

Montgomery County Tuberculosis Care and Treatment Board

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The County Board
Montgomery County, Illinois

November 30, 2013

The Montgomery County Tuberculosis Care and Treatment Board is pleased to submit the annual report.

The Board has operated continuously for 79 years, since the Glackin Act became law in 1934. This act requires each of the 102 counties in Illinois to provide care and treatment for patients with tuberculosis. The Illinois Legislature amended the Act in the 1980's to permit merger of tuberculosis boards with county health departments. Most boards still remain independent to preserve an emphasis on local treatment and control of tuberculosis. Indeed, some that merged, such as Champaign County, saw an upsurge in tuberculosis when local controls were de-emphasized. It had the greatest number of new cases (16) in Illinois outside of the Chicago area in 1999. Control efforts intensified, but Champaign still recorded 56 cases in the past ten years, including 5 in 2011. Sangamon County created its health department by subsuming the Sangamon County Tuberculosis Control Board and assuming countywide responsibility for tuberculosis on December 5, 1988. On March 1, 2006, the Springfield Department of Public Health merged with the Sangamon County Department of Public Health, under one director, Jim Stone. In 2010,

the three Public Health offices in Sangamon County consolidated to a single office at 2833 South Grand Ave. East.

Our Board has remained active and independent in 2013. We moved from Berry Street, in Hillsboro, to the new offices of the Montgomery County Health Department in late 1989. On August 1, 2012, we relocated our clinic from the south to the north side of the building. Its operation is essential to guide patients and physicians in the management of tuberculosis. Some less fortunate members of our community have no means to pay for treatment. With the help of a modest countywide tax, these patients can receive care and this avoid the spread of disease in the community. All residents of Montgomery County are treated, regardless of financial status, race, color, religion, national origin, sexual orientation, or age. The Board has served foster home facilities, licensed child-care facilities, long-term care facilities, health care institutions, correctional facilities, schools, drug rehabilitation centers, and individuals within the county.

During the past fiscal year, 1,142 skin tests were administered to residents of the county, a decrease of 420 from the past year. I have served as Medical Director since 1990, when two new cases of active tuberculosis were reported. We treated those patients, their contacts and other people who had previously been known to have active tuberculosis or positive skin tests (latent tuberculosis). We reviewed all medical activities of the Board and reviewed files of previous cases to determine whether those patients required our continued care. Four patients also completed therapy of disease, diagnosed during 1989.

From 1991-95, five new cases of active disease were reported; 79 patients completed therapy of disease, previously diagnosed. Nine patients who came under our care died of unrelated disease. Before 1996, the county's fiscal year (FY) ran from June 1 to May 31. In 1996 the FY changed to run from December 1 to November 30. From June 1, 1996 to November 30, 2000, no new active cases were treated. A total of 58 patients completed therapy prescribed previously. Eight patients died of unrelated causes. During the next five FY, from December 1, 2000 to November 30, 2005, twenty patients completed therapy prescribed previously. Two new active cases occurred (both in 2004); fifteen persons died of unrelated causes. Both new cases resolved under treatment. During FY 2006 (December 1, 2005 to November 30, 2006), four patients completed therapy prescribed previously. No new active cases occurred. One person died of unrelated causes. Based on a review of 9 outstanding files, we prescribed prophylactic therapy according to the Guidelines of the Centers for Disease Control and Prevention (CDC) and the American Thoracic Society (ATS) for 9 patients. We were able to discharge 5 patients and continued to follow 4 patients. During FY 2007, eight patients completed therapy prescribed previously. No new active cases occurred. Three persons died of unrelated causes. Based on a review of 12 outstanding files, we prescribed prophylactic therapy according to the guidelines of the CDC and ATS. Of 12 patients, we were able to discharge 1 patient and continued to follow 11 patients. During FY 2008, two patients completed therapy prescribed previously. One new patient was diagnosed with active tuberculosis. An 82-year-old white man with bladder cancer, treated with BCG, developed a lumbar spine infection (Pott's Disease). Culture of his lumbar disc yielded acid fast bacilli (AFB) from a sample taken on 10-24-07. The organism initially was

identified as *Mycobacterium tuberculosis* complex on 11-26-07, after our clinic on November 20, 2007, the last clinic in FY 2007. Therefore, his case was included in FY 2008. Ultimately, the organism was confirmed to be *Mycobacterium bovis* by the Illinois Department of Public Health (IDPH). The patient did quite well with active treatment and has been released from our care. No persons died in 2008 of unrelated causes. Based on a review of 11 outstanding files, we prescribed prophylactic therapy according to the guidelines of the CDC and ATS. Of 12 patients, we were able to discharge 4. During FY 2009, one patient completed therapy prescribed previously. No new active cases occurred. No persons died of unrelated causes. Based on a review of 5 outstanding files, we prescribed prophylactic therapy. During FY 2010 (December 1, 2009 to November 30, 2010), 4 patients completed therapy prescribed previously. No new active cases occurred. The man with Pott's Disease died of unrelated causes in November 2010. Based on a review of 6 outstanding files, we prescribed prophylaxis. Of 6 patients, we were able to discharge 1 and continued to follow 6 patients. During FY 2011 (December 1, 2010 to November 30, 2011) 2 patients completed therapy prescribed previously. One person with active tuberculosis, the recently released inmate from a jail in Missouri, and son of one of our old patients, was identified with active tuberculosis. We treated him for 4 months, until he moved to Sangamon County before finishing therapy. Based on a review of outstanding files, we prescribed prophylaxis for 2 patients. Of 6 patients, we were able to discharge 2 and continued to follow 3.

During FY 2012 (December 1, 2011-November 30, 2012) two patients completed therapy prescribed previously. Two new active cases occurred. The organism of one 27-year-old

woman was susceptible to the standard agents. We treated her for nine months and she has done well. Her contacts have been treated and completed their prophylactic therapy in 2013. The other patient was an 86-year-old man with tuberculosis of the kidney. His infection entered remission but he later died of cardiac disease. Based on a review of outstanding files we prescribed prophylaxis for a total of eight patients. Of those eight patients we were able to discharge two and continued to follow six now. During FY 2013 (December 1, 2012 to November 30, 2013) six patients completed therapy prescribed previously. No new active cases occurred. One patient completed therapy for active disease and another took therapy until his death March 30, 2013 of unrelated causes. Based on a review of outstanding files we prescribed prophylaxis for two patients. Of those two patients, we were able to discharge one to another jurisdiction and continue to follow one.

Based on the guidelines of the CDC and ATS, in 1990 we ended the annual performance of chest x-rays for patients previously treated with preventive medications or who had been followed for a long period for a positive tuberculin test, with no change in their status. After peaking in the early 1990's the incidence of tuberculosis in Illinois has dropped significantly. For example, in 1996 a total of 1,060 active cases occurred in Illinois, but only 347 were reported in 2012 (a 3% fall since 2011) including 146 in the City of Chicago and 89 in the suburbs of Chicago. The efforts of the IDPH, CDC and local tuberculosis control agencies have improved the early recognition and treatment of cases. Recent trends have shown a steady fall in cases in Cook County with a rise in the collar counties. The counties outside of Cook with the most cases in 2012 include Lake (7, the same in 2011; it has seen 97 cases in 7 years); Kane (19, down from 30 in 2009;

it has seen 134 cases in 7 years); DuPage (26, up from 23 in 2011; it has seen 218 cases in 7 years); Winnebago (8, with a local epidemic); Will (3, down from 11 in 2011; it has seen 70 cases in 7 years); Cass (5, with a local epidemic); Champaign (5, the same as 2011); Kankakee (3); Kendall (2); DeKalb (2); Sangamon (2); McHenry (2); Morgan (1); Montgomery (2); and Peoria, Knox, Ogle, Marion and Randolph (one each). Most counties saw a decline in numbers; 72 of the 102 counties reported no cases in 2012, 2 more than in 2011. The state overall experienced a decrease of 71 cases (17%) from 2009 to 2012. Our neighbors saw some cases, including Morgan (1), Sangamon (2), Madison (1), and St. Clair (4). Christian, Macoupin, Shelby, Fayette and Bond Counties reported no cases.

The case of tuberculosis in a college student in Champaign, in October 1998, reminds us all to maintain vigilance, especially because many students in Montgomery County attend school in Champaign-Urbana. In July 1994, we implemented the new rules and regulations of the IDPH for control of communicable diseases. Section 690.720 covers tuberculosis. The regulations were amended May 27, 1998 and are included in 12 Ill. Reg. 10045, effective May 27, 1998. The latest amendments were adopted on October 19, 2012 and are available in Volume 36, Issue 42 of the Illinois Register (77 Ill. Adm. Code 696). However, IDPH constantly reviews its program and corresponds regularly with us. From 1999 through 2002, our regional coordinator was Ernestine Brasher, RN, who transferred from Northern Illinois, after 20 years of service there. Debra Stephens has been our coordinator since 2002. TB Program Manager is Mike Arbisi. Lamar Hasbrouck, MD is the Director of the IDPH. Rod Blagojevich served as governor from

January 2003 until his impeachment, in December 2008. Pat Quinn succeeded him. The clinic nurse's most recent skin test was 4-23-13. The office secretary's most recent skin test was placed on 5-14-13. My most recent tuberculin test was placed on 6-4-13. All three skin tests were negative. We continue to maintain close surveillance of three major groups; immigrants, especially those from Russia, Eastern Europe, Africa, Latin America, the Caribbean, including Haiti and Cuba, and Southeast Asia; patients with human immunodeficiency virus infection; and the elderly, who might have been exposed to tuberculosis during their youth, before effective anti-tuberculosis chemotherapy was available. One group of recent interest has been adults who received radiation therapy for tuberculosis adenitis during childhood.

With the ever-present turmoil, we remain vigilant when refugees move to our area. Recent wars in Syria, Liberia, Sierra Leone, Ivory Coast, Chechnya, Sri Lanka, Bosnia, Kosovo, Myanmar, Serbia, Kashmir, the Sudan South Sudan, Mali, Uganda and both Republics of the Congo are very troublesome, as is the continued involvement of our troops in Afghanistan, not to mention, the "Arab Spring" of 2011. Very worrisome are the refugee crises in Darfur, Ethiopia; Goma, Democratic Republic of Congo; Timbuktu, Mali; and all of Syria. Even Saudi Arabia, although peaceful, experienced more TB (1). The economic crises in Asia, South Africa, Zimbabwe, Greece, Spain and Russia have led to great increases in tuberculosis there. The disputed elections in the Ukraine, Kenya, Mexico and the Ivory Coast; the Agent Orange poisoning of Viktor Yuschenko in 2004; the coup in Thailand in September 2006; and the Polonium 210 poisoning of Alexander Litvinenko in November 2006, were troubling, but fortunately tuberculosis is not implicated in the individual and civil turmoil. To date, few refugees from those countries

have settled in Illinois, as they generally prefer to move to areas where their fellow countrymen have migrated. As soldiers return from the Middle East, we will expect more cases to evaluate, as indeed we saw in 2007, when a soldier who served in Iraq came to our clinic with a positive PPD. The withdrawal of American forces from Iraq, in December 2011 is encouraging, but the medical effects won't be felt for years. Likewise we will see effects of the withdrawal from Afghanistan in 2014. The attacks on New York and Washington, on September 11, 2001, did not appear to effect tuberculosis control programs. Indeed, the budgets for public health departments increased to fight bioterrorism. These general enhancements can only help control tuberculosis, even though it is not a Class A threat. With the world still in its current economic recession and the debates in Washington about funding of President Obama's 2010 healthcare bill, we cannot predict the future incidence of TB, but we expect control efforts to continue. Moreover, many more patients may expect to receive medical coverage in 2014. A recent study from Fort Worth, Texas, demonstrated the value of active control efforts (2). In Tarrant County, in 2002, the average societal cost of each active infection was \$376,255. Treatment and other direct costs accounted for only 3.3% of the total burden.

Publicity in 1996 in the popular media focused on transmission of tuberculosis among travelers on common carriers, such as airplanes and trains. No commercial aircraft or trains make regular stops in Montgomery County, but we do cooperate with the public health authorities when travelers from our county are investigated. High speed rail is being proposed now from Chicago to St. Louis, projected for 2014 or 2015. Another potential source of transmission might be long distance buses, and we will remain vigilant. In November 1997, the CDC wrote to reassure us about our concern for

zoonotic tuberculosis. The rates of tuberculosis in birds, dogs, cats, ruminants, and cervidae are extremely low. Likewise, bovine tuberculosis has not been reported in recent years in Montgomery County. No testing of cattle is recommended. In 2007 the CDC reported that 2 of 3 recipients of tissue from an organ donor developed TB of the same type as the organ donor. We are also aware of the increased risks of TB among patients who receive immuno-suppressive therapy for rheumatoid arthritis and psoriasis. Very worrisome was an outbreak of tuberculosis in a high school in Boulder County, Colorado from 2011 to 2013, with 162 tuberculin conversions after exposure to one student with active pulmonary TB (4).

Seasonal influenza vaccine was in short supply from 1997-2005, but it has been plentiful for seven years. Whether the increases in respiratory diseases will lead to relapses of previously untreated tuberculosis in children, remains to be seen. However, no major increases in tuberculosis have been seen during recent influenza epidemics. An increase in 1918 may have reflected heightened public awareness of respiratory disease in general, during the "Spanish flu" pandemic (named after Alfonso XII, who contracted it).

Unknown is the risk of avian influenza ("bird flu"-influenza A, H5N1) for the United States in general, and Montgomery County specifically. We will follow CDC recommendations in that regard. H1N1, formerly known as swine flu, was the predominant strain in 2009-10. H1N1 surfaced in Mexico in April 2009 and in the USA, from May 2009 through now. Activity has been moderate through the time of this report, but we did see a moderate outbreak of influenza B in 2013.

The national goal for elimination of tuberculosis was set by the CDC, at the rate of 5 new

cases per 1,000,000 citizens, per year, by 2010. That goal has already been reached in Illinois. However, with 2 active cases among Montgomery County residents in 2012, our incidence is 2 per 29,810 of population (6.9 per 100,000).

A summary of skin testing and treatment and review of our outpatient, radiologic, nursing, administrative, clinical and maintenance services is attached to this report. We continue to streamline the roster of patients with tuberculosis to concentrate on those patients who need our services to the greatest degree.

To that end, we worked closely with the nursing homes in the county. In the fall of 2001, the Illinois Department of Transportation discontinued their requirements of annual PPD skin testing. We tested only 3 drivers in 2001, 2 in 2002, 1 in 2003, 7 in 2004, 4 in 2005, 2 in 2006, 6 in 2007, 3 in 2008, 5 in 2009, 4 in 2010, 3 in 2011, 7 in 2012, and 4 in 2013.

Our educational activities continue. I serve as an attending physician for the Department of Internal Medicine and Division of Infectious Diseases at the Southern Illinois University School of Medicine and was promoted to Clinical Professor in 2004. During late November 2002, the entire full time faculty of the SIU Division of Infectious Diseases was out of the country, so I provided coverage for the university service. I speak regularly with residents, students and practicing physicians regarding tuberculosis. Some of them, as well as nurses studying public health, accompany me to the monthly clinics in Hillsboro. On September 30, 2003, I delivered the Grand Rounds Lecture at the SIU Department of Medicine, "The Ten Commandments of Infectious Diseases". With Lavonya Kolluri, MD, I delivered a Grand Rounds Lecture, "Lung Abscess", on

November 8, 2005. I served as a Moderator for the 1995 Annual Conference on Tuberculosis sponsored by the Illinois Conference on Tuberculosis, and spoke at their annual conference, held in Champaign, in October 2000. In October 1998, I chaired the Springfield Clinic Symposium on New and Emerging Infectious Diseases. In November 1999, I chaired their symposium on alcohol. This and other substances, when abused, cause great difficulties for our patients. On December 3, 2002, I chaired their continuing medical education program on antimicrobial therapy. I remain a member of IDPH Task Force for Multi-Drug Resistant Tuberculosis, and in September 2000, I delivered the keynote address for the annual meeting, in Bloomington, of the Illinois Conference on Tuberculosis. I lectured in Canton (Fulton County, October 2000), Nauvoo (Hancock County, November 2000), and Springfield (Sangamon County, November 28, 2001). I also spoke in Lincoln on November 9, 2001, Litchfield on November 12, 2001, Vandalia on November 27, 2001, and Springfield on October 18 and 19, November 29, December 12, 2001, April 11, May 15 and November 1, 2002, October 9, 2003 and October 12, 2004, about bioterrorism. I have lectured several times in each of the past years on the subject of pneumonia, including tuberculosis. On March 24, 2008, I was interviewed by WICS Channel 20 TV, in Springfield, for World Tuberculosis Day. I spoke on H1N1 Influenza at the Symposium of the Sangamon County Medical Society, American Medical Association, and the Sangamon County Department of Public Health, on the regional effect of the outbreak, on September 30, 2009. I spoke at the Springfield Clinic Seminar on pneumonia and other infections, on November 11, 2010. I attended the annual meeting of The Infectious Diseases Society of America in Philadelphia, in October 2009 and the Fifth Decennial International Conference on Healthcare Associated

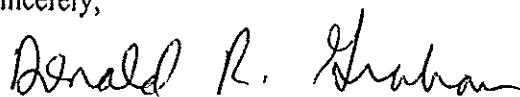
Infections, in Atlanta, in March 2010, and the Society of Healthcare Epidemiologists of America in 2011. I serve on the Program Committee of the World TB Day Conference in Chicago, March 24, 2014.

We were challenged this year by a shortage of INH 300mg tablets (our major treatment) at a time when we are again considering more directly observed therapy (DOT) (3). The problem appeared to have resolved by late 2013.

In closing, I wish to thank the County Board for its support during the past year.

Montgomery County has a first class program to control tuberculosis. As demonstrated in Texas, such programs are very worthwhile. I look forward to many years of continued service.

Sincerely,

A handwritten signature in cursive script that reads "Donald R. Graham".

Donald R. Graham, MD, FACP

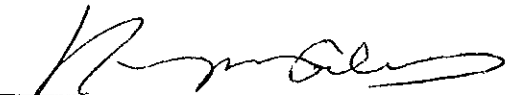
Reference

1. Gleason JA, McNabb SJN, Abduljadayel N, Abouzeid MS, Memish ZA. Tuberculin trends in the Kingdom of Saudi Arabia, 2005 to 2009. *Ann Epidemiol* 2012; 22: 264-9.
2. Miller T, McNabb SJN, Hilsenrath P, Pasipanodya J, Drewyer G, Weis SE. the Societal cost of tuberculosis: Tarrant County, Texas, 2002. *Ann Epidemiol* 2010; 20: 1-7.
3. Sia IG, Wieland ML, Current concepts in the management of tuberculosis. *Mayo Clinic Proc*, 2011; 86: 348-61.
4. Transmission of *Mycobacterium tuberculosis* in a high school and school-based supervision of an isoniazid-rifapentine regimen for preventing tuberculosis—Colorado, 2011-2012. *MMWR* 2013; 62: 805-9.

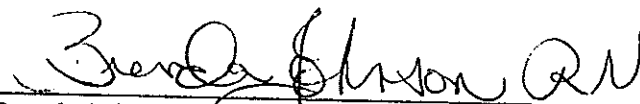
The County Board:

We wish to take this opportunity to express to the members of the Montgomery County Board our appreciation of the cooperation and confidence you have shown in our appointments as we judiciously expend the funds entrusted to us, and our staff, will make every effort to provide the best care for the residents of Montgomery County.

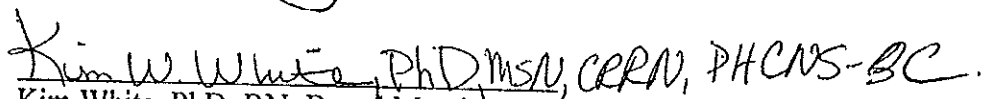
Respectfully submitted,



Roger McFarlin, MD, President



Brenda Johnson, RN, Board Member



Kim White, PhD, RN, Board Member

2013 Monthly Totals

Month	Tests in Office	Tests out of office	Total	Bus Drivers	Contacts	Prisons	County Jail	Preschool HS, DC, Foster Care	HO Employees & Students	Nurs. Hm. CRC	Volunteer Physical	School Staff and Students
Dec.	18	36	54	1	—	—	17	5	10	17	—	4
Jan.	40	57	97	—	3	—	34	8	37	8	3	4
Feb.	17	31	48	—	—	—	22	2	17	3	1	3
March	34	40	74	—	—	—	28	3	30	5	6	2
April	36	28	64	—	1	—	28	3	24	3	2	3
May	31	108	139	1	3	—	34	—	71	25	3	2
June	51	38	89	—	—	—	32	13	33	5	2	4
July	42	145	187	2	—	—	31	10	65	74	—	5
Aug.	53	79	132	—	—	—	30	9	30	16	—	47
Sept.	29	65	94	—	—	—	19	3	39	7	1	25
Oct.	37	58	95	—	—	—	46	2	29	15	—	3
Nov.	19	50	69	—	—	—	8	—	22	33	3	3
Total	407	735	1,142	4	7	—	329	58	407	211	21	105