

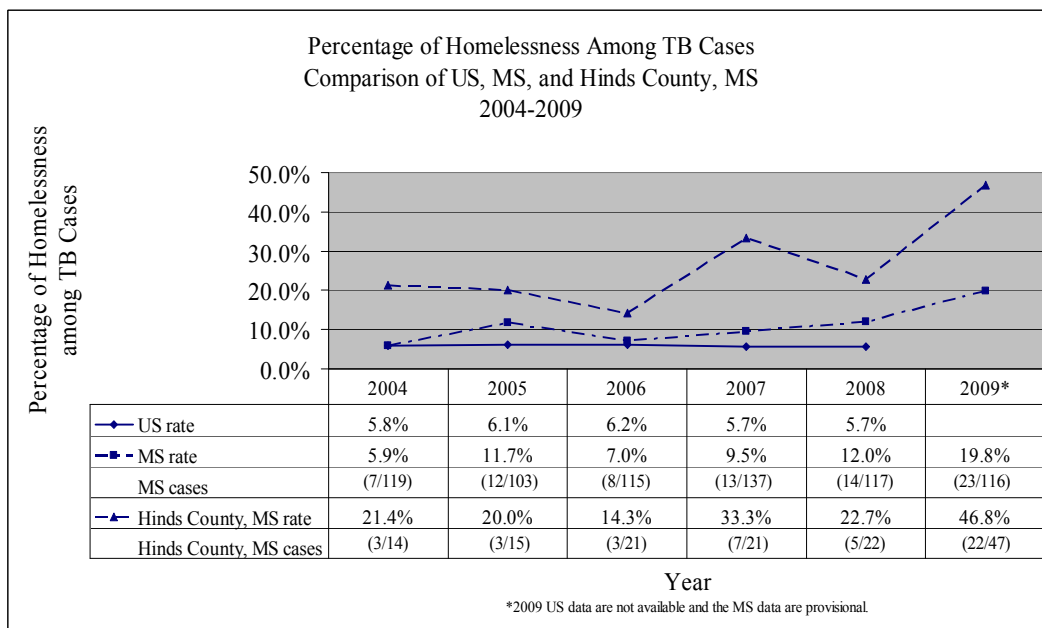


Mississippi Morbidity Report

Targeted Tuberculosis Screening in the Jackson, MS Homeless Population

Introduction: Over the past 3 decades, the significance of the transmission of tuberculosis (TB) inside shelters for the homeless has been recognized. This has been of particular concern in Jackson, located in Hinds County in Central Mississippi, where there are an estimated 800-1,000 homeless persons in the metropolitan area. From 2004 through 2008, the percentage of homelessness among TB cases in the U.S. ranged from 5.7% to 6.2% (Figure). The percentage of homelessness among TB cases in Hinds County during this time frame has been considerably higher than the U.S. percentage, ranging from 14.3% in 2006 to 22.7% in 2008 and 46.8% in 2009 (2009 data is provisional). One factor potentially contributing to the high percentage of TB among homeless individuals in the Jackson area is the dual dynamics involving the proportion of the homeless population who also spend various periods incarcerated. State TB programs which require tuberculin skin testing for entrance into shelters have allowed for more timely intervention into this transmission cycle by identifying cases of latent infection and active TB disease and providing earlier treatment to prevent advanced clinical complications. In 2008, the Mississippi State Department of Health (MSDH) began an initiative to increase testing and treatment among homeless individuals, shelter staff, and local correctional facility inmates and law enforcement personnel. The following describes this program.

Figure



Homeless Shelters: Working closely with the larger homeless shelters in the Jackson area, MSDH began a program to address TB in the Jackson area homeless population in August 2008. One of the main goals of this program is to ensure at least annual (preferably every 6 months) screening for latent TB infection, either through tuberculin skin testing or serological assay for *M. tuberculosis* (Quantiferon Gold-TB®), and clinical assessment for the development of active TB disease in those known to have a previous reactive tuberculosis test. Targeted on-site regularly scheduled screening coupled with targeted random night, weekend and holiday screening, is done at the main shelters in Jackson (Stewpot, Inc., Gateway Rescue Mission, and Stewpot’s Opportunity Center Day Shelter) for maximum population assessment. Photo identification badges are produced for clients tested at the shelters. Issuance of the ID badge is linked to the required tuberculosis evaluation. An appropriate color-coded badge is issued when the tuberculin skin test is read (48 to 72 hours

after administration) or when the results of the blood assay are known, or at the time the clinical screening is completed. Individuals wishing to utilize services at local shelter facilities are asked to show their ID badges to indicate their tuberculosis testing status. Individuals who are identified as new cases of latent TB infection are provided directly observed therapy for the duration of their treatment to ensure compliance and adequate completion of treatment. To date, 1,140 homeless shelter clients and staff have been screened for latent tuberculosis, with a new reactor rate at consistently 10-11% (compared to a reactor rate of ~5% in the general population). Due to the enhanced screening in the homeless shelters, 22 new cases of active TB were identified in the homeless population in the Jackson area in 2009, compared to between 3-7 cases annually from 2004-2008.

Another vital aspect of this program is enhanced training of the shelter staff to recognize the signs and symptoms of active pulmonary TB disease. Clients who are observed to have a persistent cough are referred for evaluation for tuberculosis and other important medical causes as soon as practical, regardless of their badge status. This also applies to those observed to have unexplained fevers/night sweats and weight loss or other symptoms for which tuberculosis is an important differential diagnosis. Also, maintenance of well-placed ultraviolet lighting, attention to ventilation concerns and coordination of open-bay sleeping arrangements in head-to-foot patterns are important components of prevention in this population. The largest 2 shelters in Jackson (plus the largest day-shelter) have upgraded their ultraviolet lighting systems during the past year. At the day shelter, optimum placement of the UV lights in the ducts of the ventilation system was done. MSDH is also in the process of adding portable X-ray TB Screening among this population – the first in more than 30 years.

No one needing shelter at times of severe weather extremes has been denied access to shelter services, but those who do not possess a valid TB program ID are required to cooperate with obtaining a TB test or screening and a badge prior to continuing to utilize shelter services. Any of these individuals who exhibit signs and symptoms of possible TB are provided appropriate respiratory masks and housed, if possible, to minimize possible transmission of tuberculosis until their status can be better defined and managed.

Correctional Facility: The MSDH TB Program is working closely with The Hinds County Sheriff's Department to enhance efforts directed at the reduction of transmission of TB in the Hinds County Correctional Facility. These activities include:

- Placing emphasis on mandatory TB screening of all personnel and inmates at regular intervals and as contact investigation dictates.
- Correctional facility notifies all current and released inmates of any potential exposures to infectious TB to facilitate screening and evaluation.
- Mandatory surveillance and prevention training for all detention, inmate-transport, and enforcement staff (including Jackson Police Department and Hinds County Sheriff's Department personnel).
- Mandatory TB update and training for all Correctional Facility medical staff.
- MSDH provides status updates for both the County Sheriff's Department and Hinds County Board of Supervisors.

Multiple potential exposures in the Correctional facility in 2009 necessitated many screenings to detect new cases of latent TB infection. During this process, more than 500 staff and 650 inmates were screened. Six active cases of TB and 75 new converters were identified as a result of the expanded efforts.

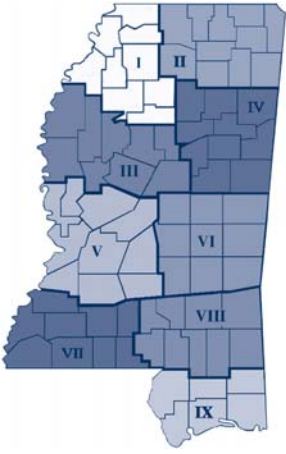
Clinicians are reminded to have a high level of suspicion for active disease in homeless or incarcerated individuals who present with symptoms consistent with TB. For questions regarding this initiative, or other TB related questions, please contact the MSDH Office of Tuberculosis and Refugee Health at 601-576-7700.

References available on request.

Mississippi

Provisional Reportable Disease Statistics

December 2009



		Public Health District									State Totals*			
		I	II	III	IV	V	VI	VII	VIII	IX	Dec 2009	Dec 2008	YTD 2009	YTD 2008
Sexually Transmitted Diseases	Primary & Secondary Syphilis	1	0	2	0	14	1	1	6	7	32	29	229	185
	Total Early Syphilis	5	1	3	0	29	4	2	14	14	72	75	553	418
	Gonorrhea	55	31	65	36	121	45	31	46	40	470	659	7,241	7,497
	Chlamydia	205	145	230	127	466	162	94	161	189	1,779	1,890	23,596	21,261
	HIV Disease	4	6	1	1	11	3	4	6	6	42	53	609	606
Mycobacterial Diseases	Pulmonary Tuberculosis (TB)	0	0	0	1	2	1	0	0	0	4	21	91	100
	Extrapulmonary TB	0	0	0	0	2	0	0	0	0	2	4	19	17
	Mycobacteria Other Than TB	5	3	0	2	10	2	1	5	0	28	33	264	307
Vaccine Preventable Diseases	Diphtheria	0	0	0	0	0	0	0	0	0	0	0	0	0
	Pertussis	3	0	0	0	0	0	2	0	0	5	6	76	103
	Tetanus	0	0	0	0	0	0	0	0	0	0	0	0	0
	Poliomyelitis	0	0	0	0	0	0	0	0	0	0	0	0	0
	Measles	0	0	0	0	0	0	0	0	0	0	0	0	0
	Mumps	0	0	0	0	0	0	0	0	0	0	0	1	0
	Hepatitis B (acute)	0	0	0	0	0	0	0	0	1	1	4	32	58
	Invasive <i>H. influenzae</i> b disease	0	0	0	0	0	0	0	0	0	0	2	0	4
	Invasive Meningococcal disease	0	0	0	0	0	0	0	0	1	1	1	4	12
Enteric Diseases	Hepatitis A (acute)	0	0	0	0	1	0	0	0	0	1	2	11	7
	Salmonellosis	2	5	1	4	4	0	3	5	7	31	50	901	1079
	Shigellosis	1	3	0	1	0	1	0	0	0	6	3	51	290
	Campylobacteriosis	0	1	0	1	2	2	0	0	0	6	11	103	115
	<i>E. coli</i> O157:H7/HUS	0	0	0	0	0	0	0	0	0	0	0	6	5
Zoonotic Diseases	Animal Rabies (bats)	0	0	0	0	0	0	0	0	0	0	0	4	7
	Lyme disease	0	0	0	0	0	0	0	0	0	0	0	0	0
	Rocky Mountain spotted fever	0	0	0	0	0	0	0	0	0	0	1	6	12
	West Nile virus	0	0	0	0	0	0	0	1	0	1	0	53	65

*Totals include reports from Department of Corrections and those not reported from a specific District.

MS School Entry Immunization Requirements 2010-2011^a

The list of immunizations required is specified by the State Health Officer and is promulgated at least annually as directed by state statute. All vaccines are to be given at the appropriate age and intervals according to ACIP recommendations. The required vaccines are listed below.

Vaccine/antigen	No. of doses
Diphtheria, Tetanus, Pertussis (DTaP) ^b	5 ^c
Polio (IPV)	4 ^d
Hepatitis B	3
Measles, Mumps, Rubella (MMR)	2 ^e
Varicella (chickenpox)	2 ^f

a-All children entering a Mississippi school (any grade) for the first time will be required to have the above listed immunizations. **(This includes Pre-K 4 year olds – 12th grade).**

b-Children entering a Mississippi school after their 7th birthday, not meeting the above DTaP requirements will need at least 3 total doses of diphtheria/tetanus containing vaccine (Td). Tdap should be used as one of the three diphtheria/tetanus containing vaccines (preferably as the first of the 3 doses) for children age 10 years and older.

c-If the 4th dose is received on or after the 4th birthday, a 5th dose is not required.

d-The final dose in the series should be administered at age ≥ 4 years regardless of number of previous doses.

e-Documented physician's diagnosis of previous infection with measles, mumps and rubella disease only or serological confirmation of immunity to measles, mumps and rubella will be allowed.

f-All children entering school for the first time will be required to have 2 doses of the varicella-containing vaccine or a history of typical varicella. If there is a history of chickenpox, the vaccine is not required.