

# EPI Update

A Bulletin on Epidemiology and Public Health in Knoxville and Eastern Tennessee



Volume 7, Number 4

October 2003

## In This Issue:

Hepatitis A Outbreak..	1
Hepatitis A Cont.....	2
Hepatitis A Table.....	3
Pneumococcal Vaccina- tions Among Adults..	4
Pneumococcal Table..	5
Hepatitis B.....	6
Changes to Reportable Disease List.....	7
Appropriate Antibiotic Use.....	7
Perinatal Hepatitis B.	7
Disease Reporting....	8
Rabies Reporting....	9
Attachments:	
Antibiotic Inserts	
. Antibiotics and You	
. Antibiotics and You (Spanish)	
. Your Child and Antibiotics	
. Your Child and Antibiotics (Spanish)	
. TAAUC Brochure	
. Reportable Disease List	

## HEPATITIS A OUTBREAK

On September 12, 2003 a case of acute hepatitis A (HAV) in a worker at a local West Knoxville restaurant was reported to the Knox County, TN Health Department. On September 15, a second case of HAV in a worker at the same restaurant was confirmed. Three more cases of suspected HAV were reported in the restaurant workers between September 15 – 18. (The average rate of HAV in Knox County is 6 cases annually, with 31 cases between 1998 - 2002.)

Local hospitals and private physicians were notified of a potential outbreak on September 17, 2003 by fax, and requested to immediately report cases of HAV to their county health department. By September 18, 2003, 36 hepatitis A cases had been confirmed in Knox and six surrounding counties, including five employees of O'Charley's Turkey Creek Restaurant.

Public notification on September 18 requested that people who consumed uncooked foods or iced drinks at O'Charley's restaurant between September 5 – 14 be given ISG, and those eating at the restaurant in August with symptoms be seen by a health professional and evaluated for HAV. On September 18, 2003 a phone bank was set up by Knox County Health Department to answer inquiries from the public regarding HAV and immune sera globulin (ISG). Between Thursday, September 18 and Sunday September 21, 2003, over 5000 persons received ISG.

By Monday, September 29, 65 cases of HAV had been confirmed; Knox County Health Department and Tennessee Department of Health issued an invitation to the CDC to assist with the outbreak investigation.

To identify associations between HAV infection and specific foods consumed at O'Charley's, a case-control study was conducted. A case of HAV was defined as any person with a history of eating at the restaurant between August 1-31, 2003, with clinical symptoms of

# EPI Update

*Continued from page 1*

HAV and laboratory confirmation of HAV infection (IgM anti-HAV-positive). Cases in the study included both restaurant workers and patrons with hepatitis A. 57 cases of laboratory-confirmed HAV were identified that meet the case definition. Potential controls were identified by asking cases to list names of persons with whom they had eaten meal(s) at O'Charley's (dining companions) between August 1-31, 2003. For cases who were also food service workers, eligible controls included other restaurant workers who had also dined at the restaurant on the same date as the worker case. If not enough meal companions could be identified for a case, potential controls were identified using credit card receipts from among restaurant patrons who had dined at the restaurant between August 10 to 24, 2003. Exclusion criteria for controls included a history of jaundice or HAV receipt of hepatitis A vaccine, or recent (August – September 2003) symptoms of dark urine.

All cases and controls were interviewed using a standardized questionnaire. Participants were asked about menu items consumed on each date that they had eaten at O'Charley's during the study period, using a detailed list of eighty-three (83) specific menu items available during the study period. Person-to-person and telephone interviews of participants were conducted by Knox County and East Tennessee Region Health Office staff and CDC team members. Interviews took place between September 28 and October 5.

The results of the epidemiologic analysis indicate that a common source outbreak of HAV occurred among patrons of O'Charley's. The ingredient most likely to have been contaminated with HAV and serve as the source of the outbreak was green onions. This ingredient, often identified as "chives," is used, uncooked, on a large number of menu items. Although several other ingredients were associated in with illness in the case-control study, the association with green onions was strongest. In addition, a higher proportion of cases reported eating green onions than any other ingredient that was significantly associated with illness; all but one of the 57 cases reported eating green onions at O'Charley's. Based on this and other similar recent outbreaks of HAV, the epidemiologic evidence suggests that the green onions were most likely contaminated with HAV at some point before delivery to the restaurant.

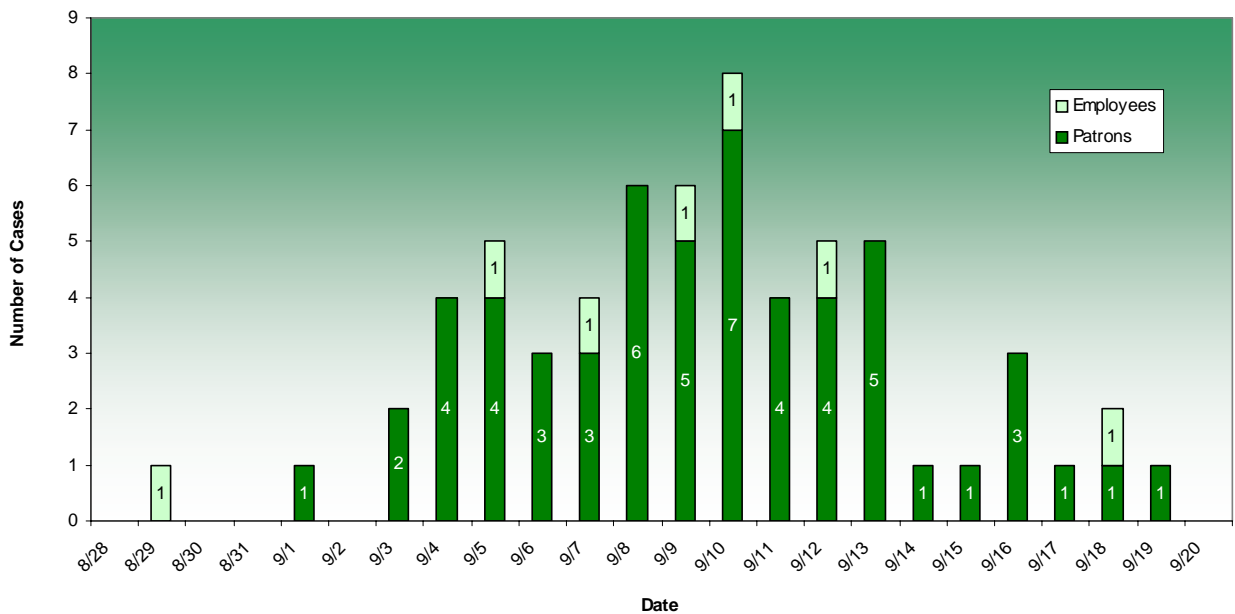
Other than the seven restaurant workers with concurrent disease onset as patrons, no current or former O'Charley's workers had serologic evidence of recent HAV infection. No HAV-infected food service worker was identified who could have served as the source of the outbreak, based on reported onsets of illness.

To date, there have been a total of 81 cases of HAV in the Knox County and East Tennessee Region associated with this outbreak. Only two cases of HAV have been reported as secondary cases, i.e. cases occurring as a result of exposure to one of the 81 original cases.



# EPI Update

Figure 1: Confirmed Hepatitis A Cases Among Individuals Reporting Eating at O'Charley's Turkey Creek, by Date of Onset, Knoxville, TN



If you would like to receive EPI Update via e-mail  
in PDF format please contact

Cindy Lou Sovastion at:

[cindylou.sovastion@knoxcounty.org](mailto:cindylou.sovastion@knoxcounty.org)

## **Pneumococcal Vaccinations Among Adults 65+**

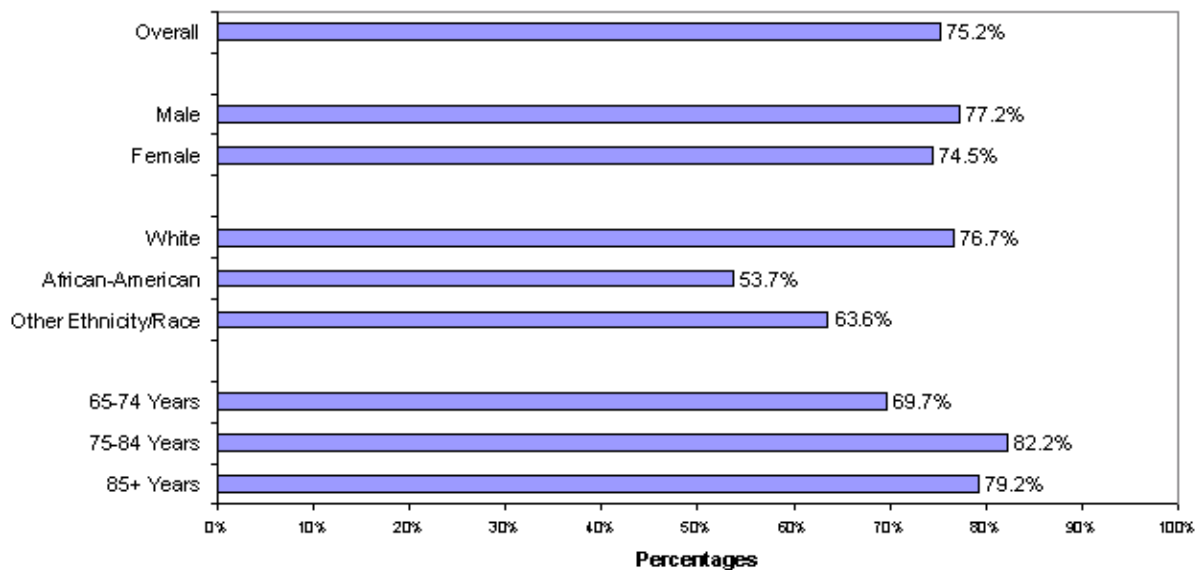
**The Centers for Disease Control and Prevention (CDC) recommends that all adults 65 years of age or older get a pneumococcal vaccination.** Approximately 10,000 to 14,000 people die each year from pneumococcal disease in the United States. Combined with influenza, pneumococcal disease is estimated to be the sixth leading cause of mortality in the United States and hits the elderly population especially hard. **Among the elderly (65+ years) in Knox County death rates from the combined diseases have been on the rise since 1991, while Tennessee's rate has been decreasing.** Tennessee's mortality rate among this age group for pneumonia and influenza decreased from 238.1 per 100,000 population in 1991 to 198.2 per 100,000 population in 2001. In contrast, Knox County's mortality rate for pneumonia and influenza among the elderly increased from 190.5 per 100,000 population in 1991 to 200.6 per 100,000 population in 2001. This mortality data is drawn from vital statistics records.

**In 2002, Knox County elderly adults (aged 65 or older) were more likely to have a pneumococcal immunization than elderly adults in either Tennessee or the nation.** Three out of four Knox County elderly adults (75.2%; an estimated 36,409 individuals) reported having a pneumococcal vaccination at one point in their lives. In contrast only 61.4% of elderly adults in Tennessee and 62.9% of the nation's elderly adults reported having had a pneumococcal vaccination at one point in their lives in 2002. This data is drawn from the 2002 Knox County Behavioral Risk Factor Survey, a randomized phone survey of 5,005 Knox County adults and the national and state 2002 Behavioral Risk Factor surveys.

**Approximately one out four Knox County elderly adults (24.8%, approximately 12,007 individuals) has not yet had a pneumococcal vaccination.** Risk analysis revealed a striking disparity among the demographics in Knox County. **African-Americans elderly adults (53.7%) are 2.9 times less likely to have had a pneumococcal immunization compared to white elderly adults (76.7%).** No clear trends were found for other demographics including gender, income, education, employment status, or whether or not the respondents had a personal physician.

When giving your patients their influenza vaccination this year, don't forget to review their vaccination status for pneumococcal vaccination. The vaccine is 60-70% effective in preventing invasive disease. The vaccination schedule calls for one dose to all adults 65 years of age and older, as well as those persons two years of age or older who have certain medical conditions (HIV infection, asplenia, immunocompromise, or other chronic illness). Routine revaccination of immunocompetent persons is not recommended; those at highest risk for serious pneumococcal infection should receive a SINGLE revaccination dose 5 years after the first dose.

**Table: Percentage of Knox County Elderly (65+ Years)  
Adults Ever Having a Pneumococcal Vaccination in 2002**



References:

Centers for Disease Control (1997). *Pneumococcal polysaccharide vaccine* [Factsheet]. Accessed 10/13/03 at [www.cdc.gov](http://www.cdc.gov).

Centers for Disease Control and Prevention. (2002). *Epidemiology and prevention of vaccine-preventable diseases (The Pink Book)*, (7<sup>th</sup> Ed.).

U.S. Department of Health and Human Services. (2000). *Healthy people 2010* (Conference Edition in Two Volumes). Washington DC.



## Hepatitis B

The East Tennessee Region is reporting an increase in the number of acute hepatitis B cases this year. The region has reported more cases this year than any other region in the state.

The highest rate of hepatitis B disease in the United States is in the 20-49 year old range. In the East Tennessee Region, the mean age for the current year is 37 years of age. A risk factor being identified in the cases this year is intravenous drug use (IVDU).

In response to this increase, The East Tennessee Region instituted a new policy in September for its 15 counties. The policy includes the following:

- A person who is confirmed with hepatitis B is interviewed to determine possible exposure and risk factors. The person is asked about current household contacts, current needle-sharing partners and sex partners.
- Hepatitis B vaccine is then offered to all household contacts, IVDU contacts and sexual partners at no charge to those contacts.
- All persons who present to the local health departments for any service and are determined to be a current IVDU vaccine will also be offered hepatitis B vaccine at no charge.

The East Tennessee Region is also discussing community outreach efforts to offer vaccine to these high-risk populations. **For further information or questions please call the Communicable Disease Section of the East Tennessee Regional Office at 865-549-5241.**

The Tennessee Department of Health's immunization program will supply hepatitis B vaccine to adult contacts (over age 20 years) of acute cases of hepatitis B, or to contacts of newly discovered infections (positive lab results). Contacts 19 years and younger can receive the adolescent formulation of the vaccine. In Knox County, call the Epi Reporting Division at 865-215-5093 for further information. In East Tennessee outside of Knox County call the Regional Office at the number listed previously.

# EPI Update

---

## **Changes to the Tennessee Department of Health Notifiable Diseases List**

The Tennessee Department of Health has updated the list of notifiable diseases. Significant additions to the list include West Nile Fever (a mild West Nile Virus infection) and Prion Disease (Creutzfeldt-Jakob Disease). Please review the notifiable disease list included in this edition of Epi-Update or online at [www2.state.tn.us/health/CEDS/notifiable.htm](http://www2.state.tn.us/health/CEDS/notifiable.htm).

“The Knox County Health Department will kick off the Appropriate Antibiotic Use Campaign in January. We have a variety of flyers and posters that are available and samples are provided in this edition of Epi Update. Please contact us by email ([cindylou.sovastion@knoxcounty.org](mailto:cindylou.sovastion@knoxcounty.org)) or by phone (865) 215-5093 if you desire any of these materials.”

## **Perinatal Hepatitis B Update**

Hepatitis B disease (HbsAg +) in a pregnant female is a reportable disease, with 2 cases being reported in 2002. In September and October of this year, Knox County had 3 cases of HbsAg + reported in pregnant women, with a total of 4 cases reported YTD for 2003. Of the 3 new cases, all were foreign born women. Whether this rise is a result of increase in disease occurrence, increase testing, increase residence of the foreign borne population, or coincidence, all providers should be aware of a slight elevation in Hepatitis B illness.

As with all pregnant women, continue testing for HBV disease early in pregnancy and alert the Epi Reporting Office at (865) 215-5093 if you need to report a case of HbsAg+ in a pregnant female.

# EPI Update

## Selected Diseases Reported by County, East TN January-October, 2003 Year-to-Date

<i>Disease</i>	<i>Campylobacter</i>	<i>Salmonella</i>	<i>Shigella</i>	<i>Hep A</i>	<i>Hep B</i>	<i>DRSP</i>	<i>Pen Sen</i>	<i>Strep</i>	<i>VRE</i>	<i>Chlamydia</i>	<i>Syphiis</i>	<i>Gonorrhea</i>	<i>HIV/AIDS</i>	<i>TB</i>
<b><i>Knox County</i></b>														
<b>YTD '03</b>	<b>53</b>	<b>35</b>	<b>61</b>	<b>48</b>	<b>8</b>	<b>12</b>	<b>25</b>	<b>40</b>	<b>1195</b>	<b>19</b>	<b>568</b>	<b>45/35</b>	<b>7</b>	
YTD '02	43	60	28	5	4	5	33	4	918	30	585	46/26	5	
<b><i>East Tennessee Region</i></b>														
Anderson	7	7	0	3	12	2	0	5	139	1	91	2/1	2	
Blount	15	9	11	4	3	1	4	27	176	5	32	3/4	2	
Campbell	4	3	0	0	4	1	5	12	66	1	4	3/1	3	
Claiborne	1	4	0	0	0	0	3	6	21	0	7	1/0	0	
Cocke	3	4	3	1	6	2	5	4	74	1	5	0/1	0	
Grainger	4	7	0	2	2	0	2	0	31	0	2	0/0	1	
Hamblen	0	1	11	3	8	0	2	2	104	2	13	3/3	4	
Jefferson	8	7	4	2	4	2	3	4	68	2	10	5/1	0	
Loudon	8	4	0	14	3	1	1	1	49	0	9	2/0	1	
Monroe	4	6	0	3	1	0	0	3	44	0	11	1/2	2	
Morgan	1	0	0	2	1	0	0	2	26	2	5	0/1	0	
Roane	2	5	1	5	4	1	2	6	54	2	11	2/1	3	
Scott	2	1	0	1	1	0	1	1	9	3	1	0/0	0	
Sevier	4	9	10	3	1	0	1	6	122	0	13	1/4	0	
Union	1	1	0	0	1	0	3	3	17	0	3	0/0	0	
<b>YTD '03</b>	<b>64</b>	<b>68</b>	<b>40</b>	<b>43</b>	<b>51</b>	<b>10</b>	<b>32</b>	<b>82</b>	<b>1000</b>	<b>19</b>	<b>217</b>	<b>23/19</b>	<b>18</b>	
YTD '02	44	74	18	9	24	12	44	68	870	12	233	26/23	16	

# EPI Update

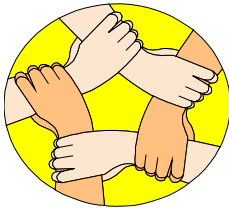
Epi Update  
 A Epidemiology Newsletter  
 from the  
 Knox County Health Department  
 and the  
 East Tennessee Regional Office

Managing Editor:  
 Stephanie Hall, M.D., M.P.H.,  
 Deputy Director

Production Editor:  
 Cindy Lou Sovastion

Knox County Health Department  
 Mark E. Jones, Director

East Tennessee Regional Office  
 Paul Erwin, M.D., M.P.H., Director



The Knox County Health Department  
 and  
 East Tennessee Regional Office  
 encourages your letters and  
 contributions to EPI Update.

Please send these to:  
 Dr. Stephanie Hall or Dr. Paul Erwin

If you would like to be on our mailing contact  
 list or receive EPI Update via e-mail contact

Cindy Lou Sovastion at  
 865.215.5093

or

[cindylou.sovastion@knoxcounty.org](mailto:cindylou.sovastion@knoxcounty.org)

## Animals Tested for Rabies in East TN January-October, 2003



County	Bats	Skunks	Dogs	Cats	Raccoons	Foxes
Anderson	9	0	1	10	0	0
Blount	3	1	10	12	5	1
Campbell	2	1	0	3	0	0
Claiborne	0	0	3	4	0	1
Cocke	0	0	3	3	0	0
Grainger	3	2	1	3	0	1
Hamblen	1	1	1	2	0	0
Jefferson	0	0	6	0	2	0
Knox	27	3	76	61	32	17
Loudon	3	1	3	4	6	0
Monroe	0	0	13	5	0	0
Morgan	0	0	2	0	0	0
Roane	2	2	7	1	0	0
Scott	2	0	0	0	0	0
Sevier	10	4	14	9	7	3
Union	2	0	1	1	2	0
<b>Total</b>	<b>64</b>	<b>15</b>	<b>141</b>	<b>118</b>	<b>54</b>	<b>23</b>

### Positive Reports

Knox County	3 Bat
Sevier	1 Dog (NC Skunk)
	1 Bat
	1 Fox (NC Skunk)