Report to
Mayor Karl F. Dean
from the
The Metropolitan Board of Health

MetroPublicHealthDept
Nashville/Davidson County

February 29, 2012

Background

The Metropolitan Charter states that the board of health, acting through its chief medical director, shall exercise all the administrative functions of the metropolitan government pertaining to the physical and mental health of the people.

In keeping with its responsibility, the Metro Health Department's mission under the board of health's direction is to protect and improve health and wellbeing for everyone in Nashville.

While the scope of the Metro Health Department is very broad, a similar strategic approach carries through all of our efforts:

Assessment. Data and evidence are needed to understand the health status of our citizens, and to take action in a way that is going to have a positive impact. The department conducts disease surveillance and provides statistical reports on health in Nashville as well as demographic trends. The Healthy Nashville Leadership Council periodically incorporates health data into a more comprehensive assessment of Nashville's health and community systems for public health, and will conduct another such assessment by the end of 2013.

Alignment. By itself, the health department alone, or even government alone, won't succeed in protecting and improving public health. It requires coordinated efforts of individuals and agencies, including businesses, nonprofit organizations, governments, faith communities, and health care organizations. Within government, many sectors play an important role in improving health, including schools, transportation, planning, housing, public safety, and others. Convening, collaborating, and coordinating community efforts to work in effective systems are essential for health improvement.

Action. Obviously we have to do the right things and have good plans, but ultimately we take action. MPHD focuses on performance, efficiency, and accountability in our efforts. Increasingly, public health improvement requires attention to public policy decisions, and some of the most significant actions to improve health are public policies that make healthy choices easier.

The Metropolitan Charter, in Section 10.104.6 (Duties of the Board of Health), requires the Board of Health to 'submit to the mayor, within six months after the beginning of each new term of office, a report upon the activities of the metropolitan board of health and a comprehensive program of public health and indigent medical care.' This report is intended to fulfill that requirement. It provides an overview of our efforts to assess, align, and act on priorities in our strategic plan. In addition, it provides some comments on anticipated opportunities for progress in the next 3-4 years.

Infants, Children and Youth

The survival of our infants and the health and wellbeing of our children are key markers of our overall health as a community. Healthy children learn better, and graduates enjoy better lifetime health than dropouts.

Assessment

Infant mortality and low birth weight: Analysis of infant and fetal deaths tells us that in Nashville the most important actions to prevent infant mortality are improving women's health before pregnancy, and ensuring that every infant sleeps in safe conditions: alone, on their back, in a crib without items that could cause suffocation.

An infant weighing less than 2500 grams (5.5 pounds) at birth has a greater risk of death or long-term health and cognitive problems than a normal weight infant. African American infants are 1.7 times more likely to be born low birth weight than white infants. Since 2005 there has been little change in the overall low birth weight rate. Davidson County has a rate similar to that of Tennessee, but some neighborhoods in Nashville have higher rates.

Preventable Deaths: In Davidson County, all deaths to children younger than 18 years are reviewed. Of the 91 cases reviewed in 2009, 23 (25.3%) were deemed preventable. The leading cause of preventable death was homicide (34.8%). The majority (87.5%) of homicides involved the use of a firearm. Violent deaths (suicide plus homicide) comprised nearly half (47.8%) of all preventable child deaths.

Immunizations: Adequately immunizing 24-month-old children prevents debilitating disease. Reported Immunization rates in Nashville declined from 2006 to 2010, but improved significantly in the 2011 measurement.

Alignment

Significant efforts at alignment of community resources to promote children's health include:

Fetal-Infant Mortality Review A state-funded, MPHD-led program that conducts comprehensive case reviews and maternal interviews for fetal and infant deaths. Findings of these reviews enable community members, health and social service providers, and policy makers to work together to improve systems of care and prevention for women and infants in Davidson County.

Alignment Nashville Children's Health Initiative: MPHD provides leadership to the Children's health oversight committee as well as several subcommittees charged with aligning and bringing to scale strategic initiatives to improve health and student outcomes. The initiatives are particularly focused on aligning resources in relation to Metro Schools. Committees are implementing projects in relation to healthy starts, healthy eating and active living, behavioral health, primary care, adolescent sexual responsibility, and school food.

Action

Major current MPHD projects aimed at improving children's health include:

Music City Healthy Start. This federally funded program supports a constellation of services and supports focused on North Nashville to improve health and wellbeing across the life course, with particular focus on prevention of infant mortality.

Fatherhood Initiative. A new federally funded initiative to provide skills, supports, and case management to help fathers who have not been engaged in parenting to become so, and in turn help to maximize the health and wellbeing of their child.

Additional MPHD operations in support of children's health include: Family planning services, immunization services, school nurses, home visiting (HUGS), school-based checkups (EPSDTs), and WIC. TheTENNderCare program provides significant outreach to increase the number of children who receive routine checkups.

Anticipated Issues in the next 4 years

Strategic opportunities to enhance Nashville's efforts to improve children's health in the next 3-4 years include the following:

Ensure alignment and integration of all school-based health efforts by supporting C**oordinated School Health** as a consistent framework for developing and coordinating services.

Include Coordinated School Health and School Nursing in overall efforts to link community resources with improved student outcomes such as the Community Achieves model.

Support appropriate use of the MNPS data warehouse to help link key health results with education results in schools and better inform planning and coordination of health-related services and supports at each school.

Additional Information

Metro Health Data

Children's Health Brief
Natality Report
Fetal Infant Mortality Review report
Child Death Review Team Report
Youth Risk Behavior Surveillance System

Other

Alignment Nashville website: results

Nashville Public Television Children's Health Crisis

Unlocking the Potential of School Nursing (Robert Wood Johnson Foundation)

Healthy Eating, Active Living, & Tobacco

Nationally and locally, the top causes of chronic illness and death are unhealthy diet, physical inactivity, and tobacco use. Surprisingly, medical care has a much smaller impact on disease and death than these factors do.

Assessment:

Physical Activity helps maintain a healthy weight and helps prevent many adverse health conditions. Children and adolescents aged 6-17 should accumulate 1 hour or more of physical activity daily.

Adults should do a minimum of 2 hours and 30 minutes of moderate-intensity aerobic activity weekly (e.g., brisk walking, ballroom dancing, general gardening).

Nearly 65% of Metro high school students report being physically active 3 or more times a week, but 65.2% of adults do not meet the minimum exercise recommendation.

Tobacco use is the leading preventable cause of death. Nearly 13% of Metro high school students currently smoke. Just over 1 in 5 adults in Davidson County is a current smoker. Non–Hispanic white high school students and adults are more likely to be current smokers than their non-Hispanic black counterparts.

Healthy Weight is important to good health. Being overweight is a risk factor for many chronic illnesses such as hypertension and diabetes as well as adverse events such as heart attacks and strokes. Overweight is defined as a body mass index (BMI) of 25 or higher; obesity is defined as a BMI of 30 or higher. Sixty-eight percent of adults in Davidson County are overweight or obese. A larger proportion of non-Hispanic black Davidson County residents are consistently overweight or obese than non-Hispanic white residents. Coordinated School Health data for Davidson County estimate about 38% of school children to be overweight or obese.

Women, Infants, and Children (WIC) helps ensure adequate nutrition that is important for a healthy pregnancy and early childhood development. In the local WIC program, the prevalence of overweight and obesity in 2009 among participants aged 2, 3, and 4 years were 12.3%, 17.5%, and 21.9% respectively. The percentage for each age group was higher in 2009 than in 1999.

Alignment

Nashville has a long track record of collaboration to promote healthy eating and active living (HEAL).

The current efforts to promote alignment of community action for HEAL and tobacco include Healthy Nashville Leadership Council (HNLC) and the HEAL Alliance. HNLC has served as a community advisory body for Communities Putting Prevention to Work (CPPW), and its major function is assessment of Nashville's Health and systems that support health, prioritization of key public health issues, and recommending major strategies for health improvement. The HEAL alliance represents a growing coalition of individuals and agencies engaged in moving Nashville toward healthier eating and active living.

For children (especially in MNPS) Alignment Nashville's HEAL and Student Nutrition committees are working to expand opportunities for children to eat healthy food and be active.

Action

Communities Putting Prevention to Work (CPPW) has added momentum to Nashville's movement toward healthier eating and active living. This two-year cooperative agreement with the Centers for Disease Control has supported over 20 projects along with a unifying brand—NashVitality-- that celebrates community efforts across Nashville to become more healthy, active, and green. Examples include expanded green bike initiative, assistance for 5 corner stores in food desert neighborhoods to carry healthy options, expansion of community and school gardens, support for MNPS's efforts to improve food options in Metro Schools, promotion of breast feeding in birth hospitals, businesses, and workplaces, and way-finding signage that highlights opportunities to walk and bike to destinations in North and East Nashville. CPPW provided support for Mayor Dean's Walk 100 Miles and the Mayor's 5K Challenge as well. A collaborative program providing free spay and neuter services in neighborhoods with high numbers of animal complaints was also supported. MPHD received a no-cost extension which will allow for completion of key projects, including full implementation of an automated kiosk-type bike share program, by December, 2012.

MPHD is working with other Metro departments and Nashville's largest employers to promote a "healthy workplace prescription" that establishes policies supporting physical activity, healthy vending and food service, tobacco-free workplaces, lactating mothers, and alternative transportation options.

Building Healthy Cities: Nashville represents a collaborative effort with the Nashville Civic Design Center to extend the *Plan of Nashville* with a special focus on health and how the built environment of the city can promote better health. Expected publication date is in 2013.

Healthy eating and active living are being incorporated into plans and programs department-wide. For example, the new South Nashville WIC Nutrition Center has a teaching kitchen and the entire program aims to increase breast feeding rates and consumption of fresh healthy food.

Anticipated Issues in the next 4 years

With the end of the CPPW grant, MPHD is addressing completion and sustainability of the projects in the Community Action Plan. Progress in improving Nashville's health by reversing the epidemic of obesity-related disease will require sustained efforts over many years. While some gaps exist in knowledge of what will be effective, the following strategies are recommended by experts and being implemented across the country:

- Multi-Sector approach: Policies and programs spanning different government departments can affect availability of healthy food and safe opportunities for physical activity.
- Place-based strategies: Choices to eat healthy and be active are greatly affected by policies and environments that shape neighborhoods, workplaces, and schools.
- Public messages that link longer term change in behavior with long range support for a healthier and more livable environment.

- Finally, specific and sustained attention to correcting disparities and inequities in health risk by race/ethnicity and income is crucial if the obesity epidemic is going to be reversed.

Additional Information

Health Brief

Behavioral Risk Factor Surveillance System Report

NashVitality.org

NashVitality Resources Page

Leadership for Healthy Communities Action Strategies for Local and State Leaders

Control of Epidemics & Emergency Preparedness

Control and prevention of communicable diseases is a core public health function. Whether the threat is pandemic influenza, an outbreak of food-borne illness, a tuberculosis case in a homeless shelter, or increasing HIV cases in young people, MPHD must be ready to respond.

Assessment

MPHD communicates with acute-care hospitals and physicians, as well as with the Tennessee Department of Health, to detect and investigate public health outbreaks and emergencies. Overall preparedness for public health threats and emergencies is assessed after every outbreak, emergency and exercise. Technical review scores for Cities Readiness Initiative, a regional plan for response to a bioterrorism event, have improved and Nashville was rated 95 out of 100 for the most recent review.

Tuberculosis: Usually a lung disease, TB can attack any part of the body. Left untreated, TB can be fatal. Since 2008, the rate of TB has decreased by 50.4%. During this same period, there has been a significant increase in the percent of TB cases that are among foreign-born residents. Nashville's TB rates remain significantly higher than those for Tennessee as a whole and the U.S.

Sexually Transmitted Infections (STI): Chlamydia is the most common STI in Davidson County, with nearly 3,500 cases reported in 2010. The number of cases of gonorrhea decreased each year between 2006 and 2009, but increased slightly in 2010. Syphilis cases increased from 2006 to 2008, but have started to decline.

HIV Infections: CDC estimates that more than one million people are living with HIV in the United States. One in five (21%) of those people living with HIV is unaware of their infection.

In Nashville, the number of new HIV cases diagnosed in 2010 was higher than any of the previous 4 years, in part due to increases in routine testing. Unlike other programs within the Health Department, the Ryan White Part A Program monitors HIV+ people and the care they receive in a 13-county area in Middle Tennessee. Davidson County residents account for more than 80% of the HIV Disease cases in this region.

Alignment

MPHD participates in emergency planning with many partners, including the Metro Office of Emergency Management, the Tennessee Emergency Management Agency, Tennessee Department of Health, American Red Cross, and Metro Police and Fire departments. Coordinated planning with Nashville's acute-care hospitals is maintained via a hospital committee, which MPHD leads, and the Metro Medical Response System (MMRS) is led by a committee chaired by MPHD.

Planning and prioritization of the HIV care resources in Nashville are done by the Ryan White Planning Council, a formal body appointed by the Mayor. The Planning council is informed by the Ryan White Needs Assessment.

Action

MPHD's Public Health Preparedness Team works to ensure that all government, business, health care systems, organizations, and the public are prepared for large scale epidemics and emergencies. MHPD has tested its Point of Distribution (POD), CHEMPACK, and Biohazard Detection System plans. All MPHD staff have received appropriate emergency preparedness training in the past year. Volunteers have received POD training through Hands on Nashville and have participated in semiannual tests of Volunteer Mobilizer.

MPHD operates comprehensive control programs that include surveillance, outreach and disease intervention, and clinical services for TB and for STI. We do routine testing at the county jail for TB and STDs. HIV care is ensured in particular via Ryan White support of expert medical providers in the community.

Anticipated Issues in the Next 4 Years

One important challenge in the near term is to increase preparedness for emergencies at the household and neighborhood level, particularly in economically challenged neighborhoods, and to optimize ability to engage volunteers in emergency situations.

MPHD and other providers must continue efforts to increase the proportion of HIV infected individuals who know their status and are maintained in high quality care. Strategies that will enable this to succeed include making HIV testing more routine, and working to reduce stigmatization and discrimination against people at risk for infection.

Additional Info

Data Brief

Ryan White HIV Needs Assessment

Notifiable Disease Report

Clean Air

Clean, healthy air prevents asthma episodes, doctor and hospital visits, lost work and school days and even deaths due to poor air quality.

Assessment

National Ambient Air Quality Standards (NAAQS) are developed by the Environmental Protection Agency (EPA) based on known and measurable health hazards from dirty air.

Nashville's success in achieving clean air is measured by the number of days in the year that the air in Nashville meets the National Ambient Air Quality Standards (NAAQS). In recent years, Nashville has met the goal. In FY 2011, NAAQS were met 99.7% of the days of the year, including the 2008 8-hour ozone standard of 0.075 ppm.

One barrier to meeting our goal is the weather, such as episodes of extreme heat and drought which adversely affect air quality.

Alignment

The air quality program implements federal regulatory requirements in concert with state and regional partners. MPHD supports and aligns with other efforts to promote sustainability and a cleaner environment. Promotion of active transportation and transit use has been a component of the NashVitality Campaign, and MPHD works with the Clean Air Partnership of Middle Tennessee to increase voluntary efforts to improve air quality.

Action

The air quality program monitors ambient air quality, enforces new and existing air pollution regulations, provides compliance assistance to the regulated community, inspects and issues permits to new and existing air pollution sources, compiles emission inventories, provides public education and outreach, provides the Air Quality Index and Pollen Count for Davidson County, partners with TDEC to provide the Air Quality Forecast for Middle TN, and formulates air pollution control strategies needed to attain and maintain the National Ambient Air Quality Standards as needed.

Radon, a naturally occurring gas, is second to tobacco smoke as a cause of lung cancer. EPA publishes recommendations for measuring and mitigating exposure to radon in occupied buildings. Ordinance 088-526 requires MPHD to ensure that Metro buildings, including schools, are regularly tested for radon and that worksites with levels above the action threshold are reduced. Over the last year, MPHD has completed one round of testing of Metro buildings, and is helping guide actions by metro agencies to re-test and reduce radon levels in areas found to be above the EPA action threshold.

The Vehicle Inspection Program exists to improve air quality through emissions testing of light duty gasoline and diesel vehicles. MPHD oversees and monitors the testing done by Metro's vendor, SysTech International. Smog forming emissions--volatile organic compounds (VOC) and nitrogen oxides (NOx)--are reduced due to our vehicle inspection program. According to EPA's MOVES model, VOC emissions

are reduced ~ 559 tons/year or ~1.6 tons/day, and NOx emissions are reduced ~759 tons/year or ~2.3 tons/day.

Anticipated Issues in the Next 4 Years

Change in Air Quality Standards. Based on health risks the EPA proposed to revise the ozone standard in FY2011 from 0.075 ppm to a lower concentration somewhere in the range of 0.06 to 0.07 ppm. This would result in more days Nashville's air is classified as unhealthy for sensitive groups. It now appears that EPA will instead implement the existing standard until a new standard in proposed in 2013. During FY2011 Davidson County was designated as "in attainment" for all criteria pollutant NAAQS. The air in Nashville was in the good or moderate range 99.7% of the days during FY2011. It is highly likely however that Davidson, Rutherford, Sumner, Wilson, and Williamson Counties in Middle TN will eventually be designated nonattainment if a new standard is adopted in the 2013/2014 timeframe that is in the previously proposed range of 0.06 to 0.07 ppm.

Redesign of vehicle inspection program. Metro began a 5-year contract with SysTech on July 1, 2007. A 3-year extension has been executed that will begin 7/1/2012. In early 2013, a public process will be initiated culminating in bid specifications for a new competitively bid contract to be developed with an anticipated start date of July 1, 2015.

Metro Animal Care & Control

Assessment

Service requests related to animals are among the most frequent calls received by the health department. This table presents trends in some key indicators of demand for MACC services:

Number of Animals	FY2007	FY2008	FY2009	FY2010	FY2011
Total Intakes	12,592	13,158	12,955	11,110	10,937
Total Adoptions	1,715	1,702	1,359	1,199	1,158
Return to Owners	761	720	688	608	581
Dog Bites	596	793	670	579	544
Total Euthanasia	10,059	10,663	10,412	8,727	8,835

A sustained downward trend in intake (with sustained strong performance in response time to service requests) is viewed as a positive sign, as is a decline in dog bites over the last 3 years.

Alignment

Over the last 4 years, MPHD has convened organizations and individuals interested in animal welfare, and helped establish UPAW—the United Partnership for Animal Welfare. Our aim was to increase the effectiveness of community efforts through improved coordination, joint planning, goal setting, policy development, advocacy, and education.

In addition, we established a MACC Advisory Committee. This group meets bimonthly to review performance and system challenges with a particular focus on MACC's operation. The Advisory Committee is a publicly noticed meeting intended to improve transparency, accountability, and interagency coordination for MACC, and to provide a sounding board on important MACC-related policy issues.

Action

As a part of CPPW, MPHD joined with Nashville Humane and UPAW members to offer spay/neuter and other veterinary services for animals whose owners are unable to afford it. The work was guided by GIS analysis to focus in two particular zip codes where strays and animal bites are more common. Over 900 animals received services in the 37207 and 37013 zip codes.

In recent years, technology and management enhancements have improved overall response times to service requests. In 2004, approximately half of complaints were investigated. Since 2007, consistently over 90% of complaints have been investigated, and 99% of priority incidents are investigated within 2 hours.

Anticipated Issues in the Next 4 Years

A new phone system is planned which will enable management to monitor performance and better assign resources to manage the high volume of calls coming into the facility.

The MACC operation runs very lean, and management is sensitive to the need to prioritize activities when new issues and expectations arise, such as the regulation of domestic hens.

Some community members and out-of-state advocates have voiced interest in our changing the current practice of not adopting pit bulls and pit bull mixes. Metro will need to address these concerns clearly and transparently.

Access to Health Care

Access to quality, affordable health care has an impact on people's health and wellbeing. Lack of access can lead to devastating outcomes including unnecessary hospitalization and preventable death.

Assessment

In 2009, The Safety Net Consortium commissioned a Safety Net Assessment. The report, released last year, highlighted these key findings about Nashville's health care safety net:

Approximately 85,000 (21%) adults aged 18-64 in Nashville are uninsured.

Nashville has a robust and growing group of Safety Net clinics that provide health care for more than one-fifth (23%) of the county population. Half (51%) of their patients have health insurance coverage. Currently most Safety Net Clinics are operating at capacity: full, but not overloaded.

Major gaps in available Safety Net services exist in specialty care and adult dental care for the poor and uninsured. Nashville General Hospital and the Nashville Academy of Medicine's "Project Access" (Bridges to Care Plus) program are important sources for specialty care, but gaps remain.

Caring for uninsured patients in emergency rooms and hospitals is costly, representing nearly a fourth of charges in hospital Emergency Departments. Many people, with and without insurance, seek care at hospital emergency departments for conditions that could be treated in a clinic at lower cost.

Alignment

While not a provider, MPHD leadership is active in the Safety Net Consortium of Middle Tennessee, which convenes safety net providers to communicate, coordinate efforts, and develop communitywide strategies for addressing gaps in the safety net.

Action

MPHD is no longer a significant provider of indigent medical care. However we are responsible for health care at the county jail, monitoring the current contract with Correct Care Solutions. We also continue to invest in health care for the homeless through a contract with United Neighborhood Health Services. The Bridges to Care program helps link uninsured people in Nashville to safety net clinics, and provides limited support to fill gaps in the pharmacy safety net.

Anticipated issues in the next 4 years

Adult emergency Dental Care remains a prominent need. Dental advocates have pursued unfunded state mandates that local health departments fill the need.

Health Reform will change the health care landscape, but a safety net will still be needed.

Additional Resources

Safety Net Assessment

Behavioral Health

Mental illness and substance abuse are closely connected to citywide issues such as homelessness, school dropout rates, violence, suicide, involvement with the justice system, and coping with emergencies and disasters.

Assessment

MPHD convenes the Davidson County Suicide Prevention Task Force. The task force commissioned a white paper which provided a roadmap for improving available data in order to better target interventions.

Alignment

The Suicide Prevention Task Force aligns countywide efforts to prevent suicide. Increasing the number of people and agencies who have had QPR (Question/Persuade/Refer) training, a basic recognition, screening and referral for people potentially contemplating suicide, is a major goal.

MPHD staff are collaborating with the Davidson County Sheriff's Office on projects and programs aimed at improving the transition from jail to the community.

MPHD has been involved in mental health disaster response planning and in mental health needs related to long term flood recovery.

Action

MPHD staff members provide substance abuse assessment and mental health screening and referral, largely in connection with the criminal justice system. A Group Accountability Program has been put in place to assist individuals needing drug treatment during the time they are waiting for a slot to become available.

MPHD staff are trained in Tobacco Cessation Education, and have assisted MDHA residents as they have moved toward smoke-free living in the high rise residences.

Anticipated Issues in the Next 4 years

MPHD will continue to build its ability and its role in developing communitywide capacity and systems for better prevention and improved access to services. Our role in direct client services for behavioral health is not expected to grow.