

Table of Contents:

Perinatal Hepatitis B Prevention Program Summary Sheet

Overview: What Laboratories Need to Know

Laboratory Responsibilities for Reporting Hepatitis B Surface Antigen-Positive (HBsAg-positive) Results

Local Health Department (LHD) Fax Cover Sheet

Hepatitis B Facts: Testing and Vaccination

Reportable Diseases in Michigan (MI) with Directory of MI LHDs by County

Printable Version of Entire Laboratory Section

Perinatal Hepatitis B Prevention Program (PHBPP)

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Mission: To identify hepatitis B surface antigen-positive (HBsAg-positive) women prenatally or at delivery for each pregnancy so that their infants, household and sexual contacts can be tested and treated to prevent the spread of the hepatitis B virus (HBV).

Surveillance: Statewide, an average of 300 infants born to HBsAg-positive women is reported annually. Based on Centers for Disease Control and Prevention (CDC) estimates, 396-597 infants born to HBsAg-positive women should be identified annually.

Prevention: Prevention of perinatal hepatitis B transmission requires the coordinated transfer of information between laboratories, primary care providers, hospitals, and the local/state health departments to ensure that all:

- Pregnant women are screened for HBsAg, all HBsAg-positive results are reported to the local health department (LHD) in the county where the patient resides within 24 hours, and the results are sent to the delivery hospital with the prenatal care record.
- Household and sexual contacts of HBsAg-positive pregnant women are identified, tested and immunized if susceptible.
- Infants of HBsAg-positive women receive appropriate prophylaxis and post-vaccination serology.
- All infants receive the birth dose of hepB vaccine prior to hospital discharge.

To view the manual in its entirety or to obtain additional copies go to www.michigan.gov/hepatitisB.

See the 12/23/05 MMWR: "A Comprehensive Immunization Strategy to Eliminate Transmission of Hepatitis B Virus Infection in the United States" for the latest Advisory Committee on Immunization Practices (ACIP) recommendations, at <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5416a1.htm>.



Overview: What Laboratories Need to Know

Laboratory-based reporting is the route by which hepatitis B surface antigen-positive (HBsAg-positive) cases are identified. Since 1988, Michigan has required laboratories to report all HBsAg-positive test results to the ordering physician and within 24 hours to the local health department (LHD) in the county where the patient resides. Since the implementation of the Michigan Disease Surveillance System (MDSS), laboratories are now able to electronically submit HBsAg-positive test results directly to the state and local health departments.

The goal of the Perinatal Hepatitis B Prevention Program (PHBPP) is to ensure that all HBsAg-positive pregnant women are identified and their lab results are reported in a timely manner. To assist in achieving this goal:

1. Report all HBsAg-positive test results within 24 hours to the LHD/Communicable Disease Unit in the county where the patient resides, by:
 - A. Faxing a copy of the HBsAg-positive result ([optional Local Health Department Fax Cover Sheet](#)), or
 - B. Electronically submitting this data through MDSS (If you are not currently enrolled in MDSS, please contact your LHD/Communicable Disease Unit), or
 - C. Calling, if systems are down ([Directory of Michigan Health Departments by County is located on the back of the Reportable Diseases in Michigan](#)).
2. Continue to report all HBsAg test results to the ordering physician's office.

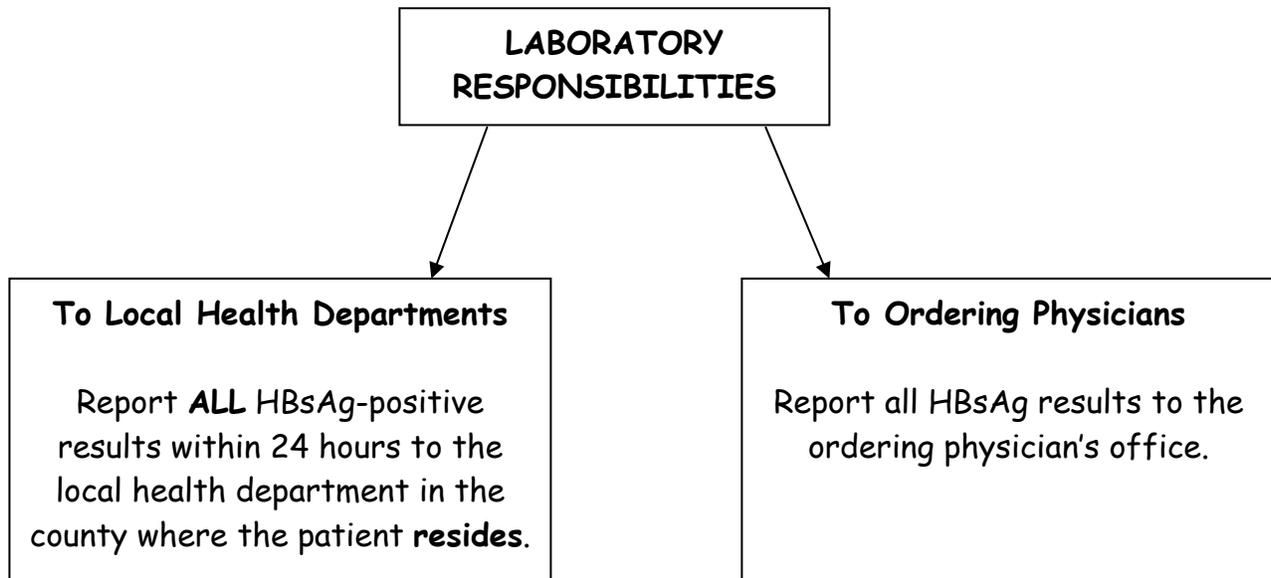
All laboratories that provide HBsAg testing of pregnant women should use an FDA-licensed or approved HBsAg test and should perform testing according to the manufacturer's labeling, including testing of initially reactive specimens with a licensed neutralizing confirmatory test (MMWR 12/23/05, 54 (RR16); 1-23).

If you have any questions, please call the PHBPP staff at 517-335-8122 or 800-964-4487. In southeast Michigan, call 313-456-4431 or 313-456-4432.

Michigan's Communicable Disease Rules, Section 333.5111, Act No. 368, Public Acts of 1978, as amended in R325.171, R325.172, and R325.173. In R325.173, Rule 3 (5), a clinical laboratory shall report, within 24 hours of discovery, both of the following to the appropriate local health department: (a) Laboratory evidence of any serious infection specified in R325.172 except for human immunodeficiency virus which is governed by MCL 333.5114. (b) Laboratory evidence of any other disease, infection or condition that is judged by the laboratory director to indicate that the health of the public is threatened.

Health Insurance Portability and Accountability Act (HIPAA): Sharing of public health information (PHI) with public health authorities is addressed in §164.512(b): (1) Permitted disclosures: A covered entity may disclose protected health information for the public health activities and purposes to: (i) A public health authority that is authorized by law to collect or receive such information for the purpose of preventing or controlling disease, injury, or disability, including but not limited to, the reporting of disease, injury, vital events such as birth or death, and the conduct of public health surveillance, public health investigations, and public health interventions.

Laboratory Responsibilities for Reporting Hepatitis B Surface Antigen-Positive (HBsAg-positive) Results



Michigan's Communicable Disease Rules, Section 333.5111, Act No. 368, Public Acts of 1978, as amended in R325.171, R325.172 and R325.173.

Local Health Department

Michigan law requires laboratories to report all hepatitis B surface antigen-positive (HBsAg-positive) results within 24 hours to the local health department in the county where the patient resides.

FAX COVER SHEET

Date: _____

To: _____

Office: _____

Phone: _____

Fax: _____

From: _____

Office: _____

Phone: _____

Fax: _____

Hepatitis B surface antigen-positive (HBsAg-positive) result

Please provide a copy of the actual HBsAg-positive lab report with this completed form.

Total number of pages including the cover page _____

Michigan's Communicable Disease Rules, Section 333.5111, Act No. 368, Public Acts of 1978, as amended in R325.171, R325.172, and R325.173. In R325.173, Rule3 (5), a clinical laboratory shall report, within 24 hours of discovery, both of the following to the appropriate local health department: (a) Laboratory evidence of any serious infection specified in R325.172 except for human immunodeficiency virus which is governed by MCL 333.5114. (b) Laboratory evidence of any other disease, infection or condition that is judged by the laboratory director to indicate that the health of the public is threatened.

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Hepatitis B Facts: Testing and Vaccination

— Who should be vaccinated? —

The following persons should receive routine hepatitis B vaccination, according to the Centers for Disease Control and Prevention (CDC):

Routine vaccination:

- All newborns at birth prior to hospital discharge
- All children and teens ages 0 through 18 years
- All persons who wish to be protected from hepatitis B virus (HBV) infection. CDC states it is not necessary for the patient to disclose a risk factor to receive hepatitis B vaccine.

Persons who are at risk for sexual exposure:

- Sexually active persons who are not in long-term, mutually monogamous relationships
- Sex partners of HBsAg-positive persons
- Persons seeking evaluation or treatment for an STD
- Men who have sex with men

Persons at risk for infection by percutaneous or mucosal exposure to blood:

- Current or recent injection-drug users
- Household contacts of HBsAg-positive persons
- Residents and staff of facilities for developmentally challenged persons
- Healthcare and public safety workers with reasonably anticipated risk for exposure to blood or blood-contaminated body fluids
- Persons with end-stage renal disease and those receiving dialysis

Others:

- Travelers to areas with moderate or high rates of HBV infection
- Persons with chronic (life-long) liver disease
- Persons with HIV infection

Refugees, immigrants, and adoptees from countries where HBV infection is endemic should be screened. Adults should discuss their need or desire for hepatitis B vaccination with their healthcare providers.

For certain people at risk, postvaccination testing is recommended. Consult ACIP recommendations for details (see references).

— Hepatitis B lab nomenclature —

HBsAg: *Hepatitis B surface antigen* is a marker of infectivity. Its presence indicates either acute or chronic HBV infection.

Anti-HBs: *Antibody to hepatitis B surface antigen* is a marker of immunity. Its presence indicates an immune response to HBV infection, an immune response to vaccination, or the presence of passively acquired antibody. (It is also known as **HBsAb**, but this abbreviation is best avoided since it is often confused with abbreviations such as HBsAg.)

Anti-HBc (total): *Antibody to hepatitis B core antigen* is a nonspecific marker of acute, chronic, or resolved HBV infection. It is *not* a marker of vaccine-induced immunity. It may be used in prevaccination testing to determine previous exposure to HBV infection. (It is also known as **HBcAb**, but this abbreviation is best avoided since it is often confused with other abbreviations.)

IgM anti-HBc: *IgM antibody subclass of anti-HBc*. Positivity indicates recent infection with HBV (within the past 6 mos). Its presence indicates acute infection.

HBeAg: *Hepatitis B “e” antigen* is a marker of a high degree of HBV infectivity, and it correlates with a high level of HBV replication. It is primarily used to help determine the clinical management of patients with chronic HBV infection.

Anti-HBe: *Antibody to hepatitis B “e” antigen* may be present in an infected or immune person. In persons with chronic HBV infection, its presence suggests a low viral titer and a low degree of infectivity.

HBV-DNA: *HBV Deoxyribonucleic acid* is a marker of viral replication. It correlates well with infectivity. It is used to assess and monitor the treatment of patients with chronic HBV infection.

— Screening before vaccination —

Serologic testing prior to vaccination may be undertaken based on your assessment of your patient’s level of risk and your or your patient’s need for definitive information (see information in the left column). If you decide to test, draw the blood first, and then give the first dose of vaccine at the same office visit. Vaccination can then be continued, if needed, based on the results of the tests. If you are not sure who needs hepatitis B screening, consult your state or local health department.

Tests	Results	Interpretation	Vaccinate?
HBsAg anti-HBc anti-HBs	negative negative negative	susceptible	vaccinate if indicated
HBsAg anti-HBc anti-HBs	negative negative positive with ≥10mIU/mL	immune due to vaccination	no vaccination necessary
HBsAg anti-HBc anti-HBs	negative positive positive	immune due to natural infection	no vaccination necessary
HBsAg anti-HBc IgM anti-HBc anti-HBs	positive positive positive negative	acutely infected	no vaccination necessary
HBsAg anti-HBc IgM anti-HBc anti-HBs	positive positive negative negative	chronically infected	no vaccination necessary (may need treatment)
HBsAg anti-HBc anti-HBs	negative positive negative	four interpretations possible*	use clinical judgment

- *1. May be recovering from acute HBV infection
2. May be distantly immune, but the test may not be sensitive enough to detect a very low level of anti-HBs in serum
3. May be susceptible with a false positive anti-HBc
4. May be chronically infected and have an undetectable level of HBsAg present in the serum

— Managing chronic HBV infection —

When you identify a patient who is chronically infected with HBV, make sure you consult a specialist knowledgeable in the treatment of liver disease so your patient’s care is optimized. Chronically infected persons need medical evaluation every 6–12 mos to assess the status of their liver health and their need for antiviral therapy, as well as to screen for liver cancer. In addition, persons with chronic HBV infection should be educated about their disease and how to protect others.

Household members and sex partners should be tested for HBV infection and given the first dose of hepatitis B vaccine at the same visit. (Vaccinating a person who has already been infected will do no harm). If testing indicates HBV susceptibility, complete the hepatitis B vaccination series. If testing indicates HBV infection, consultation and further care with a physician knowledgeable about chronic hepatitis B is needed.

References

1. A Comprehensive Immunization Strategy to Eliminate Transmission of Hepatitis B Virus Infection in the U.S.: Recommendations of the ACIP, Part I: Immunization of Infants, Children and Adolescents, *MMWR*, Dec. 23, 2005, Vol. 54(RR-16)
2. A Comprehensive Immunization Strategy to Eliminate Transmission of Hepatitis B Virus Infection in the U.S.: Recommendations of the ACIP, Part II: Immunization of Adults, *MMWR*, Dec. 8, 2006, Vol. 55(RR-16)

REPORTABLE DISEASES IN MICHIGAN

A Guide for Physicians, Health Care Providers and Laboratories

The following is a list of conditions that should be reported to the local health department without delay if the agent is identified by clinical diagnosis, direct examination, culture, serology, molecular techniques or by histopathology.

Acquired Immunodeficiency Syndrome (AIDS)

Avian influenza

Bacillus anthracis (Anthrax)

Blastomyces dermatitidis

Bordetella pertussis (**Pertussis**)

Borrelia burgdorferi (**Lyme Disease**)

Brucella species

Burkholderia pseudomallei

Burkholderia mallei

Calymmatobacterium granulomatis

Campylobacter jejuni

Chlamydia psittaci (**Psittacosis**)

Chlamydia trachomatis (**Genital infections**), (LGV)

Chlamydia trachomatis (**Trachoma**)

Clostridium botulinum (Botulism)

Clostridium tetani (**Tetanus**)

Coccidioides immitis (**Coccidioidomycosis**)

Corynebacterium diphtheriae (Diphtheria)

Coxiella burnetii (Q Fever)

Cryptococcus neoformans

Cryptosporidium species

Cyclospora species

Dengue virus

Ehrlichia species

Encephalitis, viral

California serogroup

Eastern Equine

Powassan

St. Louis

Western Equine

West Nile

Unspecified

Entamoeba histolytica (**Amebiasis**)

Escherichia coli, O157:H7 and all other shiga toxin positive serotypes

Francisella tularensis (Tularemia)

Giardia lamblia

Guillain-Barre Syndrome

Haemophilus ducreyi (**Chancroid**)

Haemophilus influenzae, <15 years of age, sterile site

Hantavirus

Hemolytic Uremic Syndrome (**HUS**)

Hemorrhagic fever viruses

Hepatitis, viral

Hepatitis A virus, (**Anti-HAV IgM**)

Hepatitis B virus, (**HBsAg**)

within 24 hours on pregnant women

Hepatitis C virus, (**Anti-HCV**)

Hepatitis, non-ABC

Histoplasma capsulatum

HIV, (Confirmed positive HIV serology and detection tests; CD4 counts/percents and all viral loads on people already known to be infected)

Influenza virus (**Weekly aggregate counts**)

Kawasaki Disease

Leptospira species

Legionella species

Listeria monocytogenes

Meningitis, viral

Meningitis, bacterial

Measles virus (**Rubeola**)

Mumps virus

Mycobacterium bovis

Mycobacterium leprae (**Leprosy**)

Mycobacterium tuberculosis (Tuberculosis)

Neisseria gonorrhoeae (**Gonorrhea**)

Neisseria meningitidis, sterile sites (Meningococcal Disease)

Orthopox viruses (Smallpox, Monkeypox)

Poliovirus

Plasmodium species (**Malaria**)

Rabies virus

Reye's Syndrome

Rheumatic fever

Rickettsia rickettsii (**Rocky Mountain Spotted Fever**)

Rickettsia species (**Typhus Group**)

Rubella virus

Salmonella species

Salmonella typhi (Typhoid Fever)

Severe Acute Respiratory Syndrome (SARS)

Shigella species

Spongiform Encephalopathy (**Includes CJD**)

Staphylococcus aureus, vancomycin intermediate/resistant (VISA/VRSA)

Staphylococcus aureus, (**MRSA**), outbreaks only

Streptococcus pyogenes, group A, sterile sites

Streptococcus pneumoniae, sterile sites, susceptible/resistant

Toxic Shock Syndrome

Treponema pallidum (**Syphilis**)

Trichinella spiralis (**Trichinosis**)

Varicella (**Chickenpox**)

Vibrio cholerae (Cholera)

Yellow fever virus

Yersinia enterocolitica

Yersinia pestis (Plague)

Unusual occurrence, outbreak or epidemic of any disease or condition

LEGEND

Green Bold Text = An isolate or serum sample, where appropriate, is to be submitted to MDCH or other laboratory designated by MDCH. Confirmed positive HIV diagnostic sera are to be submitted for incidence testing.

Report All Listed Conditions to the Local Health Department (see reverse)
This reporting is expressly allowed under HIPAA
Communicable Disease Rules: R 325.171, 172, 173

DIRECTORY OF MICHIGAN HEALTH DEPARTMENTS BY COUNTY

Please check your phone directory to see if there is a branch office in your community if the number listed is long distance. Write that number here: _____

COUNTY	HEALTH DEPT.	COUNTY OFFICE	AREA	PHONE	FAX	COUNTY	HEALTH DEPT.	COUNTY OFFICE	AREA	PHONE	FAX
Alcona	District 2	Harrisville	989	724-6757	343-1894	Lapeer	Lapeer Co	Lapeer	810	245-5581	245-4525
Alger	LMAS DHD	Munising	906	387-2297	387-2224	Leelanau	Benzie-Leelanau	Lk Leelanau	231	256-0200	882-2204
Allegan	Allegan County	Allegan	269	673-5411	673-4172	Lenawee	Lenawee County	Adrian	517	264-5202	264-0790
Alpena	District 4	Alpena	989	356-4507	354-0855	Livingston	Livingston County	Howell	517	546-9850	546-6995
Antrim	NW MI Com Health	Bellaire	231	533-8670	533-8450	Luce	LMAS DHD	Newberry	906	293-5107	293-5453
Arenac	Cent MI DHD	Standish	989	846-6541	846-0431	Mackinac	LMAS DHD	St. Ignace	906	643-1100x14	643-7719
Baraga	Western UP Dist	Hancock	906	524-6142	524-6144	Macomb	Macomb County	Mt. Clemens	586	469-5235	469-5885
Barry	Barry-Eaton DHD	Hastings	517	485-7110	543-7737	Manistee	District #10	Manistee	231	723-3595	723-1477
Bay	Bay County	Bay City	989	895-4001	895-4014	Marquette	Marquette County	Negaunee	906	475-9977	475-9312
Benzie	Benzie-Leelanau DHD	Benzonia	231	882-4409	882-2204	Mason	District #10	Ludington	231	845-7381	845-0438
Berrien	Berrien County	Benton Harbor	269	926-7121	926-8129	Mecosta	District #10	Big Rapids	231	592-0130	796-7864
Branch	Branch/Hills/St Jo	Coldwater	517	279-9561	278-2923	Menominee	Delta/Men Dist	Menominee	906	863-4451	863-7142
Calhoun	Calhoun County	Battle Creek	269	969-6370	966-1489	Midland	Midland County	Midland	989	832-6380	832-6628
Cass	VanBuren-Cass DHD	Cassopolis	269	445-5280	445-5278	Missaukee	District #10	Lake City	231	839-7167	839-7908
Charlevoix	NW MI Community	Charlevoix	231	547-6523	547-6238	Monroe	Monroe County	Monroe	734	240-7800	240-7815
Chippewagon	District 4	Cheboygan	231	627-8850	627-9466	Montcalm	Mid-Mich DHD	Stanton	989	831-5237	831-3666
Chippewa	Chippewa County	Sault Ste. Marie	906	635-1566	635-1701	Montmorency	District 4	Atlanta	989	785-4428	785-2217
Clare	Cent MI DHD	Harrison	989	539-6731	539-4449	Muskegon	Muskegon Co	Muskegon	231	724-6246	724-6674
Clinton	Mid-Mich DHD	St. Johns	989	224-2195	224-4300	Newaygo	District 10	White Cloud	231	689-7300	689-7382
Crawford	District 10	Grayling	989	348-7800	348-5346	Oakland	Oakland County	Pontiac	248	858-1280	858-5639
Delta	Delta-Men Dist	Escanaba	906	786-4111	786-7004	Oceana	District 10	Hart	231	873-2193	873-4248
Dickinson	Dick-Iron Dist	Iron River	906	265-9913	265-2950	Ontonagon	Western UP Dist	West Branch	989	854-5020	343-1899
Eaton	Barry-Eaton DHD	Charlottesville	517	343-2430	543-2656	Oscoda	District 2	Ontonagon	906	884-4485	884-2358
Emmet	NW MI Community	Petoskey	231	547-6014	547-2861	Oseola	Cent MI Dist	Reed City	231	832-5532	832-1020
Genesee	Genesee County	Flint	810	257-3612	257-3147	Otsego	NW MI Dist	Gaylord	989	732-1794	732-3285
Gladwin	Cent MI DHD	Gladwin	989	426-9431	426-6952	Ottawa	Ottawa County	Holland	616	396-5266	393-5643
Gogebic	Western UP Dist	Bessemer	906	667-0200	667-0020	Pres. Isle	District 4	Rogers City	989	734-4723	734-3866
Gd Trav.	Grand Traverse Co.	Traverse City	231	922-4831	922-4629	Roscommon	Cent MI Dist	Prudenville	989	366-9166	366-8921
Gratiot	Mid-Mich DHD	Ithaca	989	875-3681	875-3747	Saginaw	Saginaw Co	Saginaw	989	758-3800	758-3750
Hillsdale	Branch/Hills/St Jo	Hillsdale	517	437-7395x200	437-0166	St. Clair	St. Clair Co	Port Huron	810	987-9396	985-2150
Houghton	Western UP DHD	Hancock	906	482-7382	482-9410	St. Joseph	Branch/Hills/St Jo	Three Rivers	269	273-2161x200	273-2452
Huron	Huron Co	Bad Axe	989	269-9721	269-4181	St. Joseph	Branch/Hills/St Jo	Sturgis	269	659-4013x200	651-6090
Ingham	Ingham Co	Lansing	517	887-4311	887-4310	Sanilac	Sanilac	Sandusky	810	648-4098	648-2646
Ionia	Ionia Co	Ionia	616	527-5341	527-5361	Shiawassee	LMAS DHD	Manistiquie	906	341-4113	341-5230
Iosco	District 2	Tawas City	989	362-6183	343-1892	Shiawassee	Shiawassee Co	Corunna	989	743-2318	743-2413
Iron	Dick-Iron DHD	Stambaugh	906	265-9913	265-2950	Tuscola	Tuscola Co	Caro	989	673-8114	673-7490
Isabella	Cent MI DHD	Mt. Pleasant	989	773-5921	773-4319	Van Buren	VanBur-Cass DHD	Hartford	269	621-3143	621-2725
Jackson	Jackson Co	Jackson	517	768-4420	788-4373	Washtenaw	Washtenaw Co	Ypsilanti	734	544-6700	544-6706
Kalamazoo	Kalamazoo Co	Kalamazoo	269	373-5200	373-5363	Wayne (out-Wayne)	Wayne Co	Wayne	734	727-7006	727-7043
Kalkaska	District 10	Kalkaska	231	258-8669	258-2805	Weston	Weston	Weston	313	876-4000	871-5363
Kent	Kent Co	Grand Rapids	616	632-7100	632-7084	Wexford	District 10	Cadillac	231	775-9942	775-5372
Keweenaw	Western UP DHD	Hancock	906	482-7382	482-9410						
Lake	District 10	Baldwin	231	745-4663	745-2501						

In general, health care providers should seek consultation regarding communicable disease prevention and control services through their local health department.