



Testimony of Dr. Dana Leifer, M.D.  
Chair, American Heart Association New York City Stroke Task Force  
Associate Professor of Neurology  
Weill Cornell Medical College-New York Presbyterian Hospital  
525 East 68th Street  
New York, NY 10065

Position: In Support  
Re: Proposed Resolution 982-A  
Date: December 12, 2012

First of all, I would like to thank Chairperson Arroyo and the members of the Council Committee on Health for the opportunity to testify in support of the Council's proposed Resolution 982-A, which calls upon our federal government to expand vital funding for stroke research.

The mission of the New York City Stroke Task Force, of which I serve as Chair, is to promote improvements to the care of stroke patients in New York City by highlighting advances in stroke treatment, by educating health care professionals and the public at large about how to recognize and treat stroke, and by engaging the EMS system and Department of Health in development of protocols to transport stroke patients to the most appropriate hospitals. The underlying goal of our Task Force is to optimize the care that stroke patients receive in New York City and to maximize their chance for a good recovery.

While I am prepared to attempt to answer any questions of the committee regarding the diagnosis and treatment of stroke, I want to emphasize the importance of funding for stroke research. Stroke is the fourth cause of death in our nation, and the number one source of disability. An estimated 800,000 strokes occur each year in the United States and approximately 134,000 people die of stroke annually.<sup>1</sup> About one third of stroke patients suffer from some permanent disability.<sup>2</sup> The current calculation regarding the 'cost' of stroke in the US runs to \$34.3 billion dollars.<sup>3</sup> Despite these alarming statistics, the National Institutes of Health budget consistently allocates a mere 1% of NIH spending to stroke-related research.

The discrepancy between this low level of funding and the magnitude of stroke as a public health problem and an economic burden needs to be corrected. Additional funding for stroke research will benefit not only stroke patients and their families, but also the economic health of our nation. NIH-funded research has shown that patients treated with tPA (tissue plasminogen activator – the only FDA approved emergency treatment for the most common stroke) within three hours of the first signs of stroke are 30% more likely to show minimal or no residual disability within 3 months.<sup>4</sup> Additionally, another study indicated that this level of improved outcomes for stroke patients could result in a 10-year net benefit of \$6.47 billion.<sup>5</sup>

The New York City Stroke Task Force commends the Council for working to expand funding for stroke research. To emphasize the importance of stroke research, I would like to highlight several recent developments. Newly approved devices allow us to use special catheters that can extract blood clots and re-open arteries of 89% of patients with certain types of strokes. By re-opening these arteries, we can restore blood flow to the brain and limit the damage that strokes cause. In addition, newly developed anti-coagulant drugs that thin the blood can prevent certain types of strokes more effectively and more safely than older drugs without the need for frequent blood tests that have to be performed for older drugs such as Coumadin.

Moreover, research here in New York City and in other countries, has demonstrated that designation of appropriate hospitals as primary stroke centers can speed delivery of clot-dissolving drugs and ensure delivery to more patients. In this regard, I want to point out that New York took the lead in designating stroke centers almost a decade ago. Early results from a pilot project in Brooklyn and Queens indicated that with designation of stroke centers, the percentage of stroke patients who arrived quickly enough to be treated with clot-dissolving drugs more than doubled from 3.4 to 7.7%. This result, I might add, came from a research project in which many members of our stroke task force participated.<sup>6</sup> This initial success led to designation of stroke centers throughout New York State and nationally. Numerous subsequent studies confirmed the benefits of establishing such centers. Because of the success of primary stroke centers here in New York and throughout the United States and because of new research suggesting that creation of a second more specialized level of stroke centers for more complex patients will improve outcomes, comprehensive stroke centers are now being designated and criteria are being developed to measure their performance.<sup>7</sup>

Furthermore, several recent studies have demonstrated that stroke center performance is enhanced if EMS providers pre-notify emergency room physicians when they are bringing in an acute stroke patient. By allowing the ER to prepare for an incoming patient and even by allowing physicians to communicate directly with family members accompanying the patient ahead of time, the administration of clot-dissolving drugs can be dramatically speeded up.<sup>8</sup> In view of these research findings, my colleagues and I on the New York City Stroke Task Force are now initiating discussions with the Fire Department to incorporate these results into the care of stroke patients through the EMS system here in New York. We are hoping that this will further improve the care that New Yorkers receive if they have a stroke.

I want to emphasize that in each of these cases, practical improvements in stroke care depend on research. To optimize stroke care in the future, additional funding for stroke research will be critical, and I therefore urge the Council to adopt Resolution 92A. Before I conclude, I want to thank the Council deeply for inviting me here today. On behalf of the American Heart Association's New York City Stroke Task Force, I am honored to have the opportunity to support the Council's interest in promoting stroke research, and I look forward to the positive results from the passage of Resolution 982-A. Thank you again for the invitation to testify today. I am happy to answer any questions that you have about stroke research or more generally about the care of stroke patients.

1. Roger VL, et al. Heart Disease and Stroke Statistics—2012 Update : A Report From the American Heart Association. *Circulation* 2012; 125:e2-e220.
2. National Institutes of Neurological Disorders and Stroke. Stroke: Challenges, Progress, and Promise. Bethesda, MD: National Institutes of Health, US Dept of Health and Human Services; 2009.
3. Heidenreich PA, et al. Forecasting the future of cardiovascular disease in the United States: a policy statement from the American Heart Association. *Circulation* 2011; 123:933.
4. NINDS rt-PA Stroke Study Group. Tissue Plasminogen Activator for Acute Ischemic Stroke. *New Engl J Med* 1995; 333:1581-1587.
5. Johnston SC, et al. Effect of a US NIH programme of clinical trials on public health and costs. *Lancet* 2006; 367:1319-1327.
6. Gropen TI, Gagliano PJ, Blake CA, Sacco RL, Kwiatkowski T, Richmond NJ, Leifer D, Libman R, Azhar S, Daley MB. Quality improvement in acute stroke: The New York State Stroke Center Designation Project. *Neurology* 2006; 67:88-93.
7. Leifer et al. Metrics for Measuring Quality of Care in Comprehensive Stroke Centers: Detailed Follow-Up to Brain Attack Coalition Comprehensive Stroke Center Recommendations. *Stroke* 2011; 42: 849-877.
8. Meretoja A, et al. Reducing In-Hospital Delay to 20 Minutes in Stroke Thrombolysis. *Neurology*. 2012 Jul 24;79(4):306-313.



**American Heart Association / American Stroke Association**  
122 East 42<sup>nd</sup> Street, 18<sup>th</sup> Floor  
New York, NY 10168  
212-878-5922

Testimony of Robin Vitale, Senior Director, Government Relations  
American Heart Association / American Stroke Association  
Position: In Support  
Re: Proposed Resolution 982-A  
Date: December 12, 2012

Chairperson Arroyo and member of the Council Committee on Health, thank you for this opportunity to testify in support of the Council's proposed Resolution 982-A. And thank you for championing this important topic – the need to support science and research funding to combat our nation's fourth leading cause of mortality, stroke.

Acknowledging that many experts are prepared to testify today regarding the benefits of science to NYC's stroke system of care, I want to initially touch upon the basic mechanics of this disease so that we may all be better positioned to understand the vital need for additional research.

Stroke is a disease that affects the arteries leading to and within the brain. While it's prevalence as No. 4 cause of death in our nation is a top-most concern, it is also a leading cause of disability in the United States.

A stroke occurs when a blood vessel that carries oxygen and nutrients to the brain is either blocked by a clot (called an ischemic stroke) or bursts (called a hemorrhagic stroke). When that happens, part of the brain cannot get the blood (and oxygen) it needs, and as a result brain cells die. Depending on where the disruption occurs, the symptoms of stroke may vary. For example, if the blood vessel is blocked or bursts in the part of the brain that controls speech, victims may find themselves suddenly unable to communicate. Similarly, if the part of the brain that is affected controls motor-skills, standing, walking or other movements of our body may suddenly become impossible.

Due to the complexity of the brain, there are several warning signs of stroke. Sudden onset of numbness or weakness of the leg; sudden confusion or trouble understanding; sudden trouble seeing in one or both eyes; sudden trouble walking, dizziness, loss of balance or coordination; or sudden severe headache with no known cause are all considered strong indicators of stroke and 911 should be contacted immediately. A useful tool is to remember F.A.S.T. In this case, F stands for the drooping of the face; A is for arm weakness; S indicates difficulty with speech; and T relays that it's time to call 911.

Twice now, I've referenced the importance of calling 911 immediately as soon as a stroke symptom appears. Time is the most important commodity when it comes to treating a stroke patient. If blood flow to the brain remains impeded, brain cells will die and reversing the damage to the brain will be unlikely. In certain cases, a clot-busting drug called tissue plasminogen activator (tPA) may improve the chances of diminishing symptoms but only if patients receive the treatment within three hours.<sup>i</sup>

A person's risk for stroke is dependent upon several factors. Individuals over the age of 65 have a greater risk, although it is not unusual for younger people to suffer stroke. A family history of stroke, or a personal history of heart attack, stroke or TIA (transient ischemic attack – or mini-strokes – caused by a temporary blockage in the brain) are also strong indicators for stroke risk. Regarding gender, while more men than women suffer stroke, women are more likely to die from the disease. Pregnancy and the use of birth control pills can increase a woman's risk. Race also should be considered as a factor as African-Americans suffer a disproportionate risk, due to higher rates of diabetes, hypertension and obesity. The prevalence of controllable risk factors, such as the ones just mentioned as well as smoking, poor diet and physical inactivity is of paramount concern as the American Heart Association states that nearly 80% of strokes could be prevented by addressing these issues.<sup>ii</sup>

While the month of May is designated American Stroke Month – a time to promote greater awareness of stroke and its symptoms, it is appropriate for this committee to support this resolution now. Funding for the National Institutes of Health (NIH) may be cut by about \$2.5 billion or roughly 8% in January as a result of automatic across-the-board cuts required by the Budget Control Act of 2011. These reductions would be in addition to any made in the regular funding process for FY 2013. This financial loss would mean that 2300 grants that the NIH currently plans to fund would not be awarded and could result in the loss of 33,000 jobs across the United States and a \$4.5 billion decline in economic activity.<sup>iii</sup>

I have enclosed in the copies of this testimony a letter from the American Heart Association's CEO, Nancy Brown regarding this subject. The letter, addressed to the President of the United States, encourages our federal decision-makers to protect research funding as part of the negotiations to avoid the 'fiscal cliff.' In addition, I've attached a copy of the testimony provided by Dr. Gordon Tomaselli, the current President of the American Heart Association, to Congress regarding the FY 2013 budget. It is our hope that we may overcome both budgetary dynamics and ultimately secure a stable and appropriate funding level for the NIH in order to continue the positive trajectory regarding stroke care in our country.

---

<sup>i</sup> [http://www.strokeassociation.org/STROKEORG/WarningSigns/Stroke-WarningSigns\\_UCM\\_308528\\_SubHomePage.jsp](http://www.strokeassociation.org/STROKEORG/WarningSigns/Stroke-WarningSigns_UCM_308528_SubHomePage.jsp)

<sup>ii</sup> [http://www.strokeassociation.org/STROKEORG/AboutStroke/UnderstandingRisk/Understanding-Stroke-Risk\\_UCM\\_308539\\_SubHomePage.jsp](http://www.strokeassociation.org/STROKEORG/AboutStroke/UnderstandingRisk/Understanding-Stroke-Risk_UCM_308539_SubHomePage.jsp)

<sup>iii</sup> Dr. Francis Collins. "Testimony to House Subcommittee on Labor – HHS – Education Appropriations FY13 NIH proposal for National Center for Translational Science. Question and Answer period." (Date: March 20, 2012). Full testimony available at: <http://appropriations.house.gov/UploadedFiles/HHRG-112-AP07-WState-FCollin-20120320.pdf>. Accessed May 23, 2012.



**Chairman of the Board**  
Ron W. Haddock

**President**  
Donna K. Arnett, PhD, BSN, FAHA

**Chairman-elect**  
Bernard P. Dennis

**President-elect**  
Mariell Jessup, MD, FAHA

**Immediate Past  
Chairman of the Board**  
William H. Roach, Jr., Esq.

**Immediate Past President**  
Gordon F. Tomaselli, MD, FAHA

**Secretary-Treasurer**  
Alvin L. Royse, JD, CPA

**Directors**  
Elliott Antman, MD, FAHA  
Joyce Beatty, MS  
David A. Bush  
Robert M. Carey, MD, FAHA  
Mark A. Creager, MD, FAHA  
Shawn A. Dennis  
Johnny Lee, MD  
John J. Mullenholz  
James J. Postl  
Bertram L. Scott  
David A. Spina  
Bernard J. Tyson  
Raymond P. Vara, Jr.  
Henry J. Wasiak, MBA

**Chief Executive Officer**  
Nancy A. Brown

**Chief Mission Officer**  
Meighan Girgus

**Chief Administrative Officer &  
Chief Financial Officer**  
Sunder D. Joshi

**Chief Science Officer**  
Rose Marie Robertson, MD, FAHA

**Chief Development Officer**  
Suzie Upton

**Executive Vice President  
Communications**  
Matthew Bannister

**Executive Vice President  
Corporate Secretary &  
Emeritus General Counsel**  
David Wm. Livingston, Esq.

**Executive Vice President  
ECC Programs**  
John Meiners

**Executive Vice President  
Consumer Health**  
Kathy Rogers

**Executive Vice President  
Advocacy & Health Quality**  
Mark A. Schoeberl

**Executive Vice President  
Technology & Customer Strategies**  
Michael Wilson

**General Counsel**  
Lynne M. Darrouzset, Esq.

November 29, 2012

The President  
The White House  
Washington, DC 20500

Dear Mr. President:

As you begin negotiations to avoid the “fiscal cliff” and more fundamentally, address our nation’s long term economic health, the American Heart Association - on behalf of our over 22.5 million volunteers and supporters – urges you to consider the potential impact these decisions will have on both the fiscal and physical health of all Americans. We believe the two are inextricably linked. Deficit reduction is essential to putting our economy on a sustainable path; and a healthy, productive workforce is a prerequisite for sustained economic growth.

The current forecast for our nation’s health is not good. A 2011 AHA published study projects that the percentage of adults in the U.S. living with the consequences of heart disease, stroke, and other forms of cardiovascular disease (CVD) will increase to nearly 41 percent at a cost to exceed \$1 trillion annually by the year 2030, making this a critical medical and societal issue. Changing the trajectory of our country’s #1 and most costly killer requires continued government investment in research, prevention, and improving the quality and value of health care that all Americans receive.

We believe that it is possible to achieve significant deficit savings and at the same time, improve the nation’s health, by rejecting arbitrary across-the-board cuts in critical federal funding and caps on entitlement programs that merely shift spending from the federal government to state and local government, private employers and patients. We support a balanced approach with priorities that provide taxpayers with clear accountability for each tax dollar spent on our nation’s health. It is incumbent upon all of us to be responsible stewards of taxpayer dollars by implementing responsible cost savings and efficiencies whenever possible. We therefore urge you to consider the following recommendations during the course of your deliberations.

**Protect Research.** Research supported by the National Institutes of Health (NIH) and other science agencies is a proven engine of economic growth. The biotechnology and pharmaceutical industries – built upon federally-funded scientific research – enjoy a world market of more than \$140 billion and employ one million workers in the U.S. alone. Federally-funded research conducted at universities across the country provides the foundation for private sector development. Thousands of workers at companies that provide research tools and technologies support \$42 billion in annual revenues. In 2011 alone, NIH research funding led to the creation of more than 432,000 much needed jobs and generated more than \$62 billion in new economic activity across the country. Economists have estimated that a \$23.7 billion investment in NIH extramural research yields \$62.1 billion in economic activity – a solid \$2.62 ROI for every dollar spent. The ROI in terms of our nation’s health is equally impressive, if not amazing. A baby born today in the United States can expect to live to nearly 79 years old, about three decades longer than one born in 1900.

Although the NIH enjoys broad bipartisan support, funding for the agency is nevertheless included within the nondefense discretionary category of the budget which has borne the brunt of deficit reduction efforts through the Bipartisan Budget Control Act and previous spending cuts. The magnitude and depth of these cuts has made it difficult for Congress to protect even those programs that will over time support new technologies, generate jobs and maintain our global competitive leadership in the biotechnology and pharmaceutical industries. Federal investment in medical research through the NIH has declined in both inflation-adjusted dollars and as a share of GDP nearly every year since 2003. Recent studies conclude that successive years of flat funding threaten the U.S. role as the world leader in pharmaceuticals and biotechnology.

We therefore urge you to forgo any additional cuts to nondefense discretionary spending and protect programs that provide these high returns on investment and contribute to the growth of our economy. We believe that the \$917 billion of discretionary savings from the Budget Control Act should count towards any spending target agreed to in an overall deficit deal. Furthermore, we recommend that any long-term budget deal include a mechanism to preserve our investments in the NIH and other programs that contribute to long-term economic growth.

**Preserve Prevention.** As a nation, we must continue down the path of reorienting our entire approach to health care to one that promotes healthy habits and wellness at an early age. We must transform our current healthcare delivery system that focuses on “sick care” to one that better incorporates, coordinates, values and rewards quality and prevention.

The Prevention and Public Health Fund is our first sustained national investment in preventative health programs. The programs supported by the Fund are essential if we are to reduce the growth of chronic diseases, such as heart disease, cancer, and diabetes, which are primary drivers of rising health care costs. Additional cuts in the Fund – which has already suffered an alarming reduction – would compromise our ability to make important progress on cost containment, public health modernization, and wellness promotion.

Moreover, we would like to underscore that investing in prevention is not only the smart move but a proven winner during these fiscally-challenging times as it can foster both a healthy economy and a healthy society. For example, research in Massachusetts showed that comprehensive coverage of tobacco cessation services in the Medicaid program led to reduced hospitalizations for heart attacks and a net savings of \$10.5 million or a \$3.07 ROI for every dollar spent in the first two years. Similarly, if states could reduce the average body mass index of residents by just five percent by 2030, nearly every state could save between 6.5 percent and 7.9 percent in health care costs, equating to billions of dollars. Cuts in the Centers for Disease Control and Prevention state-based chronic disease programs or the elimination of key preventive services provided by Medicare and Medicaid will make it difficult to realize the full potential of prevention programs that save lives and money.

**Promote Value in Federal Health Programs.** Too many of the proposals aimed at reducing federal health care spending in Medicare, Medicaid, and the Affordable Care Act merely shift costs to patients, consumers, states, and businesses. This approach ignores the real problem of rising health care costs and could actually exacerbate costs over time by causing patients to delay or forgo medical screenings and medications that prevent disease in the first place, or keep it from worsening. We believe a much better approach to federal health care entitlement reform is to focus on improving the quality and value of health care and reducing overutilization of services, waste and inefficiencies in the system. In other words, let’s focus on making more effective and efficient use of our health care dollars.

A whopping 86 percent of adults over age 65 on Medicare have some form of CVD (including high blood pressure or high cholesterol), and a majority of adults with Medicaid coverage also have CVD. Medicare and Medicaid provide critical health coverage that enables heart disease and stroke patients to access the care they need without costly delays. And even with the financial protection that Medicaid and Medicare currently provide, typical beneficiaries with chronic conditions already pay a significant amount of their health

expenses out of their own pockets and many cannot afford to pay that, let alone even more. We must protect the most vulnerable of these patients from higher costs. Half of Medicare beneficiaries in 2010 had incomes below \$21,200.

The Affordable Care Act (ACA) makes much needed improvements to our health care system in three important ways: 1) the coverage and insurance market protections will extend health insurance to millions of Americans who are currently uninsured, including 7.3 million Americans with CVD; 2) the law places significant emphasis on preventing disease, rather than just treating it, and on improving the overall wellness of all Americans; and 3) delivery system reforms are already beginning to improve the quality of care delivered while reducing unnecessary and duplicative health care costs. We urge you to move forward on ways to improve the ACA without undermining the meaningful progress already made possible by this law.

The National Coalition on Health Care released a new report, "Curbing Costs, Improving Care: The Path to an Affordable Health Care Future" that offers a sensible alternative to merely cutting provider reimbursements or reducing benefits on which our most vulnerable citizens depend. We support many of the recommendations contained in this report and urge you to consider these and similar thoughtful alternatives and effective approaches over arbitrary program cuts and spending caps.

**Preserve incentives for charitable giving.** As mentioned earlier, the American Heart Association supports a balanced approach to deficit reduction – which we recognize must include both revenue and spending proposals. For example, we have consistently advocated for higher tobacco taxes, which are a proven deterrent to tobacco use. We do, however, share the concerns expressed by others in the nonprofit sector about proposals to alter the charitable tax deduction. Today – more than ever – Americans depend on a strong philanthropic sector of both large and small donors as nonprofits try to fill gaps created by cuts in federal, state and local budgets. We therefore urge you to thoroughly examine the impact of altering current tax deductions for charitable giving on the health and wellbeing of our most vulnerable Americans.

Thank you for your consideration of our views and we stand ready to work with the Congress and the Administration to address the economic problems we face as a nation both in the short and long term. If you have any questions or would like to talk further about these recommendations, please feel free to contact me.

Sincerely,



Nancy A. Brown  
CEO, American Heart Association

cc: The Honorable Harry Reid  
Senate Majority Leader

The Honorable Mitch McConnell  
Senate Minority Leader

The Honorable John Boehner  
Speaker of the House

The Honorable Nancy Pelosi  
House Minority Leader



**STATEMENT BY AMERICAN HEART ASSOCIATION**  
**GORDON TOMASELLI, M.D., PRESIDENT**  
**202-785-7900; [claudia.louis@heart.org](mailto:claudia.louis@heart.org); 1150 Connecticut Ave, NW, DC 20036**  
**FY 2013 LABOR-HHS-EDUCATION APPROPRIATIONS: NIH, CDC, HRSA, AHRQ**

Despite considerable progress in the fight against heart disease, stroke and other forms of cardiovascular disease, CVD remains our nation's No. 1 and most costly killer, with one person dying from it every 39 seconds. CVD is also a major cause of disability, costing our country an estimated \$298 billion in medical expenses and lost productivity in 2008. Today, an estimated 83 million adults suffer from CVD. In addition, risk factors for CVD, such as obesity, diabetes, and high blood pressure, are on the rise. At age 40, the lifetime risk for CVD is two in three for men and more than one in two for women. Many are surprised to learn that CVD is the leading cause of death in women, outweighing cancer and other diseases.

Unfortunately, these startling statistics will likely worsen. A recent study projects that by the year 2030, more than 40% of adults in the U.S. will live with the effects of CVD at a cost exceeding \$1 trillion annually that would impoverish both the healthy and the ill. The graying of America's Baby Boomers along with the volatile growth in medical spending are the key drivers of these rising costs. Compounding this dire situation, heart disease and stroke prevention, research, and treatment programs remain not only woefully underfunded, but there is no steady and dependable stream of resources for the National Institutes of Health (NIH) to mount a long-term strategy to fight this terrible disease, enhance prevention and foster best care.

CVD is the No. 1 killer in each state, except Alaska. Yet, research has shown that it is mostly preventable when treatable risk factors, such as high blood pressure and smoking, are addressed.

Where one lives can affect survival from a deadly type of heart disease—sudden cardiac arrest. Only 21 states received FY 2010 funds for Health Resources and Services Administration's Rural and Community Access to Emergency Devices Program (HRSA) to save lives from SCA.

To avoid a looming CVD crisis, American Heart Association challenges Congress to prioritize prevention. Evidence-based prevention programs must reach people where they live, work and play. Prevention must be a keystone to encourage early age heart healthy and stroke-free habits.

Thanks to the insight of Department of Health and Human Services, heart attack and stroke prevention will likely improve. AHA proudly partners with HHS to effect and achieve Million Hearts. Co-led by Centers for Disease Control and Prevention (CDC) and Centers of Medicare and Medicaid Services, this public-private partnership seeks to prevent 1 million heart attacks and strokes in five years.

In this time of budgetary belt-tightening, AHA lauds Congress for providing a glimmer of hope to the one-in-three adult CVD sufferers in the U.S. by wisely investing in the NIH, HRSA, CDC, and in the Prevention and Public Health Fund for FY 2012. While we advocated for higher increases, these funds will help improve our nation's physical and fiscal health. Stable and sustained FY 2013 funding is critical to advance heart disease and stroke research, prevention and treatment. However, the failure of the Joint Select Committee on Deficit Reduction to agree on a plan to reduce deficits will result in automatic across-the-board cuts in January 2013. Based on current projections, nearly every CVD research and prevention program will be cut by 9%.

## **FUNDING RECOMMENDATIONS: INVESTING IN THE HEALTH OF OUR NATION**

Sadly, promising research remains unfunded that could stem the increase of heart disease and stroke risk factors. Also, too many Americans die from CVD while proven prevention efforts beg for resources for widespread implementation. Now is the time to boost research, prevention and treatment of our nation's leading and most costly killer. If Congress fails to capitalize on the progress of the past 50 years, Americans will pay more in lives lost and health care costs. Our recommendations below address the issues in a thorough and fiscally responsible way.

<b><u>Summary of Recommendations</u></b>	
<b>National Institutes of Health</b>	\$32 billion
National Heart, Lung, and Blood Institute	\$3.214 billion
National Institute of Neurological Disorders and Stroke	\$1.698 billion
<b>Agency for Healthcare Research and Quality</b>	\$400 million
<b>Centers for Disease Control and Prevention</b>	\$7.8 billion
WISEWOMAN	\$37 million
Division for Heart Disease and Stroke Prevention	\$75 million
National Center for Health Statistics	\$162 million
<b>Health Resources and Services Administration</b>	
Rural and Community Access to Emergency Devices Program	\$8.927 million

### **Capitalize on Investment for the National Institutes of Health (NIH)**

NIH-funded research prevents and cures disease, generates economic growth, fosters innovation, and preserves the U.S. role as the world leader in pharmaceuticals and biotechnology. NIH sponsored studies have revolutionized patient care. Further, NIH remains the single largest funder of basic research – the starting point for all medical advances and an essential function of the Federal government. The private sector cannot fill this gap because there is no guarantee that this type of research will lead to an instant or profitable product or cure.

NIH research produces major returns on investment by developing new technologies that create high-paying jobs. Also, the typical NIH grant supported about seven mainly high-tech full-time or part-time jobs in FY 2007. In FY 2010, NIH created nearly a half-million U.S. jobs and produced about \$70 billion in economic activity. Each dollar NIH distributes in a grant returns \$2.21 in goods and services to the local community in one year.

However, with sequestration looming, NIH faces an estimated 9% or \$2.8 billion cut, reducing its budget to the 2004 level. Since NIH invests in each state and in 90% of congressional districts, thousands of jobs will be lost, with a ripple effect on our fragile economic recovery. Such draconian budget cuts will both endanger NIH's role as the world leader in medical research—when our competitors are escalating their investment—and will severely delay research and development of disease treatments and cures.

*American Heart Association Advocates:* We ask for a FY 2013 appropriation of \$32 billion for NIH to build on successes to save lives, improve health, spur our economy and spark innovation. Also, we urge Congress to protect NIH from across-the-board cuts for the aforesaid reasons.

**Enhance Funding for NIH Heart and Stroke Research: A Proven and Wise Investment**

From 1998 to 2008, death rates for coronary heart disease and stroke fell nearly 29% and 35% respectively. Yet, more must be done to improve lives and to prevent these illnesses. Declines in these deaths are directly linked to NIH research, with scientists now on the verge of exciting discoveries that could lead to game-changing treatments and even cures. For example, the largest U.S. stroke rehabilitation study showed that intensive, home-based physical therapy as well as a more complex program using a body weight-supported treadmill can improve walking. Both programs resulted in superior walking ability as compared to usual care.

One of the largest-ever NIH-sponsored analyses of CVD lifetime risks demonstrated that middle-age adults with one or more classic CVD risk factors have a much greater chance of suffering a major CVD event. Further, it showed traditional risk factors predicted one's long-term development of CVD more than just age. Also, NIH studies identified 29 genetic variants that influence blood pressure, providing new clues for control, and demonstrated that those at highest risk of a second stroke should undergo aggressive medical treatment rather than with a stent.

In addition to saving lives, NIH research can cut health care costs. For example, the first NIH tPA drug trial resulted in a 10-year net \$6.47 billion drop in stroke health care costs. Also, the Stroke Prevention in Atrial Fibrillation Trial 1 produced a 10-year net savings of \$1.27 billion.

**Cardiovascular Disease Research: National Heart, Lung, and Blood Institute (NHLBI)**

In spite of lower mortality rates and many promising avenues, there is still no cure for CVD. With an aging population, demand will only increase to find better ways for Americans to live healthy and productive lives, despite CVD. Stable and sustained NHLBI funding is needed to build on investments that provided grants to use genetics to identify and treat those at greatest risk of heart disease; hasten drug development to reduce high cholesterol and blood pressure; and create tailored strategies to treat, slow or prevent heart failure. Other key studies include an analysis of whether lower blood pressure than now recommended further reduces risk of heart disease, stroke, and cognitive decline. Sustained critical funding will allow for aggressive implementation of other priority initiatives in the cardiovascular strategic plan.

**Stroke Research: National Institute of Neurological Disorders and Stroke (NINDS)**

An estimated 795,000 Americans will suffer a stroke this year, and more than 134,000 will die from one. Many of the seven million survivors face severe physical and mental disabilities and emotional distress. In addition to the physical and emotional toll, stroke cost a projected \$34 billion in medical expenses and lost productivity for 2008. The future does not bode well. A recent study projects stroke prevalence will increase 25% over the next 20 years, striking more than 10 million individuals with direct medical costs rising 238% over the same time period.

Stable and sustained NINDS funding is required to capitalize on investments to prevent stroke, protect the brain from damage and enhance rehabilitation. This includes initiatives to: (1) determine if MRI brain imaging can assist in selecting stroke victims who could benefit from the clot busting drug tPA beyond the 3-hour treatment window; (2) assess chemical compounds that might shield brain cells during a stroke; and (3) advance stroke rehabilitation by studying if the

brain can be helped to “rewire” itself after a stroke. Enhanced funding will also allow for proactive initiation and implementation of the NINDS’ novel stroke planning process to develop priorities to advance the most promising prevention, treatment and recovery research.

*American Heart Association Advocates:* While AHA supports increased funding for all the 18 NIH institutes and centers that conduct heart and stroke research, we specifically recommend that NHLBI be funded at \$3.214 billion and NINDS at \$1.698 billion for FY 2013.

#### **Increase Funding for the Centers for Disease Control and Prevention (CDC)**

Prevention is the best way to protect the health of Americans and reduce CVD’s costs. Yet, effective prevention strategies are not being implemented due to inadequate funds. In addition to conducting research and evaluation and developing a surveillance system, the Division for Heart Disease and Stroke Prevention (DHDSP) manages Sodium Reduction Communities, Paul Coverdell National Acute Stroke Registry, and State Heart Disease and Stroke Prevention Program. The state program also promotes the “A-B-C-S” of prevention: appropriate aspirin therapy, blood pressure control, cholesterol management and smoking cessation.

The DHDSP manages WISEWOMAN that serves uninsured and under-insured low-income women ages 40 to 64. It helps them avoid heart disease and stroke by providing preventive health services, referrals to local health care providers—as needed—and lifestyle counseling and interventions tailored to risk factors to promote lasting behavior change. From July 2008 to June 2010, it served over 70,000 women. In this timeframe, 89% of them were found to have at least one risk factor and 28% had three or more. Yet, over 43,000 of them participated in at least one session to address them.

*American Heart Association Advocates:* AHA concurs with the CDC Coalition in asking for \$7.8 billion for CDC’s “core programs.” We recommend \$75 million to bolster the DHDSP and \$37 million for WISEWOMAN to add states and serve more women. We also join with the Friends of the NCHS in asking for \$162 million for the National Center for Health Statistics.

#### **Restore Funding for Rural and Community Access to Emergency Devices (AED) Program**

About 90% of sudden cardiac arrest victims die outside of a hospital. However, prompt CPR and defibrillation, with an automated external defibrillator, can more than double their chances of survival. Communities with comprehensive AED programs have reached survival rates of about 40%. HRSA’s Rural and Community AED Program provides competitive grants to states to buy AEDs, train lay rescuers and first responders in their use and place AEDs where SCA is likely to occur – and with tangible results. From September 2007 to August 2008, 3,051 AEDs were bought and 10,287 people were trained. Due to this effort, almost 800 patients were saved between August 1, 2009 and July 31, 2010. Requests for these AED grant dollars have exceeded available limited funds. In FY 2009, less than 8% of the applicants were funded and only 21 states received funds in FY 2010. We applaud Congress for restoring this program to its FY 2010 level for FY 2012. However, HRSA transferred \$1.4 million to the AIDS Drug Assistance program, thereby diminishing the positive impact of the funding increase.

*American Heart Association Advocates:* We ask for a FY 2013 appropriation of \$8.927 million to restore the Rural and Community AED Program to its FY 2005 level as 47 states were funded.

**Increase Funding for the Agency for Healthcare Research and Quality (AHRQ)**

AHRQ develops scientific evidence to improve health care and provides patients and caregivers with vital evidence to make the right decisions about their care. AHRQ's research also enhances quality and efficiency of health care.

*American Heart Association Advocates:* AHA joins Friends of AHRQ in advocating for \$400 million for AHRQ to preserve its vital initiatives.

**CONCLUSION**

Cardiovascular disease continues to wreak a deadly, disabling and costly toll on Americans. Our funding recommendations for NIH, CDC and HRSA outlined above will save lives and cut rising health care costs. We urge Congress to seriously consider our proposals that represent a wise investment for our nation and for the health and well-being of this and future generations.

## STROKE RESEARCH MILESTONES

Year	Breakthrough	Comments
1925	Cerebral Angiography	Brain blood vessels are visible through X-ray in patients for the first time.
1945	Anticoagulants	Introduced to prevent blood clots.
1953	Carotid Endarterectomy*	A surgical procedure to remove fatty deposits from the carotid artery, the main blood vessel to the brain in the neck, could reduce stroke risk in people with narrowed arteries.
1974	Imaging Techniques*	Development of computerized tomography (CT) that revolutionized stroke diagnosis.
1978	Aspirin & Stroke*	Recognition that aspirin can prevent stroke.
1985	Aneurysm Surgery*	Surgery with microscopes can improve treatment outcome of aneurysms.
1989	Cigarettes & Stroke*	Confirmation of close link between cigarette smoking and stroke.
1990	Blood Vessel Imaging Techniques*	Technological improvements in computed tomography and magnetic resonance imaging techniques allow stroke to be visualized in a clearer and more accurate manner.
1991	Atrial Fibrillation & Stroke Risk*	Abnormal rhythm of the heart increases risk of stroke. A drug to reduce risk of clots, warfarin, is shown to significantly reduce stroke risk in patients with atrial fibrillation.
1993	Apoptosis*	A new process in the death of oxygen-starved brain cells could provide a chance to develop new strategies and drugs to stop or notably reverse brain damage from stroke.
1994	Statin Drugs*	Drugs that lower cholesterol levels are found to significantly reduce stroke risk.
1996	Tissue Plasminogen Activator (t-PA)*	First FDA-approved clot-busting drug to treat sudden clot-caused stroke.
1996	Electrolytically Detachable Coils	FDA-approved treatment to prevent unruptured aneurysms from bleeding.
1999	Primary Stroke Centers*	Concept of coordinated, organized care in a hospital with the necessary resources, personnel, and equipment to treat stroke emergencies as well as associated complications.
2002	Genetics & Stroke*	Discoveries show that there are links between people who carry certain genes and their risk for certain types of stroke.
2003	Aspirin and Stroke*	Aspirin as effective as ticlopidine in preventing a second stroke in African Americans.
2004	Faster Way to Open Blocked Vessels*	Tissue plasminogen activator (tPA) plus ultrasonography improves tPA's ability to dissolve clots in brain artery that cause a stroke.
2005	Aspirin & Stroke*	Aspirin shown to be a safer prevention strategy for intracranial arterial stenosis (narrowing of arteries inside the skull that can cause a stroke), compared to warfarin.
2006	Stroke Rehabilitation*	Constraint-Induced Movement Therapy, a rehabilitative method involving forced use of a paralyzed arm, can help stroke survivors regain arm function.
2007	Predicting Stroke Risk*	Development of a new clinical assessment tool to help physicians identify patients at greatest risk of a stroke, following a TIA—a mild, transient stroke.
2008	Telemedicine & t-PA*	Telemedicine can improve safe delivery of acute stroke treatment in rural areas without immediate access to stroke specialists or facilities.
2009	Genomics & Stroke*	Advances in genomics led to development of an algorithm that predicts the safest dose of warfarin to prevent strokes and identification of new genes associated with stroke risk.
2010	Carotid Surgery vs. Stenting*	Surgery and stenting to reopen narrowed neck arteries carrying blood flow to the brain were both shown to be safe and effective in preventing stroke. Younger patients fared better with stenting and older ones with surgery. Based in large part on these results, a FDA panel voted to widen the use of the carotid stent, which will impact patient care.
2011	Rehabilitation*	Largest U.S. stroke rehabilitation study demonstrated that intensive, home-based physical therapy can improve walking ability as well as a more complex program using a body weight-supported treadmill. Both intensive programs resulted in superior ambulatory ability compared to usual care. The latter group substantially improved even when intensive rehabilitation was started 6 months after stroke.

Source: Brain Attack Coalition, The Wilkerson Group, Inc. and the American Heart Association

\* Supported by the National Institute of Neurological Disorders and Stroke of the National Institutes of Health

**New York Presbyterian Hospital / Columbia University Medical Center**

Support of New York City Council Resolution No. 982-A

Public Hearing

December 12, 2012

~~The New York City Council Committee on Health has brought forward Proposed Resolution No. 982-A~~

A calling upon the United States Congress and the President of the United States to increase funding for research on stroke prevention and treatment. We commend the Council on its proactive support of stroke research and urge Congress to take up this resolution. New York Presbyterian Hospital / Columbia University Medical Center has a long history of federally funded research which has advanced treatment capabilities in our region and across the country, and has enabled more citizens of New York to be treated for stroke more effectively as a result. We offer our full support for this resolution based on the following:

The American Heart Association reports that stroke occurs in nearly 800,000 individuals every year in the US, with an annual cost of stroke-related care of about \$54 billion. The incidence is expected to rise over the next 20 years. There are currently 5.6 million stroke survivors in the US. With the aging of the population and the rising prevalence of childhood obesity, diabetes and hypertension the number of those living with stroke will increase dramatically. Projections are for an additional 4 million by 2030.<sup>1</sup>

Stroke is the 4<sup>th</sup> leading cause of mortality in the US and the #1 cause of disability among adults, with more than 2.5 million American adults reporting functional limitations in 2005 as a result of stroke. The Framingham Heart Study showed that among stroke survivors at 6 months, 50% had some loss of motor function, 26% were dependent in their activities of daily living, and 19% had some form of a communication disorder<sup>2</sup>. About 1 out of every 3 patients has some form of stroke rehabilitation.

NIH-funded research on stroke treatment is insufficient to meet current and future needs. Studies have shown that the impact of studies for a given disease is proportional to the disease burden in the population, yet stroke, with an estimated loss of 51 million disability-adjusted life-years (DALYs) is funded by the federal government at rates disproportionately small compared with its public health importance. The reasons for this underfunding are not clear since NIH-sponsored stroke research has been shown to be highly cost effective, as reported recently<sup>3</sup>. Between 1966 and 1999, the National Institute for Neurological Diseases and Stroke (NINDS) spent \$237 million on stroke clinical trials. The trials included both positive trials in which the intervention was shown to be superior and negative trials in which the control arm was superior or there was no difference between treatment arms. Over a 10-year period after completion of the funding for these trials an additional 466,000 DALYs were realized, translating to an economic return of \$15.1 billion for the investment of \$237 million. Thus federally funded research is a tremendously advantageous proposition, and one that must continue to be promoted. For these reasons we stand in strong support of Proposed Resolution No. 982-A.

NYPH / CUMC is currently engaged in 19 active NIH-funded stroke studies all geared toward advancing stroke care. They are examples of the type of work we feel is crucial to reducing stroke disease burden in the US. Among our current studies are:

1. Acute stroke clinical trials:
  - a. NeuSTART, a multi-center phase II, trial of high dose statin treatment for acute stroke. (Dr. Elkind, PI)

- b. MRRESCUE, a randomized phase II clinical trial to test the effectiveness of combining advanced MRI techniques with cutting-edge catheter-based treatments to extract clots from cerebral arteries. (Dr. Marshall, site PI)
  - c. SHINE, a multi-center phase III acute stroke clinical trial testing 2 methods of controlling blood sugar in the first few hours of acute stroke treatment. (Dr. Mayer, Dr. Horvath, site PIs)
  - d. ICTUS 2/3, a multicenter phase II/III clinical trial using hypothermia in combination with intravenous thrombolytics ("clot-busters") to treat acute stroke. (Dr. Mayer, site PI)
  - e. POINTS, a multi-center acute stroke randomized trial to determine which antiplatelet agents are best to prevent recurrent stroke. (Dr. Kitago, site PI)
2. Studies of stroke mechanisms and stroke prevention:
- a. RECON, a multi-center clinical trial to determine whether extra-cranial-intracranial bypass surgery can preserve or improve cognition in patients with carotid artery occlusion. (Dr. Marshall, PI)
  - b. Stroke in the Elderly, an investigation of how frailty and gait instability affects stroke risk in the aging population. (Dr. Willey, PI)
  - c. ERICH, a nation-wide study of the genetics of intracerebral hemorrhage. (Dr. Elkind, site PI)
  - d. Blood Flow and Cognition, an MRI and ultrasound-based study to investigate how impaired regulation of blood flow to the brain in patients with carotid artery blockages. impairs cognition. (Dr. Marshall, Dr. Lazar, Co-PIs)
  - e. VIPS, a biomarker study of the impact of infection in childhood stroke. (Dr. Elkind, site PI)
  - f. ARUBA, an international study of medical versus surgical treatment strategies for unruptured brain arterial-venous malformations. (Dr. Mohr, PI)
  - g. Neurophysiology of Stroke Recovery, a study of motor recovery after stroke using Transcranial Magnetic Stimulation. (Dr. Schambra, PI)
3. Innovative Stroke Education studies:
- a. HIP-HOP Stroke, which engages kids in NYC schools to teach them how to recognize stroke symptoms in their family members and in the community. (Dr. Williams, PI)
  - b. DESERVE, a novel Emergency Department-based education intervention to teach acute stroke patients how to effectively change their behavior to lower blood pressure and blood glucose after minor stroke or TIA. (Dr. Stillman, site PI)

On Behalf of NIH-funded Stroke Research at NYPH / Columbia University Medical Center:

Randolph S. Marshall, MD, MS, Chief, Stroke Division, Dept. Neurology  
 Olajide Williams, MD, Director, Acute Stroke Services  
 Mitchell SV Elkind, MD, MS, Vice Chair for Clinical Research, Dept. Neurology  
 Stephan Mayer, MD, Chief, NeuroCritical Care Division  
 J.P. Mohr, MD, MS, Stroke Division Faculty  
 Joshua Z Willey, MD, MS, Stroke Division Faculty  
 Susannah Horvath, MD, Stroke Division Faculty  
 Ronald M Lazar, PhD, Stroke Division Faculty  
 Tomoko Kitago, MD, Stroke Division Faculty  
 Heidi Schambra, MD, Faculty, Department of Rehabilitation  
 Joshua Stillman, MD, Faculty, Department of Emergency Medicine



## References.

1. Lloyd-Jones D, Adams RJ, Brown TM, Carnethon M, Dai S, De Simone G, Ferguson TB, Ford E, Furie K, Gillespie C, Go A, Greenlund K, Haase N, Hailpern S, Ho PM, Howard V, Kissela B, Kittner S, Lackland D, Lisabeth L, Marelli A, McDermott MM, Meigs J, Mozaffarian D, Mussolino M, Nichol G, Roger VL, Rosamond W, Sacco R, Sorlie P, Thom T, Wasserthiel-Smoller S, Wong ND, Wylie-Rosett J. Heart disease and stroke statistics--2010 update: A report from the American Heart Association. *Circulation*. 2010;121:e46-e215.
2. Kelly-Hayes M, Beiser A, Kase CS, Scaramucci A, D'Agostino RB, Wolf PA. The influence of gender and age on disability following ischemic stroke: The framingham study. *J Stroke Cerebrovasc Dis*. 2003;12:119-126
3. Johnston SC. The 2008 William M. Feinberg lecture: Prioritizing stroke research. *Stroke*. 2008;39:3431-3436

Testimony by Salman Azhar M.D., Chair, Neurology and Rehabilitation  
Medicine, at Lutheran HealthCare in Brooklyn Representing:  
Lutheran Medical Center,  
Lutheran Family Health Centers and  
Lutheran Augustana Center for Extended Care and Rehabilitation.

Member, NYSDOH Stroke Advisory Group

Before  
New York City Council Committee on Health

Proposed Resolution Res. No. 982 - Resolution calling upon the United  
States Congress and the President of the United States to Increase  
Funding for Research on Stroke Prevention and Treatment.

December 12, 2012 at 1:00 p.m.  
16th Floor Hearing Room  
250 Broadway  
New York, NY

Thank you City Council Members for recognizing the critical need for the United States Congress and the President of the United States to increase much needed funding for research on stroke prevention and treatment in New York City, and across the country. We must increase funding because stroke remains among the top ten killers in the nation. It's the 6<sup>th</sup> leading cause of death and the leading cause of disability.

My name is Salman Azhar and I am a Chair of Neurology and Rehabilitation and Director of Stroke at Lutheran HealthCare in Brooklyn. That includes the medical center along with our community network of federally qualified health centers from Flatbush to Park Slope to Sunset Park, Bay Ridge and beyond. It also includes a long term rehabilitation facility and a health care for the homeless program located throughout Manhattan, Brooklyn Staten Island and the Bronx. This unique network enables us to truly develop a comprehensive continuum of stroke treatment and rehab for our patients. Lutheran's stroke program was born out of direct community involvement and concern over a lack of rapid stroke response in our neighborhoods. We serve a large area in South Brooklyn with a diverse population. I am here both as a representative of the

Lutheran system and as an advocate for our community in South Brooklyn and the stroke survivors who utilize Lutheran HealthCare.

Stroke is one of the leading causes of death and disability in New York City. The most important risk factors for stroke include advancing age, gender, family history, diabetes, high blood pressure, high cholesterol, tobacco use and obesity. Lutheran serves a community with a high prevalence of these conditions. Sunset Park, our closest neighbors still endure major health disparities with families living not far from the poverty line. One in five people in Sunset Park are without insurance and their first interaction with the health system occurs when they have a stroke or heart attack. Data shows that these people have the worst outcomes from their disease. Our communities are wonderfully diverse with a large Asian and Hispanic population—but they also have a higher incidence of fatal strokes.

Federally funded research in stroke has dramatically changed the landscape. We now have systems of stroke care such as the New York State designation program, and stroke units that have been shown to reduce the burden from this disease. Research on clot buster drugs and catheter based treatments to remove clots has dramatically allowed us to emergently reduce the damage to the brain during a stroke. Cholesterol

lowering medications like statins can lower the risk of a second or third stroke and finally recent research in the field of stroke rehabilitation has enabled us to get more of our patients back to work and living fuller lives.

A clear indication of this is in the data from the NYS DOH on stroke mortality. Stroke was the cause of 5,823 deaths in New York State in 2009, making it the 4<sup>th</sup> leading cause of death. Prior to 2005, stroke was the 3<sup>rd</sup> leading cause of death in New York State. From 2000 to 2009, the age-adjusted death rate from stroke dropped from 40 per 100,000 residents to 26 per 100,000 residents, a decline of over 35%.

But we cannot slow down now. Federal funding for research is crucial if we are going to take our success in stroke to the next level. I want to focus on two areas where this is so important to New York City.

Research is needed in developing systems of delivery of care and enhancing knowledge in high disparity communities. For instance, Chinese patients are more likely than whites to have hemorrhagic stroke (24% vs 17%, respectively,  $P=0.02$ ), African Americans have a 2.4-fold and Hispanics a twofold increase in stroke incidence compared with whites.

This reflects exactly what we already know – that prevention and education in diverse communities requires new innovative approaches.

There are disparities in access to Rehab as well. Something critical to get people back to as normal as possible – living, working, experience life and not needing to rely on others for basic life needs. In fact, the proportion of patients with functional independence after stroke declines annually for up to five years, and these effects are greatest for those with Medicaid or no health insurance. This decline is independent of age, stroke severity, and other predictors of functional decline and occurs even among those without recurrent stroke or myocardial infarction. New treatments in Rehabilitation are on the horizon including bioprosthesis and stem cells. Federal funding will be crucial to this process.

The New York City Council has been very responsive to the stroke needs of the communities that Lutheran serves. In FY2012, the Brooklyn Delegation of the Council allocated \$1.4M for our new bi-plane machine and it will save many lives. In fact, bi-plane intervention increases the very short window of time that is needed to provide stroke intervention – at the time of stroke. This also was born out of research into the best possible rapid treatments.

For the sake of citizens in high disparity communities, like ours and throughout New York City, I hope this council can influence policy makers to make national and statewide efforts to dramatically increase funding for culturally competent stroke prevention and treatment – that is what will cut costs in the long run and at the same time save hundreds of thousand of lives. We live in the greatest, most culturally diverse city and our people deserve better.

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. 982-A

in favor  in opposition

Date: 12/12/12

(PLEASE PRINT)

Name: Robin Vitale

Address: 122 E 42nd St. 18th Floor New York NY

I represent: American Heart Assn / American Stroke

Address: \_\_\_\_\_ Assn

Please complete this card and return to the Sergeant-at-Arms

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. 982-A

in favor  in opposition

Date: December 12/20/12

(PLEASE PRINT)

Name: Dr. Susana Horvath

Address: \_\_\_\_\_

I represent: Columbia University

Address: \_\_\_\_\_

Please complete this card and return to the Sergeant-at-Arms



**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. 982 A

in favor     in opposition

Date: \_\_\_\_\_

(PLEASE PRINT)

Name: Dana Leifer

Address: 525 East 68<sup>th</sup> Street, New York, NY 10065

I represent: ATA NYC Stroke Task Force

Address: Lexington Ave + 42<sup>nd</sup> St NY NY

◆ Please complete this card and return to the Sergeant-at-Arms ◆

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. 982

in favor     in opposition

Date: \_\_\_\_\_

(PLEASE PRINT)

Name: Salman Azhar

Address: 150 55<sup>th</sup> St Suite 3-31 Brooklyn - NY

I represent: Lutheran Medical Ctr

Address: As above

◆ Please complete this card and return to the Sergeant-at-Arms ◆