Louisiana Morbidity Report

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Hansen's Disease (Leprosy) On the Rise - Louisiana

Many physicians think of leprosy as a disease of the past and have the impression that the disease has been eradicated from Louisiana.

Leprosy was well established in Louisiana prior to the arrival of the Acadians. In the late 1700s, the migration of Acadians from Nova Scotia to Louisiana seems to have imported a few more cases of leprosy. It was only by the late 1880s that the numbers were high enough to cause the Louisiana State Board of Health to found a leprosy hospital at Carville in Iberville parish. By 1921 the hospital was taken over by the U.S. Government.

Incidence rates (new case registrations) of leprosy had increased by the 1880s (4.5 per 100,000) to reach a high of 12 per 100,000 in the late 1920s. These high rates were observed in South Louisiana (often named "French" Louisiana and New Orleans). North Louisiana was relatively spared with rates rarely exceeding 1.0 per 100,000.

Incidence

From the 1930s to the 1960s the number of new cases and incidence decreased progressively from about 0.5 per 100,000 population to 0.2 per 100,000 population. Case numbers then remained stable to around 5 to 10 new cases per year for an incidence of approximately 0.1. In the 1990s, the number of cases increased to 10 to 20 per year for an incidence increasing to 0.2 to 0.4 per 100,000. Trends from 1930 to 2008 are presented in Figures 1a and 1b.

Figure 1a: Leprosy Cases and 10-Year Average Incidence Rates - Louisiana, 1930-2008

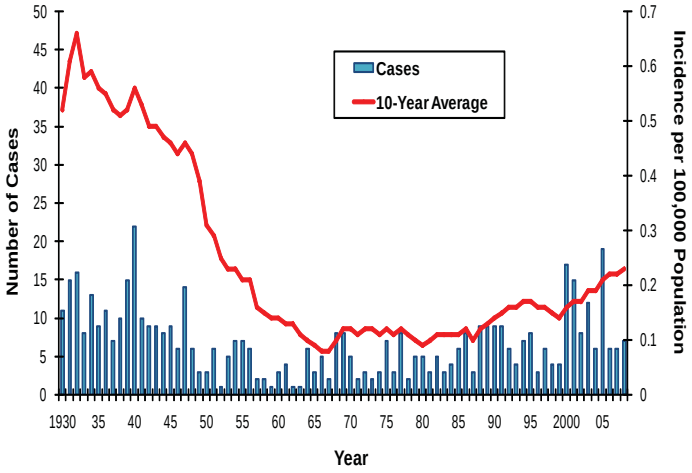
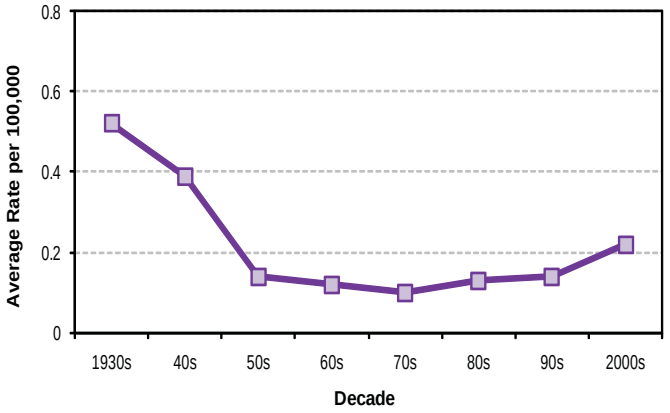


Figure 1b: Leprosy Incidence Rates by 10-Year Periods - Louisiana, 1930s-2000s



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Incidence by Sex

There has been a slight excess of leprosy among males from the earliest report (Table 1); however, the preponderance of males has increased since the 1990s. This type of shift is not usually expected and may reflect a shift in exposure patterns.

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Table 1: Trend in Sex Ratio of Leprosy Cases by Decades
Louisiana, 1930s-2000s

Sex Ratio				
Period	Sum	Males	Females	Ratio Males:Females
I=Prior to 1930s	**343**	**212**	**131**	**1.6:1**
30s	115	65	50	1.3:1
40s	96	48	48	1.0:1
50s	40	18	22	0.8:1
60s	41	23	18	1.3:1
70s	38	20	18	1.1:1
80s	55	34	21	1.6:1
II=1930s to 1980s	**385**	**208**	**177**	**1.2:1**
90s	60	44	16	2.8:1
00s	96	69	27	2.6:1
III=1990s to 2000s	**156**	**113**	**43**	**2.6:1**

The difference in distribution by sex between period I and II is barely significant (OR=1.38, CI 1.01-1.87) while the difference between period II and III is high and significant (OR=0.45, CI= 0.29-0.68).

Incidence by Age Group

Since it appears that there were some shifts in the incidence pattern by sex and age group, the data was analyzed for 3 different periods: 1930 to 1959, 1960 to 1989 and 1990 to 2008. (Figures 2a, 2b and 2c)

Figure 2a: Average Annual Incidence Rate of Leprosy by Sex and Age Group - Louisiana, 1930-1959

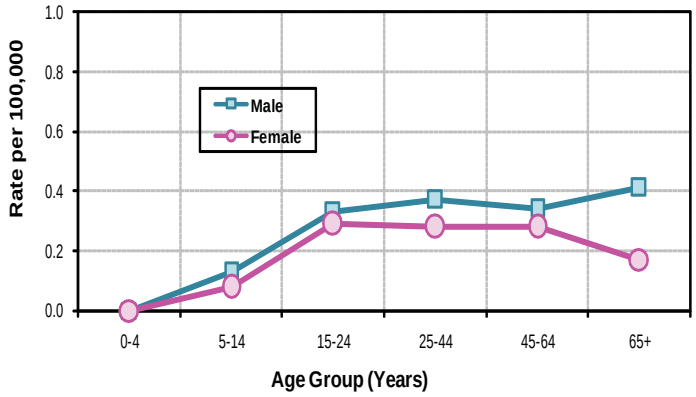


Figure 2b: Average Annual Incidence Rate of Leprosy by Sex and Age Group - Louisiana, 1960-1989

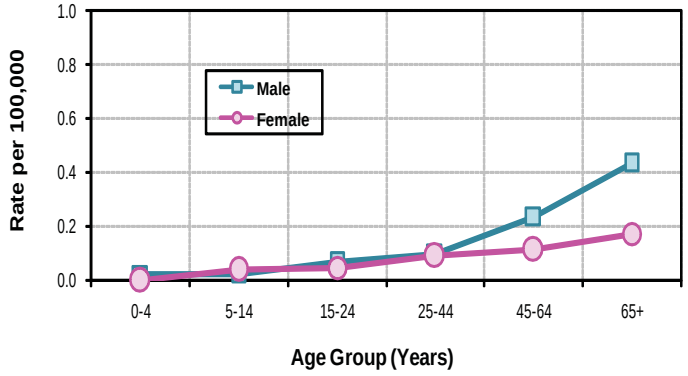
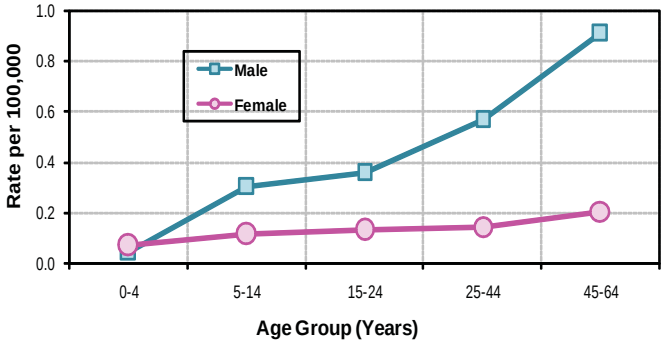


Figure 2c): Average Annual Incidence Rate of Leprosy by Sex and Age Group - Louisiana, 1990-2008



Incidence rates are lower among children and increase with age. That pattern is observed throughout all 3 periods.

The incidence pattern by sex and age group has changed over time. In the first period, there was very little difference between males and females until old age. In the second period, by age 45, males start to show higher incidence than females. Finally in recent times, male incidence is much higher than females, much earlier in life. Male children in the age group of 5 to 14 years, already show higher incidence than female children.

Announcements

Updates: Infectious Disease Epidemiology (IDES) Webpages
http://www.infectiousdisease.dhh.louisiana.gov

ANNUAL REPORTS: Creutzfeldt Jacob Disease; Hepatitis A; Leptospirosis; Summary of the Number of Reportable Diseases, 2008-2010; Varicella; Yellow Fever
EPIDEMIOLOGY MANUAL: Infection Control and Musical Instruments
FOODBORNE: Gingerbread House Recall
HAI: CMS FY11 HAI Reporting Webinar; CMS-NHSN Training and Enrollment Site; Complete Patient Safety Manual - September 2010; Quarterly Louisiana HAI Newsletters, Spring-2010, Summer-2010, Fall-2010
INFLUENZA: Weekly Report
SCHOOL RESOURCES: New Web Page
VETERINARY: Microbiological Makeup of Common Veterinary Infections, Third Quarter, 2010 - Canine, Equine and Feline

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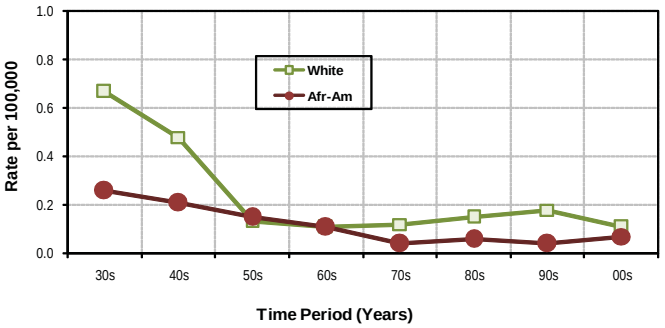
Incidence by Race / Ethnic Group

Throughout the time periods listed in Figure 3, Whites were a majority of cases (77.0%) followed by African-Americans (19.6%). Other groups are rarely represented: Hispanic, 1.6%; Asian /Pacific Islander, 1.6%; Other, 0.2%. There has been not much change in the distribution of cases throughout these time periods, from 73% to 77% for Whites without any significant changes.

Figure 3: Incidence of Cases by Race – Louisiana, 1930s-2000s

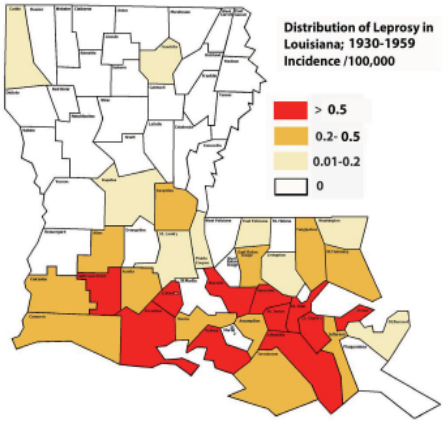


The incidence among Whites has been much higher than that of African-Americans. Incidence has been decreasing in both groups, however, there still remains a gap between both groups.

Geographical Distribution

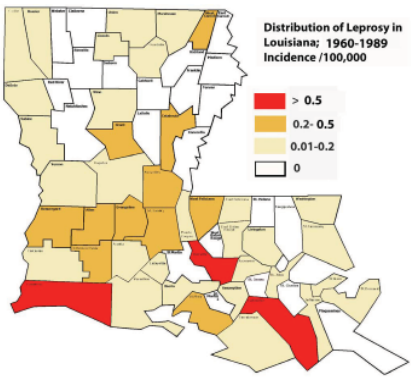
Leprosy occurred mainly in South Louisiana in the years between 1930 to 1959. The highest incidence rates were observed (0.5 per 100,000) in a narrow band of parishes from Orleans Parish in the east to Calcasieu Parish in the west (the "Cajun" parishes). In north Louisiana, cases were restricted to a few larger cities (Shreveport, Monroe and Alexandria) (Figure 4).

Figure 4: Distribution of Leprosy - Louisiana, 1930-1959



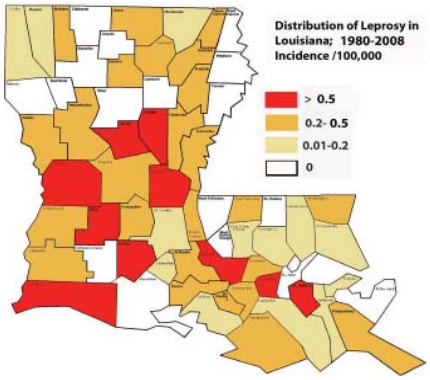
Between 1960 to 1989, there was a sharp decrease in incidence in the Cajun parishes where most incidences had decreased to 0.2 to 0.5 per 100,000 population. Meanwhile the northern parishes saw a moderate and widespread increase in incidence (0.02 to 0.2 per 100,000 population) (Figure 5).

Figure 5: Distribution of Leprosy - Louisiana, 1960-1989



In recent years (1990 to 2008) there has been a radical change in geographical distribution. Leprosy is on the increase throughout the state - in the Cajun parishes, and particularly in North Louisiana. Several authors had noticed this trend towards leprosy cases in northern Louisiana where it was rarely observed in earlier years (Figure 6).

Figure 6: Distribution of Leprosy - Louisiana, 1990-2008



Origin of Cases

The majority of cases are U.S. born (from 2000 to 2008: 94% were born in the U.S.) (Table 2).

Table 2: Country of Origin of Leprosy Cases - Louisiana, 2000-2008

Country of Birth	Total	00	01	02	03	04	05	06	07	08
United States	90	15	15	6	10	6	19	6	6	7
Brazil	1			1						
India	1			1						
Taiwan	1				1					
Vietnam	1				1					
Western Samoa	2	2								
Total	6	2	0	2	2	0	0	0	0	0

Only one case was diagnosed before entry into the United States; all others were diagnosed after entry.

Clinical Classification

The majority of cases are multi-bacillary. From the years 2000 to 2008, the types 'Borderline' (B), 'Borderline Lepromatous' (BL) or 'Lepromatous' (LL) represent 70% of all cases.

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(Hansen's Disease ... Continued from Page 3)

The distribution of cases by gender shows a slight preponderance of multi-bacillary cases (lepromatous and borderline) among males (77% L for males vs. 68% L for females, 6% B for males vs. 4% B for females) while the opposite is true for pauci-bacillary (indeterminate and tuberculoid) cases (1% I for males vs. 3% for females, 16% T for males vs. 24% for females), the difference being significant ($\chi 2=12.7$, p=0.05) (Table 3).

Table 3: Clinical Classification of Leprosy Cases - Louisiana, 2000-2008

Hansen's Disease Classification	Total	Percent
Indeterminate (I)	8	10.5%
Tuberculoid (TT)	4	5.3%
Borderline Tuberculoid (BT)	10	13.2%
Borderline (B)	1	1.3%
Borderline Lepromatous (BL)	19	25.0%
Lepromatous Leprosy (LL)	34	44.7%
Subtotal	76	100.0%
Unspecified	20	
Total	96	

The distribution of cases by age group shows some difference by gender. Among males the proportion Multi-bacillary/Pauci-bacillary is fairly constant (from 85% -15% to 90%-10%). Among females, the proportion Multi-bacillary/Pauci-bacillary decreases with age (from 68%-32% to 56%-44%) with the exception of the 15 to 44 age group where the majority are multi-bacillary (96%) (Figures 7 and 8).

Figure 7: Distribution by Bacteriological Type Within Age Group Males Louisiana, 2000-2008

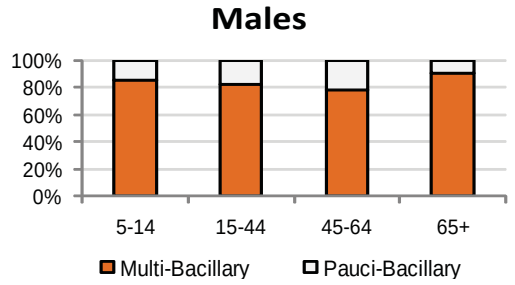
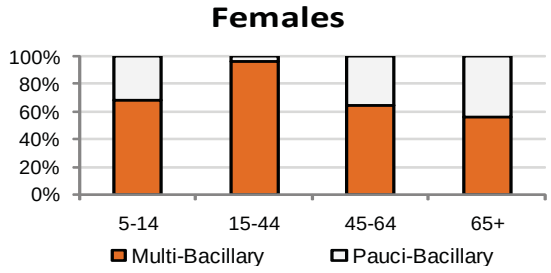


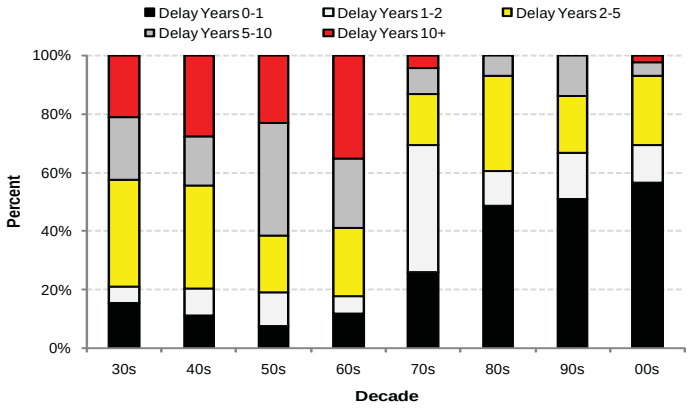
Figure 8: Distribution by Bacteriological Type Within Age Group Females Louisiana, 2000-2008



Delay Onset-Diagnosis

From 2000 to 2008, the majority of cases were diagnosed within one year of onset (55%). The delay between onset and diagnosis has been steadily reducing throughout the last 80 years. In the 1930s, 40% of cases were diagnosed within 2 to 5 years of onset and 20% more than 10 years after onset. The proportion of cases diagnosed within 1 year was hovering about 10% until the 1970s when it started increasing to 55% in current times. In the early days, there was no treatment; physicians likely delayed diagnosis because of the consequences for the patient of social ostracization. Mandatory institutionalization in the United States only stopped in the 1960s and outpatient treatment began. Those factors may have affected the diagnosing trends in Louisiana (Figure 9).

Figure 9: Trend in Delay Between Onset and Diagnosis by Decades Louisiana, 2000-2008



The Armadillo Connection

In the old days, leprosy was a very focal infection. Most cases were clustered in families or small population groups with very few sporadic cases. This pattern has been changing. Currently, the majority of cases had no family history of leprosy and occurred as sporadic cases with no connection to any cluster. The changes in gender, age group and geographic distribution all tend to show that the epidemiologic picture of leprosy is completely different.

In 1975, a leprosy-like infection was found among the nine-banded armadillo *Dasypus novemcinctus*. This was later shown by DNA studies to be identical to human leprosy. Areas with the highest rates of human leprosy were also areas with a high prevalence of leprosy in the armadillo population. Leprosy research on armadillos started in 1968, however, surveys of frozen specimens of armadillos showed that as early as 1961, armadillos were infected (17 per 182 positive sera, or 9.3%) on a wide scale. Numerous surveys that have since been carried-out, show that about 4% of armadillos had histo-pathological leprosy lesions and 16% had detectable IgM antibodies.

It appears that the prevalence rate among armadillos remained constant throughout the past years. The infection seems to be concentrated to the low-land coastal areas of Louisiana and Texas; only rare cases were found in higher lands of Texas, Arkansas or Mississippi.

Armadillos are not native to Louisiana. Armadillos slowly expanded their range north from Mexico beginning in the 1880s and have achieved very high densities here. No one really knows what allowed them to extend their range, but it is speculated that it was the elimination of normal predators as cattle operations increased in Texas. By 1957, armadillos had colonized south Louisiana.

Of the 32 patients for which armadillo contact was elicited, 15 said that they had contact with armadillos (about 50%). Although the connection between armadillo-leprosy and the changing epidemiology of leprosy in Louisiana is very suggestive, the exact mechanism of transmission is still being debated.

Leprosy Facts

- Leprosy is a chronic, mildly communicable disease of man which primarily affects the skin, mucous membranes, peripheral nerves, eyes, bones and testes due to *Mycobacterium leprae*, an acid fast bacillus related to the agent of tuberculosis.

- Leprosy was also named Hansen's Disease after the Norwegian physician Gerhard Armauer Hansen who first identified *M. leprae*.

- Most (95%) of the human population is not susceptible to infection with *M. leprae*.

- Treatment with standard antibiotic drugs is very effective.

- Patients become noninfectious after taking only a few doses of medication and need not be isolated from family and friends.

- Diagnosis in the U.S. is often delayed because health care providers are unaware of Hansen's disease and its symptoms.

- Early diagnosis and treatment prevents nerve involvement, the hallmark of leprosy and the disability it causes.

- Without nerve involvement, Hansen's disease is a minor skin disease.

- In 2005, there were 166 new cases in the United States.

- Most (100 cases or 60%) of these new cases were reported in California, Louisiana, Massachusetts, New York and Texas.

Transmission

Skin-to-skin transmission has long been suspected to be the main route of transmission. Although bacilli are present in very large number in ulcers, they cannot be found on the unbroken skin. There are a few anecdotal cases of skin transmission: inoculations during surgical procedures and tattooing. Insects have been suspected but careful studies have shown that their role in transmission would only be a minor one (if any).

It seems that the airborne transmission is the more probable route of transmission. Nasal washings from untreated lepromatous cases have from 10,000 to 10,000,000 *M.leprae* bacilli. A majority of the lepromatous patients have bacilli in their nasal secretions. The primary infection site may be the respiratory tract or the skin. Aerosols with *M.leprae* have been successful in infecting immunosuppressed mice.

Recently, contact with armadillos seems to have become a major mode of transmission in south Louisiana.

Susceptibility

There is evidence that not all people who are infected with *M.leprae* develop leprosy. Genetic factors have long been thought to play a role, due to the observation of clustering of leprosy around certain families, and the failure to understand why certain individuals develp lepromatous leprosy while others develop other types of leprosy. It is estimated that due to genetic factors, only 5% of the population is susceptible to leprosy. This is mostly because the body is naturally immune to the bacteria, and those persons who do become infected are experiencing a severe allergic reation to the disease. However, the role of genetic factors is not entirely clear in determining this clinical expression. In addition, malnutrition and prolonged exposure to infected persons may play a role in development of the overt disease.

Incubation Period

The bacillus reproduces at a very slow rate and therefore the incubation period is an average of 3 to 5 years. It is difficult to find out precisely the incubation period because exposure time and degree of exposure are impossible to determine.

Classification for Treatment Purposes

Classification of Hansen's Disease is based on clinical evaluation, skin smears from serveral sites and ideally at least an initial biopsy. The Ridley-Jopling classification of the disease is the one usually used in the U.S.. The following terms denote disease ranging from early localized to generalized: indeterminate (I); tuberculoid (TT); borderline tuberculoid (BT); mid-borderline (BB); borderline lepromatous (BL); lepromatous (LL).

While this classification gives considerable information about the disease in an immunologic sense, the use of the World Health Organization's (WHO) limited duration multidrug therapy has led to the widespread adoption of the WHO classification. This classification includes only the following: single lesion paucibacillary (SLPB); paucibacillary (PB) i.e. those with 2 to 5 lesions; multibacillary (MB) i.e. those with 6 or more lesions.

In the U.S. generally only the terms paucibacillary and multibacillary are used when discussing drug regimens. Paucibacillary patients are those who are skin-smear negative and no evidence of more advanced disease on biopsy. Multibacillary patients are those who are skin-smear positive and /or have a biopsy indicating more advanced disease. Generally, PB disease is equivalent to I, TT, and BT diseease in the Ridley-Jopling classification, and MB is equivalent to BB, BL, and LL disease.

Clinical Description:

Tuberculoid leprosy is characterized by one or more hypopigmented skin macules and anaesthetic patches, where skin sensations are lost because of damaged periperal nerves that have been attacked by the human host's immune cells.

Borderline leprosy is of intermediate severity and is the most common form. Skin lesions resemble tuberculoid leprosy but are more numerous and irregular; large patches may affect a whole limb, and peripheral nerve involvement with weakness and loss of sensation is common. This type is unstable and may become more like lepromatous leprosy or may undergo a reversal reaction, becoming more like the tuberculoid form.

Lepromatous leprosy is associated with symmetric skin lesions, nodules, plaques, thickened dermis, and frequent involvement of the nasal mucosa resulting in nasal congestion and epitaxis (nose bleeds), but typically detectable nerve damage is late.

Delayed diagnosis of Hansen's disease can have serious nerological consequences. The typical skin lesions and classic neuropathy of leprosy are readily recognized in countries where the disease is more common, but in the U.S. where leprosy is rare, it can be difficult to diagnose. **Physician awareness is key to the early diagnosis and treatment that can prevent disability.**

Consider the Diagnosis of Leprosy When...

A patient presents with non-responsive skin lesion and

- is an immigrant from a country with a high incidence of

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(Leprosy Facts ... Continued from Page 5)

leprosy
- is a U.S. resident with a history of foreign travel
- is a resident of Texas or Louisiana
- has a referral history of mulitple physician/specialist and/ or frequent emergency room visits.

Cardinal Signs
- Localized skin lesions: raised or flat; light or pigmented; sensory loss in lesion
- Thickened peripheral nerves
- Demonstrated acid-fact bacilli in lesion.

Laboratory Tests
- There are no serological or skin tests.
- A skin biopsy is needed for definitive diagnosis.
- A PCR (Polymerase Chain Reaction)for *M. leprae* DNA may be needed in special circumstances.

Recommended Treatment Regimens

Following are the general NHDP (National Hansen's Disease Program) recommendations: daily rifampin, and for longer duration of treatment than the WHO reccomendations, largely due to WHO's cost considerations for developing countries; treatment that is more intensive and of longer duration is medically preferable.

Treatment guidelines for immunologically competent individuals, (e.g. those without immunodeficiency, immunosuppression, prolonged corticosteroid use, etc.) are as follows in Tables 1 and 2.

Table 1: Drug Therapy for Tuberculoid Adults

Tuberculoid (TT & BT) (WHO classification PB)		
Agent	**Dose**	**Duration**
Dapsone	100 mg daily	12 months and then therapy discontinued
Rifampicin	600 mg daily	

Table 2: Drug Therapy for Lepromatous Adults

Lepromatous (LL, BL & BB) (WHO classification MB)		
Agent	**Dose**	**Duration***
Dapsone	100 mg daily	24 months and then therapy discontinued
Rifampicin	500 mg daily	
Clofazimine**	50 mg daily	

**The recommended durations of treatment are sufficient, even though large numbers of dead bacilli may remain in the tissues for several years before they are eliminated by physiological processes. There is no evidence that additional, prolonged treatment hastens the elimination of these dead organisms.*

*** Clofazimine, used for decades to treat HD around the world, is no longer available on the open market. Because it is no longer distributed commercially, the only way we can obtain the drug in the U.S. is to once again treat it as an investigational new drug (IND). The NHDP holds this IND for its use in treating HD in the U.S.*

For more information, please go to website http://www.dhh.louisiana.gov/offices/page.asp?id=249&detail=6481.

The National Hansen's Disease Program

The National Hansen's Disease Program is the epicenter of Hansen's disease (leprosy) care, research and information in the U.S. The program:

- Cares for patients at its facility at the Ochsner Medical Center in Baton Rouge.
- Oversees an ambulatory care network with 11 clinics in 7 States and Puerto Rico, and makes referrals for treatment.
- Consults with private sector physicians and accepts referrals for patients with Hansen's disease (leprosy)-related complications.
- Advances treatment and educates medical professionals about Hansen's disease (leprosy).
- Conducts intramural Hansen's disease (leprosy) biomedical research.
- Reaches out to medical professionals with a comprehensive Hansen's disease (leprosy) training program.

The U.S. Government established the predecessor of the National Hansen's Disease Program, the National Leprosarium in Carville, Louisiana, in 1917. Outpatient clinics were established in 1981.

These regional Hansen's disease clinics were established to provide outpatient care for Hansen's disease (leprosy) patients. The 11 community health programs are in: Boston, Chicago, Los Angeles, Miami, New York, Puerto Rico, San Diego, San Francisco, Seattle, Texas and Hawaii. Services provided include: diagnosis, treatment, follow-up, contact monitoring, disability prevention, education (professional, patient, public), maintenance of referral system for Hansen's disease health care services and maintenance of Hansen's disease registry and database.

Ambulatory Care Clinics

Individuals living in the continental United States, Puerto Rico or the U.S. Territories may receive medical care for the diagnosis and treatment of Hansen's disease (leprosy)-related conditions at one of the 11 Federally-supported outpatient clinics in 8 States and Puerto Rico.

The services offered include:
- Confirmation of diagnosis through skin biopsies
- Medical care
- Medications
- Hospitalization for treatment of complications at the Ochsner Medical Center - Baton Rouge, Louisiana
- Clinical consultation for physician-referred patients with eye problems and those in need of reconstructive hand or foot surgery
- Professional and patient education materials and conferences.

For more information, please go to website http://www.hrsa.gov/hansens/ or phone 1-(800)-642-2477, weekdays 9 am to 5:30 pm ET for referral to one of 900 private physicians nationwide who have expertise in treating Hansen's disease (Hawaii: 1-(808)-733-9831).

Table. Communicable Disease Surveillance, Incidence by Region and Time Period, November-December, 2010

DISEASE		HEALTH REGION 1	2	3	4	5	6	7	8	9	TIME PERIOD Sep-Oct 2010	Sep-Oct 2009	Jan-Dec Cum 2010	Jan-Dec Cum 2009	Jan-Dec % Chg*
Vaccine-preventable															
Hepatitis B	Cases	2	1	2	2	0	0	0	0	2	9	11	56	72	-22.2
	Rate[1]	0.2	0.2	0.5	0.4	0	0	0	0	0.5	0.2	0.3	1.3	1.7	N/A*
Measles		0	0	0	0	0	0	0	0	0	0	0	0	0	N/A*
Mumps		0	1	0	0	0	0	0	0	0	1	0	7	1	6
Rubella		0	0	0	0	0	0	0	0	0	0	0	0	0	NA*
Pertussis		1	1	0	0	0	0	4	2	1	9	12	35	142	-75.4
Sexually-transmitted															
HIV/AIDS	Cases[2]	50	38	6	9	11	8	13	10	13	158	163	1188	1220	-2.6
	Rate[1]	5.0	6.6	1.6	1.7	4.0	2.7	2.6	2.9	3.0	3.6	3.7	27.2	27.9	N/A*
Chlamydia	Cases[3]	742	208	99	180	140	262	323	308	152	2414	3623	16597	27826	-40.4
	Rate[1]	91.9	32.3	25.1	31.1	49.2	87.3	60.5	88.7	29.1	54.7	82.1	376.3	630.9	N/A*
Gonorrhea	Cases[3]	241	39	30	46	23	85	125	135	41	765	1187	4825	9053	-46.7
	Rate[1]	29.9	6.1	7.6	8.0	8.1	28.3	23.4	38.9	7.9	17.3	26.9	109.4	205.2	N/A*
Syphilis (P&S)	Cases[3]	1	3	2	2	8	0	13	3	3	35	78	436	730	-40.3
	Rate[1]	0.1	0.5	0.5	0.3	2.8	0.0	2.4	0.9	0.6	0.8	1.8	9.9	16.6	N/A*
Enteric															
Campylobacter	Cases	3	4	1	5	2	1	3	2	4	25	30	219	117	87.2
Hepatitis A	Cases	0	0	0	0	1	0	0	0	0	1	1	11	6	83.3
	Rate[1]	0	0	0	0	0.4	0	0	0	0	0	0	0.3	0.1	N/A*
Salmonella	Cases	23	22	20	26	5	9	24	22	21	172	161	1383	1182	17.0
	Rate[1]	2.2	3.9	5.3	5.0	1.9	3.0	4.7	6.3	5.5	4.0	3.7	32.1	27.4	N/A*
Shigella	Cases	11	1	1	2	0	3	9	3	5	35	18	281	179	57.0
	Rate[1]	1.1	0.2	0.3	0.4	0.0	1.0	1.8	0.9	1.3	0.8	0.4	6.5	4.1	N/A*
Vibrio cholera	Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	N/A*
Vibrio, other	Cases	0	1	1	0	0	0	0	0	0	2	2	27	49	-44.9
Other															
H. influenzae (other)		0	1	1	0	1	0	0	0	0	3	6	30	22	36.4
N. Meningitidis		0	0	0	1	0	1	0	1	2	5	2	17	18	N/A*

[1] = Cases Per 100,000.

[2] = These totals reflect persons with HIV infection whose status was first detected during the specified time period. This includes persons who were diagnosed with AIDS at the time HIV was first detected. Due to delays in reporting of HIV/AIDS cases, the number of persons reported is a minimal estimate. Data should be considered provisional.

[3] = Transition to a new system has delayed the morbidity reporting; Numbers may be artificially low; Per 100,000 population (2008 population estimate).

* Percent Change not calculated for rates or count differences less than 5.

Table 2. Diseases of Low Frequency, January-December, 2010

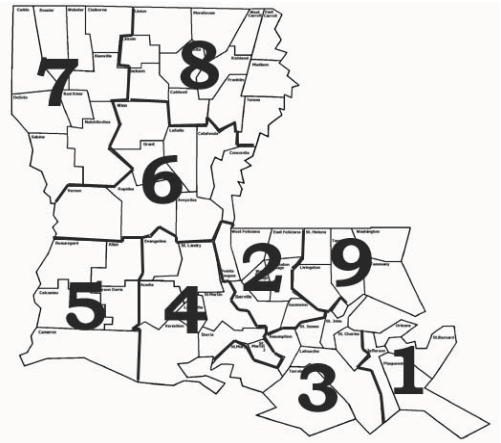
Disease	Total to Date
Legionellosis	11
Lyme Disease	2
Malaria	5
Rabies, animal	10
Varicella	89

Table 3. Animal Rabies, November - December, 2010

Parish	No. Cases	Species
Calcasieu	1	Skunk
Caddo	1	Bat
Lafayette	2	Skunk

Additional Rabies for Sep-Oct 2010 Timeframe - Bossier - 1 Skunk

Figure: Department of Health and Hosptials Regional Map



DEPARTMENT OF HEALTH AND HOSPITALS
OFFICE OF PUBLIC HEALTH
P.O. BOX 60630 NEW ORLEANS LA 70160

Sanitary Code - State of Louisiana
Part II - The Control of Diseases

LAC 51:II.105: The following diseases/conditions are hereby declared reportable with reporting requirements by Class:

Class A Diseases/Conditions - Reporting Required Within 24 Hours

Diseases of major public health concern because of the severity of disease and potential for epidemic spread-report by telephone immediately upon recognition that a case, a suspected case, or a positive laboratory result is known; [in addition, all cases of rare or exotic communicable diseases, unexplained death, unusual cluster of disease and all outbreaks shall be reported.

- Anthrax
- Avian Influenza
- Botulism
- Brucellosis
- Cholera
- Diphtheria
- *Haemophilus influenzae* (invasive disease)
- Influenza-associated Mortality
- Measles (rubeola)
- Neisseria meningitidis (invasive disease)
- Plague
- Poliomyelitis, paralytic
- Q Fever (*Coxiella burnetii)*
- Rabies (animal and human)
- Rubella (congenital syndrome)
- Rubella (German measles)
- Severe Acute Respiratory Syndrome-associated Coronavirus (SARS-CoV)
- Smallpox
- *Staphylococcus Aureus*, Vancomycin Intermediate or Resistant (VISA/VRSA)
- Tularemia
- Viral Hemorrhagic Fever
- Yellow Fever

Class B Diseases/Conditions - Reporting Required Within 1 Business Day

Diseases of public health concern needing timely response because of potential of epidemic spread-report by the end of the next business day after the existence of a case, a suspected case, or a positive laboratory result is known.

- Arthropod-Borne Neuroinvasive Disease and other infections (including West Nile, St. Louis, California, Eastern Equine, Western Equine and others)
- Aseptic meningitis
- Chancroid[1]
- *Escherichia coli*, Shig-toxin producing (STEC), including *E. coli* 0157:H7
- Hantavirus Pulmonary Syndrome
- Hemolytic-Uremic Syndrome
- Hepatitis A (acute disease)
- Hepatitis B (acute illness & carriage in pregnancy)
- Hepatitis B (perinatal infection)
- Hepatitis E
- Herpes (neonatal)
- Legionellosis (acute disease)
- Malaria
- Mumps
- Pertussis
- Salmonellosis
- Shigellosis
- Syphilis[1]
- Tetanus
- Tuberculosis[2]
- Typhoid Fever

Class C Diseases/Conditions - Reporting Required Within 5 Business Days

Diseases of significant public health concern-report by the end of the workweek after the existence of a case, suspected case, or a positive laboratory result is known.

- Acquired Immune Deficiency Syndrome (AIDS)3
- Blastomycosis
- Campylobacteriosis
- Chlamydial infection[1]
- Coccidioidomycosis
- Cryptococcosis
- Cryptosporidiosis
- Cyclosporiasis
- Dengue
- Ehrlichiosis
- Enterococcus, Vancomycin Resistant [(VRE), invasive disease]
- Giardia
- Gonorrhea[1]
- Hansen Disease (leprosy)
- Hepatitis B (carriage, other than in pregnancy)
- Hepatitis C (acute illness)
- Hepatitis C (past or present infection)
- Human Immunodeficiency Virus (HIV Syndrome infection)[3]
- Listeria
- Lyme Disease
- Lymphogranuloma Venereum[1]
- Psittacosis
- Rocky Mountain Spotted Fever (RMSF)
- *Staphylococcus Aureus*, Methicillin/Oxacillin Resistant [(MRSA), invasive infection]
- Staphylococcal Toxic Shock Syndrome
- Streptococcal disease, Group A (invasive disease)
- Streptococcal disease, Group B (invasive disease)
- Streptococcal Toxic Shock Syndrome
- *Streptococcus pneumoniae*, penicillin resistant [DRSP]), invasive infection]
- *Streptococcus pneumoniae* (invasive infection in children < 5 years of age)
- Transmissible Spongiform Encephalopathies
- Trichinosis
- Varicella (chickenpox)
- Vibrio Infections (other than cholera)

Class D Diseases/Conditions - Reporting Required Within 5 Business Days

- Cancer
- Carbon Monoxide Exposure and/or Poisoning (All ages)[5]
- Complications of Abortion
- Congenital Hypothyroidism[4]
- Galactosemia[4]
- Hemophilia[4]
- Heavy Metal (Arsenic, Cadmium, Mercury) Exposure and/or Poisoning (All ages)[5]
- Lead Exposure and/or Poisoning (All ages)
- Pesticide-Related Illness or Injury (All ages)[5]
- Phenylketonuria[4]
- Reye's Syndrome
- Severe Traumatic Head Injury
- Severe Undernutrition (severe anemia, failure to thrive)
- Sickle Cell Disease (newborns)[4]
- Spinal Cord Injury
- Sudden Infant Death Syndrome (SIDS)

Case reports not requiring special reporting instructions (see below) can be reported by Confidential Disease Case Report forms (2430), facsimile (504) 219-4522, telephone (504) 219-4563, or 1-800-256-2748) or web based at *https://ophrdd.dhh.state.la.us.*

[1]Report on STD-43 form. Report cases of syphilis with active lesions by telephone.
[2]Report on CDC72.5 (f.5.2431) card.
[3]Report to the Louisiana Genetic Diseases Program Office by telephone at (504) 219-4413 or facsimile at (504) 219-4452.
[4]Report to the Louisiana HIV/AIDS Program: see www.hiv.dhh.louisiana.gov for regional contact information, or call 504-568-7474.
[5]Report to the Section of Environmental Epidemiology & Toxicology: www.seet.dhh.louisiana.gov or 888-293-7020.

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