



Testimony

of

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New York City Department of Health and Mental Hygiene**

before the

**New York City Council
Committees on Health and Women's Issues**

regarding

Oversight Hearing on Heart Disease Among Women

February 5, 2009

Council Chambers, City Hall
New York City

Good morning Chairperson Rivera and Chairperson Sears and members of the Health and Women's Issues Committees. My name is Dr. Lynn Silver, Assistant Commissioner for Chronic Disease Prevention and Control at the New York City Department of Health and Mental Hygiene (DOHMH). On behalf of the Department thank you for the opportunity to provide testimony and discuss the state of heart disease among women in New York City.

My testimony today will provide an overview of the state of cardiovascular disease among New York City women, describe initiatives of the Department and partnering agencies to address cardiovascular disease--many of which have been made possible with the support of the City Council--and discuss challenges the City faces in reducing death and illness from cardiovascular disease.

Cardiovascular disease is the leading cause of death for both men and women in the United States. The term 'cardiovascular disease' refers to a number of conditions that affect the heart and blood vessels. These conditions include heart attacks, stroke, heart failure, hypertension, and coronary heart disease. Nearly 80 million adults over the age of 20 in the United States have one or more forms of cardiovascular disease.¹ In New York City, heart disease and stroke account for 40% of all deaths each year.² Much of this burden of illness and death could be prevented or postponed through further reductions in smoking, preventing high blood pressure and assuring its effective treatment.

In 2007, just over 24,000 New Yorkers died from cardiovascular disease. While people often think of heart disease as a disease of men, in reality more than half (55%) of the people dying from cardiovascular disease are women.³ Over 4,000 of these deaths occurred in people under the age of 65, deaths that we define as "premature". One third of premature cardiovascular deaths were among women.⁴ Such deaths are largely preventable. While deaths from cardiovascular disease have been declining over the past 25 years similarly for men and women, this decline has been most marked in whites and is slower in blacks, Hispanics and Asians.

Cardiovascular disease is the leading cause of adult death, affecting both sexes and New Yorkers of all incomes, races and ethnicities. However, there are significant inequities in disease distribution. Black women are twice as likely as white women to die from cardiovascular disease before the age of 65.⁵ Poverty is also bad for your heart. The highest rates of early death from cardiovascular disease among women in New York City are clustered in low-income neighborhoods and communities of color. Rates are especially high in the South Bronx, East and Central Harlem and North Central

¹ American Heart Association, 2007.

²⁻⁶ NYC DOHMH Bureau of Vital Statistics, 2008

Brooklyn.¹ The black-white gap in early cardiovascular disease death rates has been widening more rapidly among women than it has in men within the last few years.²

The major risk factors for cardiovascular disease are high blood pressure, high cholesterol, diabetes, smoking, and obesity and family history of early heart attack or stroke. (Male gender is also a major risk factor for cardiovascular disease because rates are higher in men compared with women).³ The observation that blacks are at higher risk for hypertension than whites is longstanding and not fully understood.

Many of these risk factors have high prevalence rate among women. In New York City, one out of four adults, male and female, has hypertension,⁴ and whether male or female, only slightly under half have their blood pressure under control.⁵ One out of four male and female New Yorkers also has high cholesterol.⁶ Women make up the majority of New Yorkers with diabetes, and they are slightly more likely than men to be obese (23.4% vs. 20.4%).⁷ While they are less likely than men to smoke there are still over 440,000 women smokers in New York City.⁸

The racial disparities in cardiovascular disease deaths among women are likely the result of disparities in social and biological risk factors. Black women are two times more likely than white women to be obese, to report ever having hypertension, and/or report ever having diabetes. Hispanic women are also two times more likely than white women to be obese and/or have self-reported diabetes. Income is an important correlate of obesity among women as well. The highest rates of obesity among women are found in neighborhoods where more than 30% of the population lives in poverty, such as the South Bronx, East and Central Harlem, and North Central Brooklyn. When compared to other groups, low-income black women have the highest rates of obesity.⁹

Risk for cardiovascular disease can start early in life. A recent study demonstrated that average blood pressure is increasing among children and adolescents in the United States, including among girls.¹⁰ This is a particularly troubling development when considering the rising rates of childhood obesity, which is associated with elevated blood pressure, and the potential future impact on cardiovascular disease in women.

Let me turn now to some of the Department's efforts to reduce heart disease and stroke related illness and death, and to eliminate health disparities. These efforts focus on two levels – keeping people healthy and improving care for those who are ill. Prevention is our first priority. We focus on the major risk factors, such as high blood pressure and

¹ Health Disparities in New York City, NYCDOHMH, 2001

³ Ong KL et al, Hypertension, 2008.

⁴ NYCDOHMH, CHS, 2007

⁵ NYC HANES, 2004

⁶ NYC HANES, 2004

⁷ NYCDOHMH, CHS, 2007

⁸ NYCDOHMH, CHS, 2007

⁹ Women at Risk: The Health of Women in New York City, NYCDOHMH, 2005

¹⁰ Muntner P et al, JAMA, 2004.

cholesterol, smoking, obesity, and diabetes. Many of our programs aim to reduce the occurrence of high blood pressure and cholesterol by promoting exercise, healthy eating, and salt reduction. We also work to reduce overall cardiovascular disease risk by identifying and treating those with high blood pressure and/or high cholesterol and by getting smokers to quit.

Although our programs do not exclusively target women, they do reach women in proportionally higher numbers than men. I would also like to acknowledge the importance of the Council's leadership and funding as well as the strong support of individual Council Members' in making these initiatives possible.

While individuals can and should make personal choices that reduce their likelihood of getting heart disease or having a stroke, our social, food and built environments are major determinants of heart disease and stroke risk factors in our communities. We therefore prioritize changes in our City's environment that can make healthy choices easier for New Yorkers. This is achieved both through city-wide initiatives as well as neighborhood-targeted programs that address the disproportionate burden of cardiovascular disease related death and illness in areas such as the District Public Health Offices (DPHOs) neighborhoods of the South Bronx, East and Central Harlem, and Central Brooklyn. I will briefly highlight some of these initiatives and would be pleased to explain in greater detail after this testimony at your request.

Much of our preventive work focuses on improving the food New Yorkers eat. As you know, New Yorkers like to eat out. Restaurant and take-away meals are a common convenience in our busy lives. In the past three years, the New York City Board of Health approved two important Health Code amendments that will help protect our hearts.

In 2006, the Board amended the Health Code to phase out artificial trans fat in NYC restaurants. Trans fat increases the risk of heart disease by elevating LDL, or "bad" cholesterol, and lowering HDL or "good" cholesterol. By reducing the intake of this dangerous substance in restaurants, we reduce our risk for heart attack. The measure has proved highly successful and, over 94% of restaurants are in compliance with the City's restrictions on trans fat use. Most remaining violations are documentation problems.

The Board also recently adopted a requirement for posting of calorie information on menu boards, menus, and item tags in restaurants. Our baseline studies show that people purchased too many calories when they eat at chain restaurants. This excessive caloric intake at restaurants contributes to obesity and places people at risk for heart disease. Calorie posting allows people to make informed decisions on the amount of calories they consume when eating out. The number of people who see and use calorie information has increased dramatically as a result.

Both of these measures became fully effective this year, and have been widely replicated across the country.

Last September, Mayor Bloomberg announced the launch of the City's first formal food procurement standard, ensuring that over 225 million meals and snacks served each year at schools, day care centers, senior centers, homeless shelters, and other locations are healthier than ever. Led by the Mayor's Food Policy Task Force, an initiative begun at the request Speaker Quinn, and with representation of the Council, the Department participated actively in this collaborative effort to set standards requiring City agencies to serve only healthier beverages such as skim or 1 percent milk (with exceptions for babies), phase out deep frying, include two servings of fruits and vegetables in every lunch and dinner, lower salt content and increase the amount of fiber in meals.

Americans currently eat almost twice the recommended limit of salt each day, increasing our blood pressure and risk for heart attack and stroke. Almost 80% of the salt we consume comes not from the shaker, but from processed and restaurant foods. If salt levels are reduced by half over the next decade, as proposed, the American Medical Association estimates that 150,000 premature deaths in the United States will be prevented every year. The Department, convening a national coalition of health organizations and public agencies, has begun to work with food industry leaders on a voluntary framework to cut the salt in their products. This may be the single most effective preventive action to reduce the burden of high blood pressure and cardiovascular disease.

We are also working on increasing access to healthful foods in areas where such options have not been available. The Department has partnered with local bodega owners to expand the availability of healthier food choices in DPHO neighborhoods. Through the Health Bucks program, the Department works with the HRA to subsidize the purchase of fresh fruits and vegetables from farmers markets, mostly for families using food stamps. And thanks to a measure recently approved by the Council, the Green Carts program will be able to introduce 1,000 more mobile food carts that sell fresh fruits and vegetables on street corners in neighborhoods where New Yorkers previously had little access to them.

Obesity and high blood pressure must also be addressed by increasing physical activity levels. With the support of the Council, the Sports, Play and Active Recreation for Kids (SPARK) program has trained over 9,000 early childhood educators at daycare centers, schools and afterschool programs citywide. Increasing number of schools are incorporating Physical Best, a curriculum focused on promoting physical fitness, and the New York City Fitnessgram assessment, a health related fitness assessment, into their physical education programs across the school system. The Department and the DOE are also working with after school programs to promote both traditional and non-traditional sports activity through the Cooperative, Healthy, Active, Motivated, Positive, Students (CHAMPS) program and with Council support, through Roadrunners as well. The Department is also collaborating with other city agencies through its Fit City initiative and PlaNYC to increase walking, biking and stair use by building more opportunities for physical activity into our environment.

Women who smoke are about twice as likely to suffer from coronary heart disease as non-smoking women.¹ In New York City, about 450,000 women are current smokers,² reflecting a nearly 30 percent decline in smoking prevalence since the implementation of New York City's innovative tobacco control program in 2002. This significant public health achievement has been driven by a combination of legislative and public education efforts. Most notably, New York City's Smoke-Free Air Act of 2002 prohibited smoking in nearly every indoor area in the city where people work, including almost all restaurants and bars. A series of cigarette excise tax increases at the city and state levels have brought New York City's combined cigarette excise tax in the highest in the country; taxes now comprise more than 60 percent of New York City's pack price. Aggressive anti-tobacco media campaigns have been a hallmark of the Health Department's efforts and continue to encourage smokers to quit and to prevent youth from ever starting. Resources that support cessation, such as annual free nicotine patches giveaways, are also integral to the City's efforts to help New Yorkers quit smoking and stay tobacco-free.

Despite these efforts, many New Yorkers still develop high blood pressure. Undiagnosed or uncontrolled blood pressure can be addressed by increasing people's participation in checking and tracking their own blood pressure outside the doctors office as well as by improving access to, and the quality of clinical care. Checking blood pressure measurements at home has been shown to help people control their blood pressure. The Department is scaling up a pilot project that distributes and evaluates the use of self-blood pressure monitors patients with poorly controlled blood pressure in select clinics in communities with significant cardiovascular disease related disparities. The majority of the participants in the Self Blood Pressure Monitoring Program are women (65%), and more than half of these women are black. In addition to encouraging clinicians to use of out-of-office checking to help their patients, we are working to improve insurance coverage of these automated monitors. To make out-of-office checks easier, the Department has also placed blood pressure kiosks in community pharmacies at no cost in the DPHOs. Over 76,000 blood pressure measurements have been taken from city placed kiosks in the past eight months.

The Department also works with over 40 faith and community-based institutions within DPHO neighborhoods to run blood pressure monitoring programs. Three-quarters of the participants in these programs are women, and approximately 40% of them had uncontrolled blood pressure. Healthy hearts is also a focus of our Primary Care Information Project. Now covering over one million patients, PCIP is helping doctors track blood pressure and deliver appropriate care for high blood pressure and other heart disease risk factors. Public Health detailing, City Health Information bulletins and other Department programs help support and educate clinicians and their staff on current recommendations for optimal care for high blood pressure, cholesterol, diabetes and obesity. We work closely with our partners at the Health and Hospital Corporation to support their efforts to continuously improve care for heart disease and its risk factors.

¹ HHS, *Women and Smoking: A Report of the Surgeon General*, Washington, DC: HHS, Public Health Service, Office of Surgeon General, 2001. Accessed on January 31, 2009 from http://www.cdc.gov/tobacco/data_statistics/sgr/sgr_2001/index.htm

² NYCDOHMH, CHS, 2007

To increase awareness of cardiovascular disease as the leading cause of death among women, the Department has teamed up with the American Heart Association (AHA) to help promote AHA's annual "Go Red for Women" campaign in New York City.

Collaboration activities include:

- Co-branding a NYC-specific "Love your heart. Control your blood pressure" Go Red poster which will be distributed to community partners;
- Developing messaging for the NYC Go Red transit media and billboard campaign;
- Developing a shared website that contains both AHA and health department resources on heart health; and
- Participating in a press event.

New York has a number of innovative initiatives that will improve the cardiovascular health of women. Yet much remains to be done. Furthermore, the rising poverty and unemployment during this economic crisis will tend to aggravate existing risks and disparities. Premature illness and death from cardiovascular disease will be most effectively addressed with comprehensive multi-pronged and sustained approach that addresses not only its environmental determinants and the immediate health needs of people with cardiovascular disease, but also social and economic needs. While we maybe far from our goal, city programs and our community partners are working harder than ever to meet the increased needs with leaner funding. We look forward to continued partnership with our fellow city agencies, the American Heart Association, community partners as well as ongoing collaboration with the Council to further strengthen our efforts to prevent and control cardiovascular disease, in both women and men.

In closing, let me reiterate our appreciation of the Council's support for cardiovascular disease prevention and control. Many of the key initiatives discussed today receive Council funding and we thank you for your commitment to addressing the City's leading cause of death. I am happy to answer any questions you may have.

Heart Disease in Women in New York City

New York City Council

Committee on Health &
Committee on Women's Issues

Melissa Schori MD, MBA
Medical Director

Lincoln Medical and Mental Health Center
New York City Health & Hospitals Corporation

Heart Disease in Women

- Cardiovascular disease is the most common cause of death and disability
- Deaths due to coronary heart disease (CHD) have decreased by more than 10% in the past decade
- CHD accounts for 35% of all causes of mortality in women
- Between the ages of 45 to 64, one in nine women develop symptoms of CHD
- After age 65 the ratio climbs to one in three

Sudden Cardiac Death

- Women had a lower sudden cardiac death (SCD) rate than men at all ages
- A higher fraction of sudden deaths in women occurred in the absence of prior overt CHD 63% vs 44% in men
- The presence of heart failure increased overall mortality and the incidence of SCD

Disparities in Adult African-American Women's Knowledge of Heart Attack and Stroke Symptoms

- Heart disease and stroke are the first and third leading causes of death in American women
- African-American women experience a disproportionate burden of these diseases compared to white women
- African-American women are more likely to delay seeking treatment for acute symptoms
- Knowledge is a first step in seeking care.
- Racial/ethnic gap in awareness remains
- Educational efforts to increase heart disease awareness should be targeted to racial/ethnic minorities to improve prevention and recognition

African-American, Hispanic & White Women's Perception of Early Disease - Why Women Delay Seeking Treatment for Symptoms of an Acute Heart Attack

- Patient age & race
- Low perception of heart disease risk
- Don't recognize *initial* symptoms
- Don't want to bother others
- Atypical presentation of symptoms
- Barriers to access to care - insurance issues, language, availability
- Women associate heart disease with men. They can correctly identify symptoms, but do not recognize them at the time of occurrence
- Disconnect between personal risk and known risk factors

Racial, Ethnic and Socioeconomic Differences in Multiple Risk Factors for Heart Disease and Stroke in Women

- More than 1/3 of all women had multiple risk factors
- Prevalence of multiple risk factors was lowest in whites and Asians
- Odds for multiple risk factors were greater in African-American and Native-American women and lower for Hispanic women compared with white women
- Prevalence and odds estimates increased with age & decreased with education, income and employment
- Smoking was more common in younger women, older women were more likely to have medical conditions and to be physically inactive

Cardiovascular Risk Factors

The assessment of cardiac risk factors should be an important component of periodic health examinations

- Personal history of CHD, family history of premature CHD
- Age - over 55
- High LDL or Low HDL
- Smoking is associated with 50% of all coronary events
- Hypertension: African-American and Hispanic New Yorkers have higher rates
- Diabetes - 1 in 10 adults in the South Bronx has Diabetes Mellitus
- Peripheral vascular disease
- Chronic kidney disease
- Obesity - one in 4 adults in the South Bronx is obese
- Sedentary lifestyle - more than half of South Bronx residents report no physical activity

Clinical Features of Coronary Heart Disease in Women

- Women with CHD are about 10 years older than men at the time of presentation
- Chest pain – women are less likely than men to have typical angina and more likely to have pain and other sensations in the neck and throat
- Women who present to an ED with new-onset chest pain are less likely to undergo an EKG, cardiac monitoring, cardiac enzymes, to receive a cardiology consult or be admitted to a coronary care or step-down unit

Management of Heart Disease

- Benefit of Aspirin, Beta blockers, ACE Inhibitors, Statins and Aspirin in Women
- Hormone replacement therapy is not recommended for cardiac protection
- Conflicting data on the benefit of early catheterization and revascularization in women
- Thrombolysis – women are less likely to receive & are likely to experience a greater delay in being treated. They Also have a higher rate of bleeding.
- Primary Percutaneous Coronary Intervention (PCI) – women have higher rates of in hospital and longer term mortality than men
- Coronary Artery Bypass Graft (CABG)– women have a higher mortality rate than men

Outcome of Heart Disease in Women

- Women with a heart attack have a higher long term mortality after Myocardial Infarction (MI) than men
- African-American women have a higher mortality than white women
- Cardiac mortality is also higher in women, as compared to men, with diabetes
- Women with heart disease develop symptomatic heart failure more often than men.
- The 6 month survival rate after first MI is lower in women than men

Recommendations

- Moderate intensity physical activity
- Avoidance/cessation of cigarette smoking & avoid environmental smoke
- Weight maintenance/reduction to achieve a BMI of less than 25
- Maintenance of a heart healthy diet
- Treatment of hypercholesterolemia
- Treatment of hypertension
- Treat Diabetes
- Avoid oral contraceptives in women who smoke
- Aspirin if over 65
- Not recommended: Hormone replacement and antioxidant vitamins

Cardiac Services Offered By HHC

- Comprehensive services
- Cardiology clinics redesigned with goal of improved patient flow, greater cost effectiveness, and greater volume capacity
- Midlevel providers recruited to expand cardiology services, increase capacity and improve patient access
- Non-invasive ancillary services (Echo, Stress tests, Holters, Nuclear cardiology, CT Angio)
- Specialty clinics for Diabetes management and obesity management

Cardiac Services Offered By HHC

- Smoking cessation services
- Cardiac catheterization referral services
- Information Systems leveraged – ancillary procedure results are in the Electronic Medical Record and clinical information is available across the network
- EKG interfaced with the EMR – review and compare immediately
- Diabetes Registry – improve disease management
- Cardiovascular Risk Registry – improve management of risk factors
- Chronic disease management – case management
- Targeted Training and Updates for Medical Staff

Enhancing Care: Goal BP <140/90 for 70% of Adult Patients

- Develop and implement guidelines for BP management and update corporate formulary
- Instruct the staff how to accurately measure BP
- Disseminate a treatment algorithm & formulary to clinicians
- Use of the new Hypertension patient registry
- More active recall of poorly controlled patients
- Use of patient education materials
- These additional efforts will build upon recent achievements to increase the rate of blood pressure control among our patient population

Enhancing Diabetes Control

- Task Force to develop & implement guidelines for diabetes care
- Update the corporate formulary to promote diabetes disease management
- Goals: HbA1c <7, BP < 130/80, LDLc <100, annual depression screening

Take Care NY Goals to Improve Heart Disease Risk Factors

- Goal 1 - all patients should have a primary care physician. These are the providers who initiate preventive health and screening and coordinate care.
- Goal 2 - Be tobacco free- smoking is the leading cause of preventable death in NYC and the cause of heart disease, stroke, emphysema and lung cancer

Take Care NY Goals to Improve Heart Disease Risk Factors

- Goal 3 – Keep Your Heart Healthy – While the heart disease death rate has decreased over the last decade, the heart disease hospitalization rate in the South Bronx is higher than NYC overall.
 - Focus on smoking cessation, high blood pressure and high cholesterol control, encourage physical activity and prevent obesity. Obesity is increasing rapidly. This has contributed to the diabetes epidemic. Poorly controlled DM worsens the harmful effects of high blood pressure.

National Recognition of HHC Facilities' Efforts

- Lincoln Hospital Received the Gold Performance Achievement Award for sustained performance by achieving more than 85% in all "Get with the Guidelines" recommended secondary prevention treatment measures for Coronary Heart Disease from the AHA with a range of 96% to 100% compliance.
- HHC facilities perform above national benchmarks on Core Measures for Acute MI management reported to CMS and NYSDOH
- The Jacobi Hospital Director of Cardiology is collaborating with Yale on NIH funded study reviewing heart disease in women

Systems Approach to Reducing Heart Disease

- Access to Care
- Risk factor prevention
- Risk factor reduction
- Healthy lifestyle
- Address psychosocial issues and concerns
- Early intervention
- Education and patient empowerment

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I represent: Montefiore Medical Center

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Name: Safiya Addison (PLEASE PRINT)
Address: 2107 1st Bldg Avenue
I represent: New York Methodist Hospital / GMAA
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