Louisiana Morbidity Report

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Oysters-related Outbreak

Between December 30, 1996 and January 7, 1997 the Office of Public Health was notified of 60 clusters of persons from five states with gastroenteritis associated with consumption of Louisiana oysters. OPH investigated and on January 3, 1997 mandated an emergency closure of the suspected waterways of Black Bay, Lake Machias, Lake Fortuna, California Bay, Bay Crabe, Bay Gardene, American Bay and Bay Lafourche.

Of 297 persons in parties of three or more that were contacted and interviewed, 185 (62%) developed diarrhea or vomiting for over 24 hours. The most common symptoms were diarrhea (90%), cramps (72%), vomiting (61%), headache (46%) and fever (45%). The median duration of illness was 2 days (range 1 - 10 days).

The epidemic curve (Figure 1) shows two clusters of illness between December 21, 1996 and January 7, 1997. Of 207 persons who ate oysters, 159 (77%) became ill compared to 13 (19%) of 170 persons who did not eat oysters (relative risk 4.1; 95% confidence intervals 2.5, 6.8). The median time from the oyster-associated meal to onset of symptoms was 38 hours (range 8 - 90 hours).

Reviewing retailer and wholesaler records about the oysters consumed by individuals within the 60 clusters resulted in a traceback of 23 retailers, 10 wholesalers, and 20 harvesters. Interviews with these fishermen are pending.

Norwalk virus was found by electron microscopy in seven of 11 stool samples from ill persons. In six specimens (representing six different clusters), three unique genetic

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sequences (sequence 1, 2, 3) were identified (Table 1). Each sequence was associated with a different harvest site; sequence

Figure: Epidemic curve from 60 clusters of gastroenteritis associated with eating oysters (n = 183). Dates of harvesting oysters, OPH notification, and closure of the oyster beds are also illustrated.



1 was associated with oysters harvested from Black Bay, sequence 2 with oysters harvested from Lake Machias and sequence 3 with oysters harvested from American Bay. Norwalk virus was also identified in oyster meats. The genetic sequence of this virus has not yet been determined.

Norwalk virus is a pathogen found only in humans, therefore the oysters must have been contaminated by human feces. The large number of wholesalers and retailers involved suggests that the level of contamination occurred at the oyster beds. During the time of this outbreak, the only possible source of human sewage found in the implicated waterways, to date, is oyster harvesters, who routinely dump their waste over (continued on next page)

Table: Association between date of oyster-associated meal, the genetic sequence found in stool samples, and the harvest dates and sites

Cluster	Date of meal	Stool sequence	Harvest date	Harvest site
А	1/1/97	1	12/29/96	Black Bay
В	12/31/96	1	12/29/96	Black Bay
	1/1/97			
С	1/1/97	1	12/23/96	Black Bay
D	1/2/97	2	?	Lake Machias
E	1/5/97	2	?	Lake Machias
F	1/5/97	3	12/22/96	American Bay

Oysters-related Outbreak (Cont.)

board. During the month of December, due to the cold and foggy weather, recreational boaters were rare, and the harvest sites were many miles from community sewage outlets.

This is the third oyster-related outbreak due to Norwalk virus within the last three years. In 1993, oyster contamination in Cabbage Reef was associated with fishermen infected with Norwalk virus who dumped their waste directly into the water. In 1996, the source of oyster contamination was felt to be most likely an oil rig on Stone Island which had a malfunctioning sewage disposal system and several employees who had Norwalk-like gastroenteritis prior to the outbreak. Fishermen dumping waste overboard could not be excluded as an additional source of oyster contamination. In both outbreaks, recommendations centered around proper sewage disposal and its enforcement.

The third outbreak differs from the other two because three different harvest waterways have been identified, and each waterway is associated with a unique Norwalk virus strain. This data suggests the possibility that several fishermen, infected with Norwalk viruses of different genotypes, were simultaneously dumping their waste, but in different waterways, and that environmental conditions somehow favored accumulation of the viruses in the oysters.

Because the present epidemiologic and laboratory investigation is on-going, OPH's interim recommendations have been to more strictly enforce toilets on boats and to create acceptance stations at docks. The eight waterways were reopened on January 23, 1997 with no additional cases of gastroenteritis reported.

Emerging Pathogens Surveillance

In a previous Morbidity Report (Vol. 7, No. 4), the Epidemiology Section published information regarding the initiation of an active surveillance program on selected antibiotic resistant pathogens, drug-resistant streptococcus pneumoniae (DRSP), methicillin resistant staphylococcus aureus (MRSA) and vancomycin resistant enterococcus species (VRE). From July through December, 1996 the surveillance program collected data on these organisms from twenty sentinel hospitals throughout the nine public health regions of Louisiana. Both aggregate data, collected monthly on the number of isolates screened from sterile sites and those demonstrating drug resistance and case reports from reference laboratories and Infection Control Practitioners, respectively, have provided useful information toward determining baseline levels of resistance statewide. Aggregate data show that statewide, 19% of S. pneumoniae are resistant to penicillin, 27% of S. aureus are resistant to methicillin/oxacillin, and 2% of enterococci are resistant to vancomycin. The rate of resistance of these organisms by public health region reveal extreme variability between regions and may be biased due to convenience sampling of hospitals, small sample size and limited period of data collection (Figure 1). Large rates seen in some of the regions are due to the latter two and are not representative of actual regional rates. However, beginning on January 1, 1997 the Epidemiology Section increased the initial sample of selected hospitals to include all hospitals with 175 beds or more resulting in a doubling of the sample size which is expected to more actually reflect drug-resistant patterns in the state.

A case has been defined as an individual with DRSP or VRE which was isolated from a sterile site. When speciation is possible, enterococcus is reported as *faecium* or *faecalis*. Case reports have provided data on patient demographics, infection site, bacterial species and drug resistance patterns. There were eight male and six female cases of DRSP; the median age was 52, but infection was seen ranging from <1

Figure: Drug resistant pathogens in Louisiana, July-December 1996





to 100 years of age. Of the fourteen cases of DRSP eight were isolated from blood, 2 bronchial washings and 1 each from CSF, sinus surgical aspirate, middle ear and lung. Four each fell in the months of July and November. Seasonal trends of cases will continue to be monitored and reported. There were sixteen cases of VRE, five male and 11 female, ranging from 24 to 92 years with a median age of 76. Of the fifteen cases of VRE 13 were isolated from urine catheter, 2 from blood and 1 from surgical specimen.

The data obtained will help determine the risks associated with the acquisition and spread of drug-resistant infections, monitor changes in resistance patterns, and provide early detection of new resistance patterns.

Pedestrian Injuries

Approximately 84,000 pedestrians were injured and 5585 were killed in traffic crashes in the United States during 1995. Pedestrian injuries account for two percent of all traffic crash injuries and 13% of all traffic crash fatalities. On average, one pedestrian is killed in a motor vehicle crash every 94 minutes and one is injured every 6 minutes (1).

During 1995, 109 pedestrians were killed in Louisiana and an additional 104 suffered traumatic brain injuries (TBI). Pedestrians over the age of 64 represented the largest percentage of pedestrian fatalities while those under the age of 5 had the largest percentage of TBIs (Figures 1 and 2). Males accounted for 72% of the TBIs and 76% of the pedestrian deaths.



Ninety-six percent (100) of the pedestrian-related TBIs resulted from a pedestrian being struck by a car or truck. However, 3 of the injures were caused by pedestrians being struck by trains and 1 resulted from a bicycle-pedestrian collision.

Ninety-eight percent of the pedestrian-related TBIs had information on alcohol testing at the time of injury. Of those, 22% had blood alcohol concentrations (BAC) above the legal limit for driving or exhibited clinical evidence of intoxication (admission of alcohol use by patient or family present at the time of injury, smell of alcohol on breath, or positive urine or saliva test). Twelve percent tested positive for alcohol use but remained under the legal limit and 66% were not tested for blood alcohol and did not exhibit signs of intoxication.





Generally, pedestrian deaths are primarily an urban problem since many pedestrians are killed at crosswalks, sidewalks, median strips, and traffic islands. Warning signs and pavement markings in addition to physical separations such as overpasses and barriers may aid in the prevention of pedestrian injuries and deaths (1). However, simply obeying safe crossing rules (stopping at the curb or edge of the roadway, checking for parked cars that may be ready to move, looking left-right-left before crossing, and crossing ONLY when the street is clear) also reduces the risk.

New Vaccine Combination

On October 2, the Food and Drug Administration (FDA) licensed a new product called COMVAX, which combines Haemophilus influenzae b conjugate vaccine and hepatitis B vaccine. The new vaccine is recommended to be given at ages 2, 4, and 12-15 months and is produced by Merck. This specific vaccine is expected to have only limited use within the public clinics in Louisiana, because it does not fit well within the current recommendations for the timing of hepatitis B vaccination of infants. Giving the first dose of Hepatitis B vaccine to newborns before they leave the hospital is very important, because it provides the earliest protection for those infants who are going home to an environment with a chronic hepatitis carrier, and because it provides some protection for infants born to a Hepatitis B carrier who may not have been tested prior to delivery. Also, the third dose of Hepatitis B vaccine is not given until 12-18 months with Comvax. This leaves the infant at risk for a longer period than necessary. However, it would be a vaccine which can decrease the number of injections given at the two month visit by combining antigens given at that age.

Inadequate Health Care Coverage, 1991-1994

Inadequate access to medical care contributes to many public health problems, and is a particular problem in Louisiana. According to the Behavorial Risk Factor Survey conducted annually from 1991 to 1994, one in five Louisiana adults, or approximately 850,000 lacked health insurance. An additional 8.8% (375,000) had insurance but reported that they could not afford to see a doctor at some time in the last year and are considered underinsured (Figure 1).

Blacks were more likely than whites (32.4% vs 16%) to report that they were uninsured. Females were more likely

Figure 1: Insurance coverage of Louisiana adults, 1991-1994



than males (10.8% vs 5.5%) to report that they were underinsured (Figure 3). Adults aged 18-35 reported being uninsured nine times more frequently than adults, 65 and older (29% vs 3.2%).

The Behavioral Risk Factor Survey (BRFSS) is an annual population-based randomized telephone survey conducted by the Louisiana Office of Public Health, DHH and the Center for Business Research, Northeast Louisiana State University. Approximately 1,600 adults are interviewed annually.

The Current Population Survey (CPS) is a telephone survey conducted by the US Census Bureau. According to the CPS, 51% of Louisiana residents had health insurance through employee benefits packages, 16.5% had Medicaid, 11% Medicare, 14% had other private insurance or CHAMPUS and almost 20% had no health insurance (Figure 2). Nonelderly adults (23%) were more likely than children under 18 (17.8%) and elderly adults (1.8%) to have no health insurance. Persons under 65 years were most likely to be uninsured if their family incomes were less than twice the federal poverty level.

Results from the CPS survey showed that children are more likely than adults 18 to 64 to have had Medicaid (34% vs 9%). Fifty-seven percent of children lived in families with incomes less than twice the federal poverty level. Twenty-one percent had no health insurance and more than half (53%) were covered by Medicaid. Forty-three percent of the children lived in families with incomes over 200% of the federal poverty level. Only 13% were uninsured. Thirty-eight percent of Louisiana children lived in families with incomes



below the federal poverty level; 64% of these received Medicaid.

Data from the BRFSS and the CPS are self-reported which may bias results. Survey participants are representative of Louisiana's population as to age, gender, and race. Because persons must have a working phone number to be included, it is likely that the poorest population are underrepresented in the survey. This suggests that the survey results may underestimate the proportion of the population that is without insurance or is underinsured.

In spite of significant expenditures spent by Louisiana for Medicaid coverage, there remains a large proportion of persons who are uninsured and underinsured. Many of these individuals seek care for conditions through the charity hospital system that might have been prevented.

Figure 3: Insurance status in Louisiana by race and sex, 1991-1994







Notification of Partners of HIV-infected Persons

Sex partners of HIV-infected persons are at high risk for HIV infection themselves, and are often unaware of their risk. Notification of these partners of their risk provides them the opportunity to change their behavior if they are still uninfected or to receive medical treatment if they are already infected. This process can prevent HIV infections and save lives. In a study conducted in South Carolina, 92% of partners who were notified said that they they felt the health department should continue partner notification.

Notification of partners of HIV-infected persons of their risk has been part of the HIV prevention program for the Louisiana Office of Public Health for several years. A review of this program published in the January-February 1996 Louisiana Morbidity Report indicated that 68% of HIVinfected persons interviewed by OPH staff named at least one sex partner. Of partners who were named and tested for HIV infection, 29% were previously known to be HIV-positive, 18% were newly-identified as HIV-positive, and 54% were HIV-negative.

Currently, OPH staff interviews about 400 HIV-infected persons each year of the approximately 1,100 cases of AIDS and 700 cases of HIV infection reported. The largest group of the persons who receive this partner notification are reported from public clinics, followed by persons reported from public hospitals. Persons with HIV infection reported to AIDS surveillance staff from private providers are not interviewed by OPH unless the providers specifically ask for this service. Some of the HIV-infected persons not interviewed by the health department staff notify their own partners, and some partners are notified by physicians or other medical providers. There is currently no system in place to document patients' intention to notify their own partners. Under the current practice, it is likely that many partners of HIVinfected persons are not notified of their risk at all.

A variety of circumstances have led OPH to reconsider the current policy and propose changes. Under a proposed policy change to take effect in the Spring of 1997, OPH will attempt to assure that all spouses and non-spouse sexual partners of all known HIV-infected persons are notified of their risk, regardless of which medical provider reported the persons to OPH. This notification may take place by the infected person, by his/her medical provider, or by OPH Disease Intervention Specialist (DIS) staff. Each report of a person with HIV infection received by AIDS surveillance staff will be first checked to determine if he/she has been reported before. If not, the name will be referred to DIS staff. The DIS will contact the patient's medical provider and ask if the partners will be notified by the patient or by the medical provider. If the provider reports that the partners will not be notified in these ways, the DIS will contact the patient for an interview and notify the partners named. When DIS carry out the partner notification, the name of the infected person will

be kept confidential - that is, partners will only be told of their exposure, not the name of the infected person to whom they have been exposed.

For each HIV-infected person reported, the DIS will be required to record on a standard form which method of partner notification was used. In keeping with a federal requirement, notification for spouses and non-spouse partners will be identical except that legal spouses will be notified if they have had sexual contact at any time up to 10 years prior to the interview (or up to the time of infection if this date is known); non-spouse sex partners will be notified if they have had sexual contact in the 12 months prior to the interview. OPH will soon propose a new provision in the state Sanitary Code describing these policies and procedures as part of the State Health Officer's authority and responsibility to control communicable diseases.

The HIV/STD Section feels strongly that this change will help target information and counseling to people who are at extraordinarily high risk, who need this information, and in whom HIV infection can be prevented. Persons with questions or comments should contact the HIV office at (504) 568-7524.





January - February , 1997 PROVISIONAL DATA															
Table 1. Disease Incidence by Region and Time Period HEALTH REGION TIME PERIOD															
DISEASE		1	2	3	4	5	6	7	8	9	Jan- Feb 1997	Jan- Feb 1996	Cum 1997	Cum 1996	% Chg
Vaccine-preven Measles	table	0	0	0	0	0	0	0	0	0	0	0	0	0	
Mumps		0	0	0	0	2	0	0	1	0	3	6.	3	6	-50
Rubella		0	0	0	0	0	0	0	0	0	0	0	0	0	
Pertussis		1	1	0	0	0	0	0	0	0	2	2	2	2	0
Sexually-transm AIDS	nitted Cases Rate ¹	28 2.6	9 1.6	4 1.1	3 0.8	2 0.8	0	3 0.6	6 1.7	0 0	55 1.3	246 5.7	55 1.3	246 5.7	-78
Gonorrhea	Cases Rate ¹	24 41.0	141 25.0	88 24.0	103 20.0	89 33.0	18 6.0	171 34.0	106 30.0	51 13.0	1191 28.0	1822 43.0	1191 28.0	1822 43.0	-35
Syphilis(P&S)	Cases Rate ¹	38 3.7	14 2.5	7 1.9	10 1.9	0 0	2 0.7	10 2.0	5 1.4	7 1.8	93 2.2	105 2.5	93 2.2	105 2.5	-11
Enteric Campylobacter		2	5	2	1	1	0	0	0	0	11	19	11	19	-42
Hepatitis A	Cases Rate ¹	5 0.5	1 0.2	2 0.5	7 1.4	0	0	11 2.2	15 4.3	2 0.5	43 1.0	12 0.3	43 1.0	12 0.3	+258
Salmonella	Cases Rate ¹	3 0.3	3 0.5	4 1.1	5 1.0	4 1.5	0	2 0.4	4 1.1	6 1.6	31 0.7	20 0.5	31 0.7	20 0.5	+55
Shigella	Cases Rate ¹	6 0.6	5 0.9	0	2 0.4	2 0.7	0	0	1 0.3	2 0.5	19 0.5	81 1.9	19 0.5	81 1.9	-76
Vibrio cholera		0	0	0	0	0	0	0	0	0	0	0	0	0	
Vibrio,other		0	0	0	0	0	0	0	0	0	1	0	1	0	
<u>Other</u> Hepatitis B	Cases Rate ¹	13 1.3	4 0.7	0	0	0	1 0.3	5 1.0	2 0.6	3 0.8	28 0.7	12 0.3	28 0.7	12 0.3	+133
Meningitis/Bac H. influenza	teremia ¢	0	0	0	0	0	0	0	0	0	0	0	0	0	
N. meningiti	dis	5	3	0	2	2	1	1	1	2	17	18	17	18	-5

LOUISIANA COMMUNICABLE DISEASE SURVEILLANCE January - February , 1997

1 = Cases per 100,000

Table 2. Diseases of Lo	w Frequency
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Disease	Total to Date						
Blastomycosis	0						
Brucellosis	0						
Histoplasmosis	1						
Lead Toxicity	3						
Typhoid	0						
Rocky Mountain Spotted Fever	0						
Legionellosis	0						
Lyme Disease	0						
Malaria	2						
Tetanus	0						
Table 3. Animal Rabies Parish No. Cases	: (Jan - Feb, 1997) <u>Species</u>						
No Cases for this period.							



ANNUAL SUMMARY Tuberculosis - 1995

The tuberculosis case count rose in 1995 for the second year in a row, from 443 cases to 476 cases. Louisiana's case rate of 10.8 per 100,000 is approximately the same as the national rate (Figure 1). As in the past, the case rate was approximately three times as high in blacks as in whites (20 versus 6.2 per 100,000). While the age group with the highest rates was 65 and older, an increasing number of cases occurred in persons age 35-54 (Figure 2).

Of the 476 cases, 419 (88%) had pulmonary disease and 57 (12%) had extrapulmonary disease. In 1995, for the first time in many years, cases of tuberculosis in adults which were not culture-proven were included, for consistency with national data. Of the 476 cases, 88 were in this category.

Of 301 cases for which the HIV status was known, 42 (14%) were HIV-infected. This percentage is lower than in previous years. As part of a national surveillance system, Louisiana is now collecting information on risk factors for tuberculosis. Of the cases in 1995, 108 (23%) were known to use excessive alcohol, 11 (2.3%) were known to use intravenous drugs, and 26 (5.5%) were known to have been homeless in the year before diagnosis.

Information was available regarding initial drug susceptibility of *M. tuberculosis* isolates from 252 persons. Of these isolates, 11 (4.3%) were resistant to isoniazid (INH), and 2 (0.7%) were resistant to rifampin.



Figure 1: Rates of tuberculosis, U.S. and Louisiana, 1960-1995 Cases/100,000

Comment:

The increase in tuberculosis cases is probably related to both increased case-finding and to the expansion of the case definition. However, tuberculosis remains an important health problem in Louisiana, with an increasing number of cases in young adults which may be related in part to the HIV epidemic. The state is not currently experiencing a large problem of multi-drug-resistant tuberculosis seen in other areas but there are resistant strains in some patients.





LOUISIANA FACTS

In the mid 1800's physicians adhered to the idea that all illness was simply a consequence of "bad air." It was felt that the environment was contaminated by miasmate (imaginary, invisible gases which supposedly arose from swamps and decaying plant and animal matter). Several of New Orleans most distinguished physicians did not believe diseases were contagious and that the use of sanitary measures was the essential key. It was felt by some that yellow fever originated in New Orleans. Dr. William Wood summarized their viewpoint in the following: "I believe the poison that gives rise to yellow fever, to exist in the atmosphere is generated under peculiar circumstances, requiring the influence of certain degrees of heat and moisture, added to animal vegetable decomposition. That this power, when generated, is of local origin, and confined to circumscribed districts of country, or portions of our country, and all who enter within the infected circle and breathe the air, are liable to take the disease.

LIST OF REPORTABLE DISEASES/CONDITIONS

REPORTABLE DISEASES

Acquired Immune Deficiency Syndrome (AIDS) Amebiasis Anthrax Aseptic meningitis Blastomycosis **Botulism*** Brucellosis Campylobacteriosis Chancroid** Cholera* Chlamydial infection** Diphtheria* Encephalitis (specify primary or post-infectious) Ervthema infectiosum (Fifth Disease) Escherichia coli 0157:H7 Foodborne illness* Genital warts** Gonorrhea** Granuloma Inguinale**

Hemolytic-Uremic Syndrome Hepatitis, Acute (A, B, C, Other) Hepatitis B in pregnancy Herpes (genitalis/neonatal)** Human Immunodeficiency Virus (HIV) infection**** Legionellosis Leprosy Leptospirosis Lyme disease Lymphogranuloma venereum** Malaria Measles (rubeola)* Meningitis, (Haemophilus)* Meningococcal infection (including meningitis)* Mumps Mycobacteriosis, atypical*** **Ophthalmia neonatorum**** Pertussis Plague*

Poliomyelitis Psittacosis Rabies (animal & man) **Rocky Mountain Spotted** Fever (RMSF) Rubella (German measles) Rubella (congenital syndrome) Salmonellosis Shigellosis Syphilis** Tetanus Trichinosis Tuberculosis*** Tularemia Typhoid fever Typhus fever, murine (fleaborne, endemic) Vibrio infections (excluding cholera) Yellow fever*

OTHER REPORTABLE CONDITIONS

Cancer **Complications of abortion** Congenital hypothyroidism Galactosemia Hemophilia Lead poisoning Phenylketonuria **Reye Syndrome** Severe Traumatic Head Injuries+ Severe undernutrition severe anemia, failure to thrive Sickle cell disease (newborns) Spinal cord injury+ Sudden infant death syndrome (SIDS)

Report cases on green EPI-2430 card unless indicated otherwise below.

*Report suspected cases immediately by telephone. In addition, report all cases of rare or exotic communicable diseases and all outbreaks. **Report on STD-43 form. Report syphilis cases with active lesions by telephone.

***Report on CDC 72.5 (f 5.2431) card

1-800-256-2748

**** Report on Lab 94 form (Retrovirus). Name and street address are optional but city and ZIP code must be recorded. +Report on DPP-3 form; preliminary phone report from ER encouraged (568-2509).

> Numbers for reporting communicable diseases Local # 568-5005 FAX # 504-568-5006

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