu>, with links provided to nationwide data from CDC.

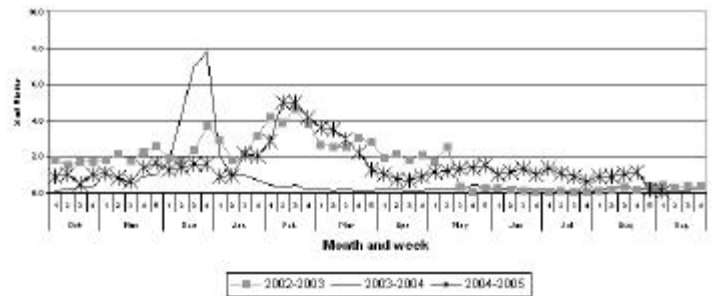
Georgia Influenza Activity, 2004-2005

The 2004-2005 influenza season began with notification that the vaccine, Fluvirin®, manufactured by Chiron Corporation, would not be available for distribution in the U.S., leaving only 1 of 2 manufacturers of injectable influenza vaccine for the season. Therefore, ACIP recommended that certain groups at high risk for complications from influenza be given priority. GDPH collaborated with CDC and vaccine manufacturer Aventis to determine where inactivated vaccine had been distributed. Local public health staff contacted the healthcare community to assess vaccine needs. A coordinated effort communicated vaccine priority guidelines, delivered vaccine to areas in need, alleviated disparities in vaccine supply, and maximized vaccination of priority groups. By the end of the season, approximately 1.3 million doses of influenza vaccine were distributed in Georgia. This report summarizes influenza activity in Georgia for the 2004-2005 season.

Influenza Surveillance

On December 17, 2004, GPHL identified the season's first influenza virus isolate from a Georgia resident whose onset of illness was in mid-December. During the 2004-2005 season, GPHL identified a total of 135 influenza viruses; 100 influenza A and 35 influenza B. Of the 100 influenza A isolates, 97 were subtyped as influenza A (H3N2) and 3 were not subtyped. CDC antigenically characterized 11 of the 100 influenza A isolates; 3 were antigenically similar to A/Wyoming/3/2003 (the A/Fujian/411/2002-like (H3N2) component of the 2004-05 influenza vaccine) and 8 were similar to A/California/7/2004 (the H3N2 component of the 2005-06 influenza vaccine). CDC antigenically characterized

Figure 1. Percent of Visits for Influenza-like illness Reported by Sentinel Provider Network in Georgia.



9 of the 35 influenza B isolates; six of the influenza B viruses isolated last season belong to the B/Yamagata lineage and were characterized as similar to B/Shanghai/361/2002 (the influenza B component in the 2004-05 and the 2005-06 influenza vaccine), and 3 influenza B viruses belong to the B/Victoria lineage.

Influenza activity peaked in Georgia during February. Influenza has peaked in January or February during the last 4 of 5 influenza seasons in Georgia. The proportion of visits to Georgia Influenza Sentinel Providers for ILI increased from 2.2% in mid- January to a peak of 5.0% during the second week of February, decreased to 2.4% in late March, and then steadily decreased to approximately 1.0% in April (Figure 1). Influenza activity in Georgia was characterized as local or regional from January 16-February 5, 2005, and widespread from February 6-March 5, 2005. “Widespread” designation was based on reports of ILI activity from Sentinel Providers and hospitals, lab-confirmed influenza in more than half of Georgia’s designated regions, high rates of school absenteeism, and outbreaks in long-term care facilities. Influenza activity in Georgia was characterized as regional or local from March 6-April 2, 2005, and sporadic from March 3-9, 2005 based on reports of decreasing influenza activity from Sentinel Providers and District Health Offices.

Reports of Deaths among Children

In August 2004, an influenza-associated death in a child <18 years of age was made a reportable condition in Georgia. During 2004-2005, four influenza-associated deaths among children <18 years of age were reported to GDPH. All were laboratory-confirmed by rapid antigen testing, viral culture, PCR, or immunohistochemistry.

Influenza Outbreaks

During 2004-2005, 17 ILI outbreaks in institutional settings were reported to GDPH, including 10 in long-term care facilities, 1 in a hospital, 2 in correctional facilities, and 4 in schools. Of the 11 outbreaks that were confirmed as influenza, 9 were associated with Influenza A and 2 with Influenza B.

Avian Influenza

Since December 2003, the World Health Organization (WHO) has continued to receive reports of confirmed human cases and poultry outbreaks of avian influenza A (H5N1) in Asia and other countries. The exposure of humans to ongoing poultry outbreaks is of grave concern. It enhances the potential for avian influenza

(H5N1) viruses to undergo genetic changes or recombine with human influenza viruses and result in a new influenza A virus that is easily transmitted human-to-human, thus triggering an influenza pandemic. Healthcare providers are asked to report to Public Health any patients who have respiratory symptoms and who have recently traveled to a country with poultry outbreaks or had recent close contact with potentially infected poultry or a human case of avian influenza. Close contact includes visiting a poultry farm, household where poultry are raised, or live bird market in an affected country. It does NOT include exposure to cooked or processed poultry. Please go to <http://health.state.ga.us/healthtopics/avianflu.asp> for more information.

Georgia shows improvement, but vaccination among those at high risk remains low

The Behavioral Risk Factor Surveillance System (BRFSS) conducted a nationwide special study during October 2004-February 2005 to assess influenza vaccination uptake (4). Through January 2005, vaccine coverage levels among priority groups reached levels similar to prior years, whereas coverage levels among adults not in priority groups were approximately half of levels in 2003. Among non-high-risk adults 9.3% reported “saving vaccine for people who need it more”. Last season was the first year that children aged 6 through 23 months were included in the vaccine target group, and 48.4% of those children were estimated to have received at least one dose. Data from the BRFSS indicate that influenza and pneumococcal vaccination rates have improved in recent years among Georgians aged > 65 years (Figure 2). Overall vaccination rates were minimally affected by the vaccine shortage, but are still far below the Healthy People 2010 goal of 90% vaccination coverage for both vaccines among people aged > 65 years. BRFSS also assessed vaccine uptake by race in the context of the 2004 vaccine shortage. Among the elderly, disparity by race has existed in Georgia for influenza vaccination rates. This

Figure 2. Influenza and Pneumococcal Vaccination Rates among Persons Aged ≥65 Years, Georgia, 1995-2003

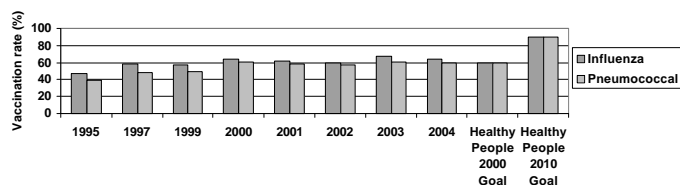
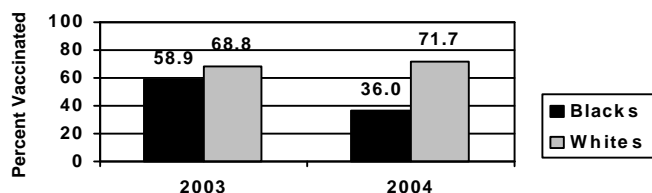


Figure 3. Influenza Vaccination Rates by Race among Persons Aged ≥65 Years, Georgia, 2003-2004



disparity widened in 2004 (Figure 3). Greater efforts should be made to vaccinate older black persons in Georgia.

Resources


Many illnesses have signs and symptoms similar to those of influenza, making a clinical diagnosis difficult. Knowing when influenza is circulating in the community can enhance the accuracy of clinically diagnosed influenza. During influenza season, GDPH emails periodic updates on influenza activity in Georgia to those who are interested. To receive these updates, send an email to flu@dhr.state.ga.us with the word “subscribe” in the subject line. GDPH has developed materials to assist long term care facilities and other care providers in preventing influenza. The materials include outbreak control guidelines, resources for ordering vaccine, using rapid tests, administering antiviral medications, billing Medicare for immunizations, and important contact and reference information. These materials are available at <http://health.state.ga.us/epi/flu/outbreakcontrol.asp>. GDPH is also developing materials to promote influenza vaccination among healthcare workers in Georgia. These materials will be available on the GDPH website at <http://health.state.ga.us/>.

Thank you Georgia influenza Sentinel Providers: GDPH would like to thank the 2004-05 Influenza Sentinel Providers, especially those who continued to report through the summer. The reports provide essential information that permits Public Health to follow statewide disease trends and circulating influenza strains. If you are a healthcare provider interested in volunteering as a sentinel physician please contact James Cope, Influenza Surveillance Coordinator, at 404-463-4625.

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Year			
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October 2005

Volume 21 Number 10

Reported Cases of Selected Notifiable Diseases in Georgia Profile* for July 2005

Selected Notifiable Diseases	Total Reported for July 2005	Previous 3 Months Total Ending in July			Previous 12 Months Total Ending in July		
	2005	2003	2004	2005	2003	2004	2005
Campylobacteriosis	71	237	187	210	706	567	608
Chlamydia trachomatis	2501	9004	9018	7802	36065	35024	32638
Cryptosporidiosis	10	35	36	24	125	139	155
<i>E. coli</i> O157:H7	2	10	5	8	31	26	23
Giardiasis	46	210	243	138	896	878	773
Gonorrhea	1228	4545	4198	3687	18387	16494	15376
<i>Haemophilus influenzae</i> (invasive)	4	18	31	15	75	117	104
Hepatitis A (acute)	10	120	69	33	518	663	179
Hepatitis B (acute)	6	200	125	26	581	582	290
Legionellosis	2	11	23	10	33	44	28
Lyme Disease	2	6	6	2	12	11	4
Meningococcal Disease (invasive)	2	5	3	7	30	25	21
Mumps	0	0	0	0	1	2	3
Pertussis	1	6	7	13	31	31	39
Rubella	0	0	0	0	0	1	0
Salmonellosis	240	636	660	557	1977	2089	1869
Shigellosis	33	395	196	132	1943	733	531
Syphilis - Primary	1	30	27	11	113	140	80
Syphilis - Secondary	5	132	122	46	450	479	358
Syphilis - Early Latent	8	210	69	38	801	506	248
Syphilis - Other**	24	209	207	122	836	822	723
Syphilis - Congenital	0	5	1	0	14	4	4
Tuberculosis	34	137	154	118	528	546	467

* 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

Report Period	Total Cases Reported*			Percent Female	Risk Group Distribution (%)						Race Distribution (%)		
	<13yrs	>=13yrs	Total		MSM	IDU	MSM&IDU	HS	Blood	Unknown	White	Black	Other
Latest 12 Months: 10/04-09/05	4	1,606	1,610	25.2	31.9	5.4	2.1	11.4	1.5	47.7	23.2	74.8	2.0
Five Years Ago: 10/00-09/01	8	1,186	1,194	26.4	30.5	10.3	2.4	17.5	1.7	37.6	19.3	76.2	4.4
Cumulative: 07/81-09/05	224	28,877	29,101	19.4	45.3	15.8	4.9	14.4	1.9	17.7	31.9	65.6	2.5

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

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