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Statewide Disease Facts & Comparisons

A quarterly publication of the West Virginia Division of Surveillance and Disease Control

West Virginia answers the challenge:

Meeting the health needs of Hurricane Katrina refugees

On August 29, 2005, Hurricane Katrina made landfall on the Louisiana coast as a Category 4 storm with sustained winds of 145 mph, resulting in extensive flooding in New Orleans, surrounding parishes, and the neighboring states of Mississippi and Alabama. From September 4-7, 2005, a total of 323 Louisianans displaced by the storm were brought to a shelter established at Camp Dawson, an Army National Guard Training Site in Kingwood, West Virginia. In order to provide appropriate medical, mental health, and social services, the West Virginia Department of Health and Human Resources (WVDHHR) requested CDC assistance to conduct a needs and health status assessment of this displaced population. This report summarizes the findings and recommendations of that assessment, which determined that 25% of the displaced persons reported acute symptoms, 46% reported chronic medical conditions, and 57% reported needing dental care. Public health officials responsible for the housing, care, and reintegration of persons displaced by disasters should be prepared to provide care for both acute medical conditions and more chronic health problems including dental care.

In this NASA image dated August 29, 2005, Hurricane Katrina begins to make landfall along the Louisiana coast.

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WEST VIRGINIA Department of Health & Human Resources
West Virginia Bureau for Public Health

Joe Manchin III, Governor
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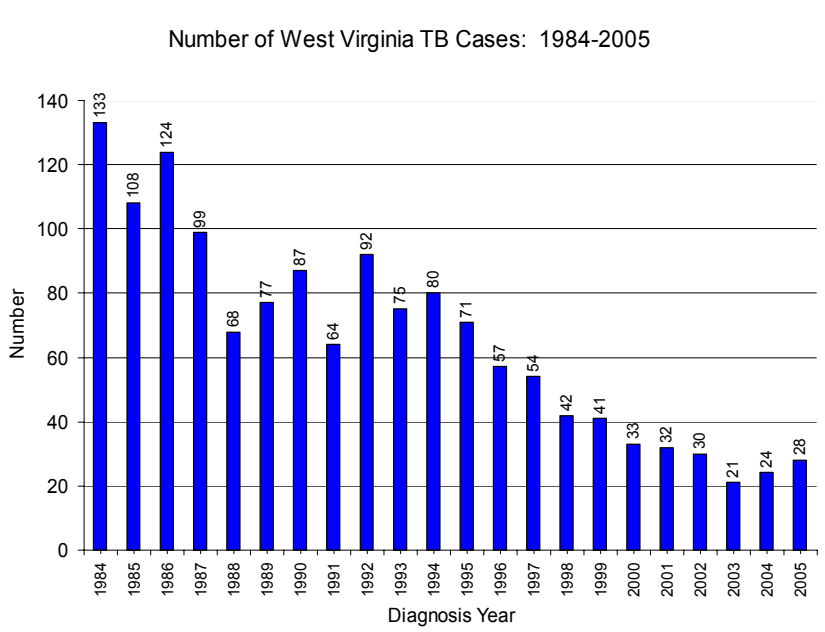
2005 West Virginia tuberculosis profile continues two-year upward trend

West Virginia reported 28 confirmed cases of tuberculosis (TB) in 16 of the 55 counties during 2005, giving an incidence rate of 1.6 per 100,000 residents. This is a 14% increase from 2004 when there were only 24 reported cases (1.3), and a 25% increase from 2003 when there were only 21 reported cases (1.2). This is a two year trend in increases of cases since 1994. Twelve (43%) of the reported cases in 2005 occurred in 5 of the 9 federally funded counties.

Although the percent of reported cases 65 years of age or older had seen a gradual decrease over the past few years with only 33% (8) in 2004, this age group represented 50% (14) of the reported cases for 2005. Seven of the 14 were over the age of 80. In 2005, there were seven (25%) in the age group 45-64, compared with 12 (50%) in 2004. The 25-44 age group constituted 14% (4) of the reported cases in 2005. There were no reported cases of TB in the 25-44 age group in 2004. Four cases (17%) of TB were reported in 2004 under the age of 25. In 2005, there were three reported cases (11%) in this same age group.



The ratio of males to females reported with TB remains 2:1 as in previous years. One person (4%) out of 28 reported cases was classified as homeless. There were no cases reported as residents of a correctional facility. One case (4%) was a resident of a long-term care facility. The percent of persons not employed went up to 71% in 2005, from 50% in 2004. Again, no cases of TB were reported in health care workers in 2005.

It has been noted that the number of non-U.S. born cases has increased progressively since 2001, when there were no non-U.S. born cases reported in West Virginia. In 2002, there was one (3%) non-U.S. born case; in 2003, there were two (10%); in 2004, there were three (13%); and finally in 2005, there were four (14%) non-U.S. born cases. Two of the four cases in 2005 have completed treatment, one remains on treatment, and the other has returned to her native country after four months of treatment with enough medication and instructions to complete her treatment.

West Virginia is a very rural and poor state, and it is well known that federal dollars are an integral part of this state's tuberculosis prevention and control efforts. The state of West Virginia understands and appreciates that tuberculosis is a shared federal, state, and local responsibility. For the past several years federal funding for TB prevention and control has been reduced, and West Virginia continues to struggle to maintain its core prevention and control activities. If federal funding to West Virginia for tuberculosis prevention and control activities continues to decline, the damage to this state's TB Program will be severe. Without adequate federal funding, WV will not be able to accelerate progress toward the elimination of tuberculosis nor will it be able to adequately fund prevention and control activities at the present level.

Fortunately in 2005, the federal funding for TB prevention and control activities received only a minimal reduction, and West Virginia was able to continue funding important activities at the local level, such as directly observed therapy. The federal funding also makes it possible for the program director and surveillance nurse to travel throughout the state in order to render support at the local level.

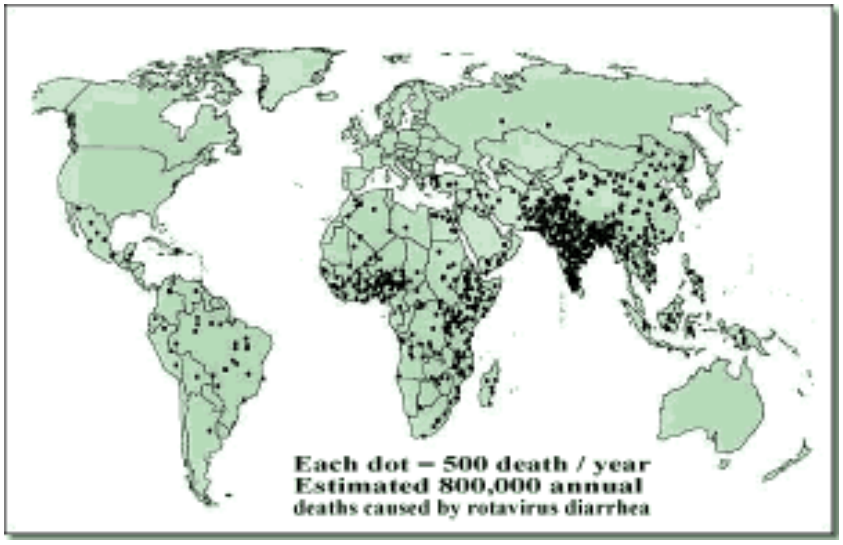
Local health department efforts (LHD) in TB prevention and control consist of providing free of charge medical, nursing, tuberculin skin testing, x-ray services,

*(See **TB**, page 6)*

CDC panel recommends new rotavirus vaccine

The Advisory Committee on Immunization Practices (ACIP) to the Centers for Disease Control and Prevention (CDC) in their meeting in Atlanta February 21 voted to recommend a newly licensed vaccine to protect against rotavirus, a viral infection that can cause severe diarrhea, vomiting, fever and dehydration (gastroenteritis) in infants and young children.

The ACIP recommendation is for infants to receive three doses of the oral vaccine at two, four, and six months of age. Children should receive the first dose of the vaccine by 12 weeks of age and should receive all doses of the vaccine by 32 weeks of age. Because there is insufficient data on safety and efficacy outside of these age ranges, it is not recommended to begin the series on children older than 12 weeks of age. The new vaccine, RotaTeq™ (marketed by Merck and Company), is the only vaccine approved in the United States for prevention of rotavirus gastroenteritis (vomiting and diarrhea).



"Rotavirus is the leading cause of severe gastroenteritis in infants and young children worldwide" according to Dr. Anne Schuchat, director of CDC's National Immunization Program. "Nearly every child in the United States is infected with rotavirus by age five and most will develop gastroenteritis, leading to a large number of physician visits, emergency room visits, and hospitalizations, with a few deaths. Therefore, this vaccine will help reduce one of our most common and potentially severe childhood illnesses."

Each year, rotavirus is responsible for more than 400,000 doctor visits, more than 200,000 emergency room visits, 55,000 to 70,000 hospitalizations, and between 20 and 60 deaths in US children younger than 5 years of age, leading to about $300 million in direct medical costs and $900 million in total societal costs. In developing countries, rotavirus is a major cause of childhood deaths, causing more than half a million deaths each year in children younger than five years of age.

Rotavirus vaccine will not prevent gastroenteritis caused by other viruses, but is very effective against rotavirus disease. Studies indicate the vaccine will prevent about 74 percent of all rotavirus cases and about 98 percent of the most severe cases, including 96 percent of rotavirus cases requiring hospitalization. In trials, the vaccine prevented 59 percent of all causes of gastroenteritis hospitalizations, which highlights the important role of rotavirus in severe childhood gastroenteritis.

In 1999, RotaShield®, a different rotavirus vaccine was withdrawn from the market after it was found to be associated with a rare type of bowel obstruction called intussusception. The risk of intussusception for RotaTeq™, the new vaccine, was evaluated in a large scale trial of over 70,000 children. In that study, there was no association found between the RotaTeq™ and an increased risk of intussusception and it did not cause fever to the extent caused by RotaShield®.

This is a different vaccine than the vaccine removed from the market because of problems with bowel obstructions," said Dr. Schuchat. "It is made differently and was not associated with intussusception in a large clinical trial. Nevertheless, we will continue to very closely monitor this vaccine to ensure there are no problems. At the same time it's important to remember that the known benefits of the vaccine far outweigh any known risks."

CDC will conduct a large study to rapidly detect any association between RotaTeq™ and intussusception as well as other potential adverse events through its Vaccine Safety Datalink Program that evaluates vaccine safety in approximately 90,000 infants every year. CDC and the Food and Drug Administration (FDA) will also regularly monitor reports of intussusception and other serious adverse events reported to the Vaccine Adverse Event Reporting System (VAERS). Merck has also committed to conducting a post-licensure study of approximately 44,000 children. In addition, the manufacturer will report cases of intussusception to FDA within 15 days of receiving them.

For more information on rotavirus, visit www.cdc.gov/nip

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Red Cross volunteers registered each displaced person on arrival to Camp Dawson, using a household registration form. They recorded the name, age, and sex of each household member present at Camp Dawson, the total household income range, and information about the dwelling that had been vacated (i.e., type of dwelling, ownership and insurance status, and extent of damage).

From September 9-12, 2005, WVDHHR and CDC personnel and West Virginia University (WVU) medical students administered a health questionnaire to individual displaced persons about 1) acute physical symptoms, including injuries, 2) current mental health symptoms, 3) chronic medical conditions, including disabilities, and 4) current health needs. Displaced persons were approached outside the cafeteria at mealtimes and after meetings held for organizational purposes such as registering children for school. Interviews also were conducted in the barracks' living quarters. Medical and counseling services were available on-site, and interviewers made referrals for persons with acute needs (such as infections or suicidal ideation). Microsoft Access was used for data entry of the registration form and the health questionnaire, and analyses were conducted using EpiInfo.

September 1, 2005: Lines of Katrina refugees wait to board buses for Houston, Texas.

Red Cross volunteers obtained information on 220 households representing 323 individuals. All were from New Orleans (91%) or nearby parishes (9%). The population was 64% male, 36% female; 11% were in potentially vulnerable younger (<5 years) or older (>65 years) age groups. Most had lived in an apartment (40%) or a house (55%), but 2% reported being homeless prior to the hurricane. Seventy-five percent rented housing and only a small minority carried insurance on the dwelling (13%) or its contents (10%). The majority (89%) reported some housing damage, with 60% describing their dwelling as "destroyed." Most households (84%) reported a total income of less than $25,000 per year; 40% reported less than $7,500 per year.

A total of 164 of the 323 (51%) completed the health questionnaire. Those that answered the questionnaire had similar sex and age distributions as the total population. Nearly 81% of the respondents were African-American. When asked about pre-disaster health insurance, 44% reported not being covered by any of the insurance programs listed (Medicaid, Medicare, private, Veterans, Workers' Compensation).

A quarter of the respondents described an acute illness, most commonly symptoms of an upper respiratory tract infection (Table 3). Approximately 13% reported a recent physical injury; 18% (4/22) of these injuries were described as resulting from an assault. Forty percent reported a current mental health symptom, most commonly anxiety/depression (28%), with nearly 2% endorsing suicidal ideation. None of the women reported being pregnant. Approximately 46% of respondents reported one or more chronic medical conditions and a similar proportion (47%) was taking prescription medication. The most common chronic medical conditions were hypertension (25%), diabetes (10%), and asthma (8%); one third of diabetics used insulin. Nine percent of respondents reported a physical disability and 7% had mobility impairment. The most common self-reported health needs were dental care (57%), eyeglasses (34%), dentures (28%), medical care (25%), and counseling or psychotherapy (13%).

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Editorial Note

Infectious diseases have traditionally been a concern of public health officials following a natural disaster. Poor sanitation, crowded living conditions, and limited access to health care are common after disasters and can promote transmission of infections. The findings of this report are consistent with observations following other disasters, in which respiratory infections were reported (1,2). Yet these data also demonstrate that non-infectious health issues, including mental health symptoms, chronic medical conditions, and dental needs, were also common in this displaced population.

The needs for dental care and dentures were particularly prevalent among this overwhelmingly poor, largely African-American population, supporting the findings of prior investigations. An analysis of the National Health and Nutrition Examination Survey (NHANES III) limited to African-Americans found that dental health was worse for those individuals who were poor, unemployed, and uninsured; those living in the South reported poorer dental health (3). Other studies have demonstrated racial and socioeconomic disparities in dental health (4,5). In addition to its impact on nutrition and links to some chronic diseases, poor dental health may be not only a marker for but also a contributor to poverty. Vocational opportunities for individuals with poor dentition or edentulousness may be limited, in part by the low self-esteem of the individuals themselves and in part by the negative perceptions of potential employers (6). Reintegrating Camp Dawson's displaced persons will require that many seek new employment, and poor dental health could negatively impact that important process.

The findings in this report are subject to several limitations. First, it relied on self-reporting both for household and health information, as documents (such as tax returns or medical records) that could be used for verification were not readily available. Income has multiple components, including wage earnings, child support, and transfer payments (7); some households may have reported only wages, thus underestimating household income. Similarly, individuals without a complete understanding of their health history may have omitted or misreported information, particularly regarding chronic medical conditions. Second, while those that completed the health questionnaire had similar sex and age distributions as the overall population at Camp Dawson, the possibility that persons with health concerns were more likely to participate in the health assessment, and thus be overrepresented, cannot be excluded. Third, while efforts were made to include the less mobile by entering their living quarters within the barracks, this group may have been underrepresented.

WVDHHR collaborated with multiple public and private partners to provide services to the displaced persons at Camp Dawson. A medical clinic staffed by WVU faculty, residents, and students and capable of dispensing medications for both acute and chronic conditions was in operation starting September 4, 2005. In addition, WVDHHR and the Red Cross provided mental health services at Camp Dawson, and established referrals systems with local private and Veterans' hospitals. The WVU School of Dentistry made emergency dental care available at WVU, to which transportation was provided.

In response to the findings of the needs and health status assessment, WVDHHR worked with partners to establish several new services. Local county health department officials identified additional dental providers for non-emergency care, including a dentist willing to provide dentures free of charge. Collaborations with the local Lions' Club and county health department established similar agreements with optometrists for procurement of eyeglasses. Officials in other communities should be aware that persons displaced by disasters may have considerable non-infectious health conditions and needs, and that services to address these needs may be provided successfully in collaboration with local organizations.

Acknowledgements

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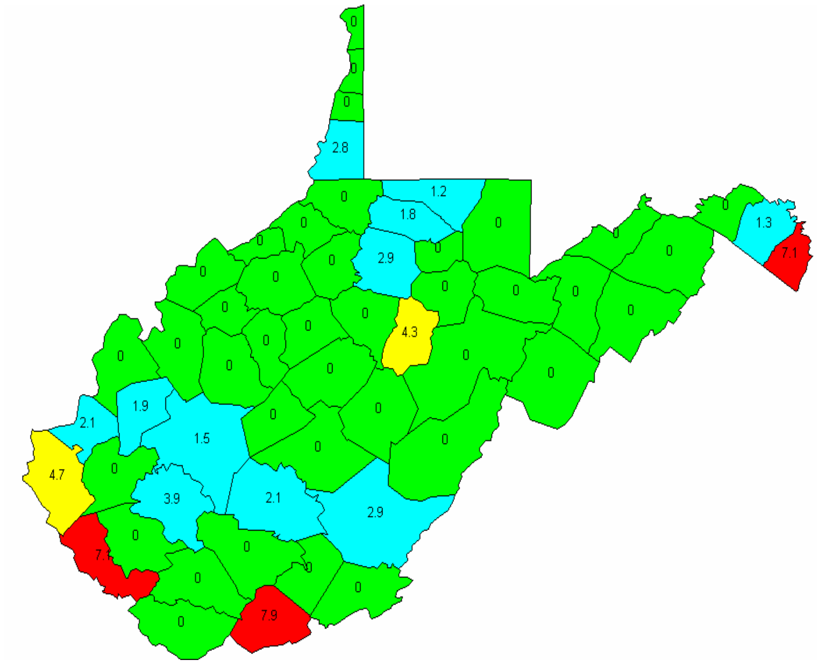
(*TB*, continued from page 2)

laboratory testing, anti-tuberculosis drugs, clerical and other support services. Outreach services are available for case finding, follow-up, monitoring and treatment. Directly observed therapy (DOT) is strongly recommended as the standard method of treatment. The West Virginia Department of Health and Human Resources, Bureau for Public Health, Division of Surveillance and Disease Control, Tuberculosis Control Program supports the LHDs in their local TB programs by direct and in-kind materials and services. These services are supported by both federal as well as state funding.

The medical consultant, program director, and surveillance nurse of the state TB Control Program are available for telephone consultations as well as on-site visits as needed. Current updates, guidelines and educational materials are provided as they become available to state facilities, LHDs, hospitals, nursing homes, personal care homes, correctional facilities, and other care providers.

The state TB Control Program supports all LHDs with state funding to aid in core public health activities, one of which is TB. Nine of these local health departments are also supported with federal funding in order to perform enhanced TB activities. These LHDs were originally chosen due to the history of high incidence and prevalence in those areas. Six of the nine LHDs are in southern counties where coal mining was prevalent, and they now experience high unemployment and poverty levels.



2005 TB Indidence Rates

The complete *West Virginia Tuberculosis Profile 2005* with additional charts and demographic details can be found on the web at: **http://www.wvdhhr.org/idep/pdfs/TB/2005_TB_Annual_Report.pdf**

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