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NEW YORK CITY COUNCIL
COMMITTEE ON HEALTH

OVERSIGHT HEARING:
EXAMINING WOMEN'S PRECONCEPTION CARE AND HEALTH OUTCOMES FOR MOMS

TESTIMONY OF
ROSS WILSON, MD, FRACP, FCICM
SENIOR VICE PRESIDENT,
CHIEF MEDICAL OFFICER

NEW YORK CITY HEALTH AND HOSPITALS
CORPORATION

NOVEMBER 13th, 2013

- Identify common medical conditions that can affect the pregnancy or be exacerbated during pregnancy (e.g., diabetes, obesity, hypertension, asthma, epilepsy, thyroid disease, depression and eating disorders);
- Have a current Pap test to screen for sexually transmitted diseases (e.g., chlamydia, gonorrhea, and syphilis) and cervical cancer;
- Health problems that run in the mother's or father's family;
- Problems with prior pregnancies, including preterm birth; and
- Depending on any identified genetic risk factors, we may also refer the patient to a genetic professional. Risk factors can include ethnic background, a family history of a genetic condition, birth defect, chromosomal disorder, (such as sickle cell anemia, thalassemia, Tay-Sachs, hemophilia, or cystic fibrosis) or cancer. The genetics professional can help them determine if testing is the right option. This ideally occurs with the father.

Prenatal or Antenatal Care

Although HHC encourages all of our patients to speak with their health care provider prior to becoming pregnant, the majority of our pregnant patients have not done so. Fewer than 70% of our patients commence antenatal care in the first trimester. When a woman first appears for antenatal care, they receive the same comprehensive health assessment as indicated above, along with consideration for several additional medical screenings, including those for:

- Glucose tolerance test to screen for gestational diabetes;
- Birth defects, such as Down syndrome;
- Group B Streptococcus (GBS);
- HIV testing; and
- Others based upon risks determined as a result of the comprehensive health assessment.

In addition to these screenings, pregnant women also receive:

- Referral to the Women Infant and Children (WIC) program for nutrition services, dental services, mental health services and social services;
- Health education as appropriate for each stage of pregnancy so women know what to expect, when to contact the clinic and when to go to the Emergency Room or to the Labor and Delivery suite; and
- Breastfeeding education throughout the prenatal period.

For women who present to us late in pregnancy, we still provide the relevant medical screening tests, but have lost the opportunity to provide the best care possible, by modifying risk factors like hypertension, diabetes, smoking etc.

Prenatal Care Assistance Program

Waiting to seek care is particularly unfortunate because all HHC facilities participate in the state's Prenatal Care Assistance Program (PCAP), which offers comprehensive prenatal care to pregnant women or teens who meet the eligibility criteria (low-income or high risk). Immigration status is not considered when determining eligibility. PCAP services include all of the screenings and risk assessments and care I discussed. In addition PCAP includes the following:

- Coordination of care for all services required by a pregnant woman;
- Prenatal or post-partum home visits provided to those women with identified medical or psychosocial indications for such visits; and
- Follow up on missed visits.

This concludes my written testimony. I would now be happy to answer any questions you have.

New York State NURSES ASSOCIATION® One strong, united voice for nurses and patients

Testimony at the NY City Council Health Committee Hearing

"Examining Women's Preconception Care and Health Outcomes for Moms."

November 13, 2013

I am Jacqueline Gilbert, a registered nurse, working in the Women's Health Department at Harlem Hospital for the past nineteen years. I am also a member of the NYSNA executive council at HHC and the President of the NYSNA Congress of Bargaining unit leaders.

I am here today to raise our concerns regarding the serious shortcomings in the availability of quality pre-natal and perinatal services in New York city and in low income communities in general. This lack of available health care services, combined with economic and environmental factors, is a major contributor to excessively high maternal and infant mortality rates in New York City. These mortality rates are particularly acute among black women and infants.

The infant mortality rate in New York City in 2011 was 4.7 per 1,000 live births. For black babies the mortality rate was 8.1 per 1,000 live births, compared to only 3.1 for white babies. In Central Harlem the total infant mortality rate was 8.5. The rate for the Bronx as a whole was 5.9, well above the City average. In Morrisania mortality rates reached 7.7 and in Hunts Point 7.6.[1]

Similar disparities exist in the rates of maternal death. Maternal mortality rates have increased by 30% in the last decade. The impact has been most pronounced among black women, who have a rate of maternal death of 79 per 100,000 live births (compared to 10 per 100,000 live births for white women). [2]

The high rates of infant and maternal mortality in New York City and the racial and socio-economic disparities in these rates are subject to numerous contributing factors. We join in supporting the proposals that have been put forward today to attempt to address these problems.

We at NYSNA feel that it must also be noted that the solution to this problem requires that existing health services available to women in the City be maintained. In this context, we feel that the sudden closure of peri-natal services at NCB Hospital by HHC and the NY State Department of Health in August of this year will only serve to make a bad situation worse. If we are to address the problems of infant and maternal mortality, it is imperative that we maintain the existing network of health services available to low income mothers and babies. We urge the Committee to request that HHC and the State DOH immediately restore those vital services to the north-west Bronx.

Thank you for your time and attention to this matter.

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[1] See: Bureau of Vital Statistics, New York City Department of Health and Mental Hygiene, Summary of Vital Statistics 2011, The City of New York, Infant Mortality

[2] See: New York Women's Foundation, Economic Security and Well-Being Index for Women in New York City, March 2013.

131 West 33rd Street, New York, NY 10001 ■ 212-785-0157 ■ E-mail: info@nysna.org ■ www.nysna.org

11 Cornell Road, Latham, New York 12110-1499 ■ 518-782-9400

Hearing on Preconception Care Nov.13,2013

More detailed information is available from

Dr.Susan J Gross

Professor, Department of Obstetrics and Gynocology and Women's Health

Albert Einstein College of Medicine

Email: Susan.gross@Einstein.yu.edu

Dr. Berish Rubin

Professor, Department of Biological Sciences, Fordham University

441 East Fordham Road,

Bronx, New York 10458

Email: rubin@Fordham.edu

American College of Obstertricians and Gynocologists

Districct 2 NY

152 Washington Ave.

Albany,N 12210

Email: info@ny.acog.org

Booklet: Preconception Care-----A Guide for Optimizing Pregnancy Outcomes

Medical Education Director-Kristin Zielinski
District II
518-436-3461

Respectfully submitted,
Beverly Fettman
#718-543-5881

FOR THE RECORD

Testimony of Frank Proscia, M.D.,
Executive Director of Doctors Council SEIU
Before the New York City Council Health Committee

November 13, 2013

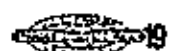
Good Afternoon Chairman Arroyo and members of the Health Committee. My name is Dr. Frank Proscia and I am the Executive Director of Doctors Council SEIU which represents thousands of doctors in the Metropolitan area, including in every HHC facility, the New York City Department of Health, and other New York City agencies. Thank you for the opportunity to testify today.

Today's oversight hearing comes at a time when health outcomes for mothers in the Bronx are being jeopardized. On August 12, HHC suspended all Labor and Delivery services at North Central Bronx Hospital and moved the doctors, nurses, and staff, as well as the NICU, to Jacobi Medical Center. HHC's decision left the Northwest Bronx community without a single labor and delivery room displacing services for hundreds of Northwest Bronx patients in the process.

The decision has also led to complications like overcrowding in maternity rooms at Jacobi and increased strain on the Emergency Department at North Central Bronx Hospital which no longer has an OBGYN on-call.

While we are pleased to hear that HHC is planning to reopen Labor and Delivery at North Central Bronx sometime in the Fall of 2014, we welcome this news with caution. We have yet to see anything in writing from HHC on the reopening. And we are no strangers to broken promises by New York City's healthcare agencies.

National office: 50 Broadway, 11th Floor, Suite 1101, New York, NY 10004 • Phone (212) 532-7690 • Fax (212) 481-4137
Regional office: 300 South Ashland Avenue, 4 Fl., Suite 400, Chicago, IL 60607 • Phone (312) 588-7612 • Fax (312) 337-7768
Barry Liebowitz, M.D., President • email: info@doctorscouncil.com http://www.doctorscouncil.com
Affiliated with the Service Employees International Union (SEIU)



Every year for example, Doctors Council SEIU has to fight tooth and nail for program funding supporting immunization, HIV prevention and school-based health clinics. Upcoming service cuts, such as a reduction in clinic hours and days at STD clinics in Brooklyn, Queens and Manhattan, as well as TB clinics in Manhattan and the Bronx, do not bode well for improving preconception care and health outcomes for moms in the City.

One of the most egregious examples of DOH's disregard for patient care was the termination of the Oral Health Program, which began in New York City Schools in 1903. DOH promised to give children needing additional care referrals to other clinics who would care for them, but never followed through.

We do not want to see families needing medical care let down once again, in this case by HHC. Doctors at both Jacobi and North Central Bronx had been meeting with HHC for months prior to the Labor and Delivery suspension in order to convey longstanding concerns surrounding doctor retention, a lack of senior staff at both hospitals, and the frequent changeover of Department chairs. A decrease in resident staff has also placed enormous pressures on doctors. And the Department is in dire need of experienced OBGYNs who can help mentor junior faculty.

Our goal now is to work with HHC to reopen a department that addresses these longstanding systemic issues, namely ensuring a properly staffed Labor and Delivery department at North Central Bronx and Jacobi where patient safety and care are top priority; implementing measures to retain senior staff and to recruit both new and experienced doctors; and to address the impact the temporary closure has had on other departments.

Doctors Council SEIU wants to work with HHC to find solutions that will provide the best patient care for New Yorkers. This means a dialogue with HHC that shapes the reopening of Labor and Delivery services at North Central Bronx Hospital. This collaborative approach between the Unions, management and community groups will lead to safer and better health outcomes for women in the community. Thank you for your time today.

About Doctors Council SEIU:

Doctors Council SEIU, a professional organization for doctors, is the nation's oldest and largest union of attending physicians and dentists in the United States, with approximately 3,000 members in New York City, and additional members in other states across the country. Formed in 1973, Doctors Council SEIU represents attending physicians and dentists at Health and Hospitals Corporation (HHC) facilities and hospitals, including doctors employed by the affiliates New York University School of Medicine, the Mount Sinai School of Medicine and the Physician Affiliate Group of New York (PAGNY). HHC is the largest public hospital system in the nation. Doctors Council SEIU also represents doctors in the New York City Mayoral agencies including the Department of Health and Mental Hygiene (DOHMH) as well as doctors working at Rikers Island, the largest correctional facility in the nation. Affiliated with SEIU, Doctors Council SEIU is a national union representing doctors employed in the public and private sectors.

TESTIMONY OF DANIELLE SULLIVAN, PARTICIPANT IN THRIVE WOMEN'S HEALTH INITIATIVE AT THE NORTHERN MANHATTAN PERINATAL PARTNERSHIP

City Council Health Committee – Public Hearing on Women's Preconception Care and Health Outcomes for Moms

November, 13, 2013

My name is Danielle Sullivan and I am a participant in the Thrive Women's Health Initiative at the Northern Manhattan Perinatal Partnership. Thank you for the opportunity to speak today.

Joining the THRIVE women's support group was one of the best decisions I have made for **MYSELF** in quite some time. The moment I joined and fully committed to participating was when I realized how these 10 week sessions would affect my life. This was more than just showing up and listening, this was a program that would eventually lead to me altering life decisions.

Dealing with personal obstacles was not a talent of mine. I found myself crying and feeling defeated a lot of times before I joined the group. I had no support or anyone to turn to for feedback. Coming to the evening sessions provided me with some vital life tools I lacked. The existence of the group provided support in helping me to sustain a positive outlook on life. It was through the encouraging words of the facilitator and participants where I understood the importance of remaining optimistic as an individual first and then to watch it spill over to the other roles I play in life.

I would feel fatigue and very lazy about attempting complete daily projects due to my poor eating habits and lack of sleep. The groups were insightful and fun. This made the persistence in attending and participating easy. In relative and attractive ways, I gained knowledge in health awareness by being exposed to healthy natural snacks given out at sessions and dinner recipes, but I also now understand how important it is to be healthy to execute daily functions. Throughout the program I lost 8 pounds and was able to bring my blood pressure to way lower levels than when I started.

While dealing with a child with Special Needs, I made sure that my daughter saw all of her specialist and was on time for all evaluations faithfully, but had neglected my own doctor's appointments and did not keep in mind the importance of taking care of my **OWN** mind and body. I had become absolutely consumed with making sure her health and development

prospered and had not paid any attention to my own. By expressing that this was a major error I needed to work on during group testimonial sections, It was through the physical activities and meditations where I learned how important the mind and body being in tune with each other are also key components in achieving daily goals. Yoga, Zumba, Samba, Belly Dancing and breathing exercises I learned to appreciate more by getting involved at the groups and getting past the stigmata of sweating! I now make major efforts to apply all of these activities and knowledge to my daily routines.

So far I have been successful at following through with my goals and have made conscious efforts to change my diet and better my health. I am thankful for THRIVE and it's motivation and push and will do all that I can to make sure that others have the opportunity to obtain the same benefits that I did.

Club Mom created the very welcoming forum for women to come and discuss about their personal reflections of being a mom. With being an amazing, responsible, caring and passionate mom, we tend to wear a flawless persona on the outer, but never have a moment to express our flaws, difficulties, bad days or failures. Club Mom gives women the opportunity to be real. It is amongst these women where it is eventually learned that not only do we come from many different communities, backgrounds and circumstances and relate in the struggles of not only being a mom, but also being a woman. Interacting with other moms has helped me to realize that my challenges are not always unique. With identifying that I have received insights, suggestions and feedback from the facilitators and participants on how to approach situations, resources for further help with personal challenges and my "if you need a shoulder" network has tremendously grown. I am super appreciative of such a program's existence.

Ancient Song Doula Services
375 Stuyvesant Avenue, Second Floor
Brooklyn, NY 11233

November 13, 2013

Committee on Health
New York City Council
250 Broadway, Fourteenth Floor
New York, NY 10007

- Maternal mortality: Maternal death or serious injury associated with labor or delivery while being cared for in a healthcare setting.[1]
- Significant disparities: The maternal mortality rate for black women is seven times higher than white women. Hispanic and Asian/Pacific islander women are twice as likely to experience pregnancy related deaths than white women.[2] Women living in poorer neighborhoods are more likely to experience preventable pregnancy-related deaths.

What is a doula? How can doula services help to decrease the maternal mortality rate in New York City?

A birth doula is a person who provides emotional, physical, and informational support for women and families during childbirth. Doula care has been shown to increase the positive birth outcomes of women, particularly those receiving Medicaid benefits.

- The leading causes of pregnancy related deaths were embolism, hemorrhage, and infections in women who had cesarean birth.[3]
- Doula supported births decrease the odds of a cesarean section by 40%.[4]

What communities are most in need? Is there access to doulas in the communities that need their services the most?

The maternal mortality rate in New York City has continued to rise over the last decade. The areas of the city hardest hit are low income immigrant neighborhoods like Brownsville,East New York, Brooklyn and Jamaica, Queens. The doulas at Ancient Song are uniquely positioned to decrease the maternal mortality rate, because we are committed to serving the low-income families, women of color (WOC), the uninsured and undocumented women across New York City.

About Ancient Song Doula Services

Ancient Song Doula Services is a community based social profit organization committed to providing maternal health services on a low cost or free basis to all women regardless of their socioeconomic status. Our mission is to lower the Infant and Maternal Mortality Rate by changing the way mothers view birthing, advocating on behalf of all mothers, and challenging the current healthcare systems quality of care regardless of one's socio-economic standing.

To learn more about ASDS visit: www.ancientsongdoulaservices.com or 917-947-8933

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[1] Maternal Mortality Review, Marilyn A. Kacica, M.D., M.P.H. New York State Department of Health
[2] Maternal Mortality in New York: A Call to Action, The New York Academy of Medicine
[3] Pregnancy Associated Mortality NYC 2001-2005, New York City Maternal Mortality Review Project Team
[4] Doula Care, Birth Outcomes, and Cost Among Medicaid Beneficiaries, Katy Backes Kozhimannil. American Journal of Public Health

Testimony

of

Deborah Kaplan, DrPH, MPH, R-PA

Assistant Commissioner, Bureau of Maternal, Infant and Reproductive Health

New York City Department of Health and Mental Hygiene

before the

New York City Council Committee on Health

on

Examining Women's Preconception Care and Health Outcomes for Moms

November 13, 2013

250 Broadway, 14th Floor Committee Room

Good afternoon, Chairperson Arroyo and members of the New York City Council Committee on Health. I am Dr. Deborah Kaplan, Assistant Commissioner of the Bureau of Maternal, Infant and Reproductive Health at the New York City Department of Health and Mental Hygiene. I am joined by Dr. Lorraine Boyd, the Bureau's Medical Director, and Dr. Tamisha Johnson, our Maternal Health Projects Coordinator. Thank you for the opportunity to submit testimony on the subject of Women's Preconception Care and Health Outcomes for Moms. Although this topic is somewhat broad, I'd like to spend my time today focusing on maternal morbidity and mortality, and, in particular, the reasons for racial disparities in maternal morbidity and mortality rates. This is a very important issue to the Department and we are pursuing a number of initiatives to help address it, which I will also be discussing today.

Maternal mortality is internationally recognized as an indicator of a community's health and the Department has, for decades, routinely reported the City's maternal mortality rates. From our most recent data, which includes surveillance through 2011, we know that, tragically, approximately 30 women die in New York City annually from conditions which were either caused or exacerbated by pregnancy, a rate that has been consistent for the past two decades. From this surveillance we also know that black women are three times more likely to die from conditions related to childbirth than non-Hispanic white women. This disparity is consistent with nationwide trends. To supplement this data, we conducted in-depth reviews of maternal deaths from 2001-2005 using an even broader definition of maternal death. The results from our review of these maternal deaths were published in the Department's report on pregnancy-associated mortality in the City. The leading causes of maternal mortality identified in this report included post-partum hemorrhage, embolism, and pregnancy-induced hypertension. As you are aware, the report also noted significant racial disparities in maternal deaths.

Another finding highlighted in the Department's report was the high prevalence of pre-existing chronic diseases among women who experienced a maternal death. Among the cases reviewed, 56% of all women who had a pregnancy-related death had a chronic health condition prior to becoming pregnant. These conditions included chronic hypertension, asthma, and cardiac disorders, among many others. Additionally, almost half of the women who suffered a pregnancy-related death were classified as being obese.

We know from survey data that more than one-third (37%) of New York City women are overweight or obese before pregnancy and 2% have pre-existing diabetes. Compared to non-Hispanic white women, non-Hispanic black women are two times more likely to be overweight or obese and to have diabetes prior to pregnancy. Additionally, non-Hispanic black and Hispanic women are also less likely to have accessed preventive health services. There are similar disparities by insurance status; for instance, women with no insurance or those on Medicaid are less likely to access preventive health services prior to pregnancy compared to women with non-Medicaid insurance.

We also know that among women 25-44 years of age in New York City, many of whom will go on to become pregnant and give birth, 12% have had hypertension, 13% have high cholesterol, and 6% currently have asthma. These factors, along with overweight and obesity, are risk factors for adverse pregnancy outcomes including maternal mortality and, not surprisingly, there are racial and ethnic disparities in many of these indicators. Obesity can directly impact pregnancy-related illnesses such as pregnancy-induced hypertension, pre-eclampsia/eclampsia, and/or gestational diabetes, even in women who are otherwise well. Research indicates that these conditions can also impact birth outcomes for the child, such as preterm delivery and birth defects.

Our Department carefully monitors and seeks to prevent maternal deaths. For instance, in response to the number of maternal deaths due to post-partum hemorrhage - a condition which in many cases may be survivable with timely and appropriate clinical interventions - the Department, in collaboration with the New York State Department of Health and the American Congress of Obstetricians and Gynecologists, issued a health alert letter for clinicians caring for maternity patients, encouraging them to ensure that effective drills were in place to manage postpartum hemorrhage. The letter was followed in subsequent years with the development of a hemorrhage poster with clinical management guidelines to be displayed on labor and delivery wards, and a set of educational slides with information on obstetric hemorrhage management which was distributed to maternal health providers. We plan to assess how effective this outreach has been in preventing maternal deaths due to hemorrhage.

Other educational efforts to address maternal mortality include presenting our data and guidance at meetings hosted by the American Congress of Obstetricians and Gynecologists and the New York Academy of Medicine. These sessions were attended by New York City-based

obstetricians, researchers, midwives, nurses and other health care providers, including staff from HHC hospitals.

In 2009, the New York State Department of Health announced the formation of a Maternal Mortality Review Committee to assume responsibility for reviewing all cases of maternal deaths in New York and develop guidelines and interventions to prevent maternal deaths. Staff from our Department sit on this committee, ensuring that concerns specific to New York City are addressed. Recently, our Department's staff on the committee helped prepare a guidance document on the management of hypertensive conditions in pregnancy for obstetric care providers. That document was released in May of this year.

In developed nations, a more accurate picture of maternal health may be gleaned from studying severe maternal morbidity, as opposed to just maternal mortality. Severe maternal morbidity includes complications during labor and delivery, for example, a ruptured uterus or an unplanned hysterectomy. Cases of severe maternal morbidity are approximately 100 times more common than maternal death. From national studies we know that the incidence of such cases is rising and that this is likely due in part to the rising chronic disease burden among the reproductive age population. Consequently, the Department is planning to examine hospitalization data to better understand non-fatal, severe, adverse clinical events which occur during hospitalization for infant delivery. We believe it will help us better understand the factors that place women at risk of serious pregnancy complications and the factors associated with racial and ethnic disparities. This data will be disseminated widely and used to inform program and policy recommendations to reduce negative pregnancy outcomes.

Both the Centers for Disease Control and Prevention and the American Congress of Obstetricians and Gynecologists acknowledge the importance of preconception health and health care in reducing the risk of adverse pregnancy outcomes by working to optimize a woman's health *prior* to her conceiving a pregnancy. Improving the preconception health and medical care of women is directly related to improving the primary care system generally and, to this end, the Department works with clinicians and other providers to improve the quality of preventive health care for all New Yorkers. Through the Department's Primary Care Information Project, known as PCIP, we work with over 3,000 providers, serving more than 3 million patients, to improve the quality of the primary care they provide. PCIP focuses on treatment of common medical

conditions that can adversely affect pregnancy, such as hypertension and diabetes, and has demonstrated that it can improve treatment of those conditions.

In addition, the Department's efforts to broaden health care access among vulnerable populations will undoubtedly allow more women of reproductive age to obtain primary care coverage, enabling them to obtain proper screening/risk assessment, early diagnosis and adequate management of chronic health conditions before they become pregnant. The Department recently developed a fact card for use in health centers and other community based settings, to raise awareness of the connection between women's overall health and having a healthy pregnancy. This card is available in multiple languages and can be obtained online or by contacting the Department.

Finally, current Department initiatives which encourage New Yorkers to consume a healthy diet, engage in regular physical activity, maintain a healthy weight, and quit smoking are also well in line with the goal of optimizing women's preconception health. Many of the Department's initiatives in these areas, including the Shop Healthy, Green Carts, and Stellar Farmer's Markets programs, are focused on communities that have high rates of many of the chronic diseases that can contribute to negative maternal health outcomes.

In its Healthy People 2020 objectives, the United States Department of Health and Human Services set as a goal a 10% reduction in both maternal mortality and in maternal illness and pregnancy complications. As it becomes increasingly clear that a woman's health prior to conception can greatly affect her pregnancy outcomes, the need to focus on preconception care and, even more generally, on women's health as a whole is of the utmost importance if we are to meet these goals as a city and a nation. Making certain these efforts are appropriately targeted to ensure that we not only reduce the rates of maternal mortality and morbidity, but that we also reduce racial disparities in these rates, is equally important.

Thank you again for the opportunity to submit testimony. We are happy to answer any questions.

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Public Health Solutions
MERGING RESEARCH AND ACTION

40 Worth Street
5th Floor
New York, NY 10013-2988

voice: 646-619-6400
fax: 646-619-6777
www.healthsolutions.org

Testimony
Of
Marci Rosa
Senior Director, Maternal Child Health
Public Health Programs Division
Public Health Solutions

before the
New York City Council Committee on Health

regarding
Oversight: Examining Women's Preconception Care and Health Outcomes for Moms

November 13, 2013
250 Broadway
14th Floor
New York, NY

Good afternoon Chairperson Arroyo and members of the Health Committee. My name is Marci Rosa and I am the Senior Director of Maternal Child Health at Public Health Solutions. On behalf of Public Health Solutions, I would like to thank you for the opportunity to provide testimony today regarding women's preconception care and health outcomes for mothers in New York City.

To begin this testimony, I would like to share with you the story of one of our clients and just how important it is for you to be holding this hearing today.

Helen was a 26 year old client of PHS' Nurse Family Partnership Program in Corona Queens. When we first met Helen in 2011, she was 24 weeks pregnant with her first child and living with her mother and grandmother in a cramped 2 bedroom apartment in Corona. Helen had already developed gestational diabetes, which led to some complications with her daughter's birth. Three months after giving birth, Helen was still struggling with her weight and high blood pressure. She was worried about getting pregnant again too soon after her daughter was born and was feeling blue – what we call postpartum depression. Our Nurse Home Visitor helped her to develop goals and be successful with maintaining a healthy diet and exercise program, and was able to provide nutrition education and resources to her and helped her get enrolled in SNAP (food stamps). She found out about free Zumba classes at the local library, which Helen started attending, and helped her find mental health counseling to help her address her postpartum depression. Because Helen didn't meet income requirements for Medicaid any longer after her daughter was born, her home-visitor referred her to Plaza del Sol Family Health Center, which helped her to access critical family planning services. By the time her daughter was 18 months old, Helen had lost 20 pounds, her blood pressure was in the normal range and her doctor was no longer warning her about developing Type 2 diabetes. She was going to see a counselor that she really liked once a week and reported that she was feeling a lot better about life and her future. And she was happy with her plan to take some time before having another child.

Helen just needed a hand, and we were there to help out. There are many Helens in Corona Queens, and all over the City, who, with some support and services at the right time, in the right place, can be healthier and reduce their risk of maternal mortality.

Public Health Solutions (PHS), one of the largest not-for-profit organizations in New York City and a nationally recognized Public Health Institute, addresses critical public health needs such as food security and nutrition; women's reproductive health; early childhood development and family support; HIV prevention and care; healthcare access and quality; tobacco control; and health information technology. Public Health Solutions' mission is to implement innovative, cost effective and population-based public and community health programs, conduct research that provides insight on public health issues, and provide services to other not-for-profit organizations to address public health challenges. Our direct service programs serve close to 80,000 individuals and families annually. The vast majority of those we serve are low-income women, infants, and children of color (many of whom were born in a country outside of the U.S.), residing in some of the highest-need neighborhoods in Queens, Brooklyn and the Bronx.

Public Health Solutions, along with our colleagues represented here today, is concerned about the unacceptably high rates of maternal mortality in New York, the alarming disparities in pregnancy-related mortality rates, as well as the increase in the rate of maternal mortality over the past 10 years described today and in recent reports. While coordinated approaches to data reporting as well as to evidence-based clinical and community-based interventions have been implemented over the past several years, there is still much work left to be done and we applaud the Committee for demonstrating a continued commitment to policies and programs that have the potential to improve critical health outcomes such as maternal and infant mortality.

As you know, preconception health is the health of women and men during their childbearing years before and between pregnancies (the latter is often referred to as interconception health). Preconception health focuses on supporting women and men to take steps today to protect their own health and the health of babies they may choose to have in the future. Preconception health is important for every woman, not just those planning to become pregnant -- almost half of all pregnancies in the United States are unplanned,[1] and the vast majority of maternal deaths occur as a result of chronic, preventable diseases and risk factors that were present prior to pregnancy, including diabetes, hypertension, and obesity. There are, however, actions that can be taken now—by women, their partners, allies and advocates and by healthcare and other service providers--to prevent pregnancy-related maternal mortality.

There are nationally recognized clinical and educational recommendations that outline key factors affecting preconception health including undiagnosed or poorly controlled medical conditions, immunization history, medications, nutritional issues, family history and genetics, tobacco and substance use and other high risk behaviors, environmental exposures, social issues, and mental health issues. Research also shows that strategies and interventions, if they are to be effective, must specifically address the alarming disparities that exist for low-income people of color and other vulnerable people in the context of maternal-infant health outcomes; in New York City, for example, Black, non-Hispanic women are more than three times more likely than white, non-Hispanic women to die from pregnancy-related causes and maternal mortality rates are two times higher for Hispanic and Asian/Pacific Islander women than for white, non-Hispanic women.[2]

Public Health Solutions, like many community-based organizations in New York, operates a range of programs that are aligned with evidence-based practices and have records of success in improving preconception health and thus reducing maternal mortality rates and poor birth outcomes. It is this expertise and proven capacity, as well as our solid reputation and ability to convene key stakeholders and community leaders in the vulnerable NYC neighborhoods we serve, that resulted in PHS being awarded a five-year grant earlier this year by from the New York State Department of Health to implement a Maternal and Infant Community Health

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[1] Finer LB, Zolna MR (2011). Unintended pregnancy in the United States: incidence and disparities, 2006. Guttmacher Institute.

[2] The New York Women's Foundation Economic Security and Well-being Index for Women in New York City. March 2013. Available at: http://www.nywf.org/wp-content/uploads/2013/04/New-York-Womens-Foundation-Report.pdf

Collaborative (MICHC) in Corona, Queens. The MICHC will support collaborative development, implementation and coordination of evidence-based and best practice strategies designed to achieve a set of performance standards including enrolling women and infants in health insurance; engaging women and their infants in health care and other supportive services; and identifying and addressing medical, behavioral and psychosocial risk factors through timely and coordinated counseling, management, referral and follow-up. A key goal is to create community supports and opportunities to help women engage in and maintain healthy behaviors and reduce risky behaviors. This 5-year project represents an opportunity for PHS and our partners to leverage and build upon existing, proven programs and strategies and to develop and hone new ones based on the particular needs, strengths, and opportunities in this high-need underserved community. We look forward to working with our Queens City Council members and are pleased to share some of the core evidence-based strategies and programs that we currently oversee that will be built upon or tailored for the MICHC with the Council, our colleagues and others in attendance today:

Access to comprehensive family planning services: PHS' Article 28-licensed MIC Health Centers have been providing comprehensive family planning and prenatal care to NYC's most medically underserved neighborhoods for over 40 years, serving close to 4,500 women annually at its two sites in Brooklyn. For the Corona project, we will work closely with Plaza del Sol Family Health Center to provide these critical services to women, with a particular focus on providing access to the most effective contraception methods, including IUDs and other Long Acting Reversible Contraceptives (LARCs). Access to high-quality family planning services (with an emphasis on LARCs) is linked to a reduction in unintended pregnancy and very closely spaced births which are in turn associated with adverse maternal and child health outcomes, such as delayed prenatal care, premature birth and negative physical and mental health effects for children.[3]

Nurse Home Visiting and Community Health Worker Programs: PHS' Nurse Family Partnership Program (based in our home community of Corona, Queens) is a nationally recognized, evidence-based nurse home-visiting program for low-income, first-time mothers and has reached over 800 families in Corona since 2008. While the NFP model and other evidence-based home-visiting programs (such as Healthy Families New York) are typically associated with improving maternal and infant health outcomes for expectant and new mothers, this intervention can also have a positive effect in a preconception context as home visitors are able to connect new mothers with services and resources that will reduce their risk factors for future pregnancies including helping them to access health benefits, preventive healthcare, family planning and contraception, nutrition and healthy lifestyle supports, etc.

The Corona MICHC will also use community health workers, who are trusted peer advocates and educators from the community, who will provide outreach, education, referral and follow-up, case management, advocacy and home visiting services to women who are at highest risk for poor birth outcomes. These CHWs will create a bridge between providers of health, social and community services and the underserved and hard-to-reach populations within the community. This piece (and the cultural and linguistic competency that it engenders) is especially critical in

[3] 3. Orr ST et al., Unintended pregnancy and preterm birth, Paediatric Perinatal Epidemiology, 2000, Vol. 14, 309–313.

Corona which has a teen birth rate that is twice that of Queens. It is these particularly vulnerable teens and women that experience the greatest disparities when it comes to poor maternal and infant health outcomes and who will benefit most from this project.

Health insurance coverage: PHS' health insurance enrollment program currently helps over 15,000 individuals and families obtain public health insurance coverage and apply for food stamp benefits every year. Our innovative model is built around the co-location of health insurance outreach and enrollment workers and SNAP (food stamp) counselors, at our nine WIC Centers throughout Brooklyn and Queens. For the project in Corona, PHS will leverage existing health and food benefits enrollment expertise and capacity, working closely with our partners to enroll Corona teens with a special emphasis on the Family Planning Benefit Program (a New York State program that provides family planning services to teens, women and men who meet certain income and residency requirements, and who are not enrolled in Medicaid or Family Health Plus) in order to address the high teen pregnancy rate in the community and numbers of uninsured adolescents, which are both higher than in the borough as a whole. We will also enroll women and their families in other insurance programs that they may be eligible for, including Medicaid and Child Health Plus, or through the Health Insurance Exchange. Our hope is that an increase in health insurance enrollment in Corona will also mean a decrease in higher-risk pregnancies down the road because of poor pre-conception health; the preventive care--including regular doctor visits, birth control, information about making healthy food choices, mental health services and help in stopping smoking – that comes with coverage, can make a big difference in terms of risk factors and poor outcomes, including rates of maternal mortality; we know that without insurance women are about four times more likely to die of pregnancy-related causes than women with HMO or other third party insurance including Medicaid.

Coordination of care: A central component of the MICHC project, that stretches beyond direct outreach, education, and services (and one we hope will make the project sustainable beyond the five-year funding period) is a critical emphasis on coordination of care; policies and protocols, screening tools, and systems for monitoring and assessing data with continuous quality improvement in mind that can be utilized and shared across partner organizations. It is through these collaborative mechanisms that we hope to not only sustain the project and avoid duplication of resources but also to ensure comprehensive access to the range of services and supports that are necessary to promote preconception health (and across the other life-stages as well) and thus prevent maternal mortality and other poor outcomes for the most vulnerable individuals and families.

In closing, we believe strongly that a concerted effort to support and expand programs and strategies like these is critical to promoting improved maternal and infant health outcomes and we greatly value the opportunity to speak today on behalf of Public Health Solutions and the women and families we serve in the hopes of further bringing to light some of the key challenges as well as most promising opportunities to have a positive effect on this critical public health concern.

THE DOULAS FOR ALL CAMPAIGN

What is a doula?

Doulas are trained to provide (non-medical) emotional, physical and informational support to a woman before, during, and after labor and childbirth. Doulas offer a continuous presence at birth, share information about labor and comfort measures, and may facilitate communication by helping women to articulate their questions, preferences and values with clinicians and hospital staff.

Documented Health Benefits of Doula Care

Doula care has been shown to improve birth outcomes and reduce health disparities. Substantial evidence demonstrates that doula support increases the likelihood of safer, healthier, and more satisfying birth experiences. Specific benefits identified in the scientific literature include:

- Lower Cesarean rates by 28% [1]
- Shorter labors [1]
- Fewer forceps or vacuum births [1]
- Less need for anesthesia or analgesia such as epidurals [1]
- Higher Apgar scores for babies [1]
- Increased breastfeeding [2]

Doula Programs Serving Women in Low-Income Communities

Doula care may be particularly beneficial for women from low-income, medically-underserved, and at-risk communities. By ensuring that women most at risk for adverse birth outcomes have the added support they need to maximize their chances to have a healthy pregnancy, childbirth, and postpartum period, doulas can contribute to reducing health disparities.[3]

Community-based doula programs offer low- or no-cost services tailored to meeting the specific needs of the community they serve. Community-based doula programs expand access to doulas by eliminating cost-barriers, and often offer a comprehensive approach to meeting their clients' needs. In addition to their presence at birth, community based doulas may have several visits with clients before and after birth to provide childbirth and breastfeeding education, offer referrals for needed health or social services, assist with creating birth plans and inform the client about birth options.[4]

Some community-based doula programs use a peer-to-peer approach, pairing pregnant women and teens in underserved areas with a trained doula from their own community.[5] When doulas come from within the same community as clients, they may be particularly well-suited to address issues related to discrimination and disparities by bridging language and cultural gaps, and serving as a health navigator or liaison between the client and the service providers. Reimbursing doula services through Medicaid could expand the reach of these programs.

Doulas Can Improve the Value of Maternity Care

Expanding access to doula care has the potential not only to improve health outcomes for women and babies, but can also bring down the cost of care by reducing the use of unnecessary medical interventions. Medicaid costs for Cesarean delivery in New York are nearly $6300 greater than vaginal births, so reducing unneeded cesareans, as well as epidurals and instrumental deliveries, can result in significant cost savings. Critical examinations of the potential cost-savings associated with Medicaid and private insurance reimbursement have recently been undertaken by multiple states including Minnesota,[2] Oregon [6] and Wisconsin [7], to assess the potential for

simultaneously reducing overall costs associated with unnecessary medical intervention, while improving birth outcomes and satisfaction.

Increased breastfeeding rates associated with doula care could also improve health outcomes while reducing costs. A recent cost-analysis of the potential benefits of breastfeeding indicates that achieving widespread adoption of optimal levels of breastfeeding (1-year) could significantly reduce costs associated with premature maternal death from breast cancer, diabetes and myocardial infection.[8]

New York State Statistics

- In New York State, the average Medicaid cost is $6,294 higher for a cesarean ($16,940) compared with a vaginal birth ($10,646).[9]
- New York State had 239,736 births in 2011, nearly half of which were covered by Medicaid.
- More than one third (34.3%) of New York State women give birth by cesarean, and an estimated 40,000 of New York State's cesarean births were covered by Medicaid.
- Because doulas can reduce cesareans by 28%, if all women receiving Medicaid had doulas attend their births, medical expenditures could be reduced by $70 million (not accounting for the cost of paying the doulas).

New York City Statistics

- New York City had 118,719 births in 2011.
- Nearly 6 of 10 births (57.9%) in New York City in 2009 were covered by Medicaid.[10]
- The cesarean rate for New York City was 32.5%, slightly lower than the national average of 32.8%

Estimated Savings from Reduced Cesarean Rate - New York State [11]

*Note: These figures do not include the cost of reimbursing doula services.

Births per year – NY, 2011	% NY births covered by Medicaid, 2011	No. NY births covered by Medicaid	NY Cesarean section rate	Estimated No. Medicaid covered Cesareans in NY	Estimated % of Cesareans prevented with doula support	No. cesarean sections preventable through doula utilization	Difference in Medicaid cost for cesarean vs vaginal births	Resulting savings to NY Medicaid per year
239,736	48.6 %	116,581	34.3 %	39,987	28%	11,196	$6,294	**$ 70,469,890**

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[1] Hodnett ED, Gates S, Hofmeyr GJ, Sakala C. Continuous support for women during childbirth. *Cochrane Database of Systematic Reviews* 2013, Issue 7. Art. No.: CD003766. DOI: 10.1002/14651858.CD003766.pub5.

[2] KB Kozhimannil, RR Hardeman, LB Attanasio, et al, Doula Care, Birth Outcomes, and Costs Among Medicaid Beneficiaries, Am J Public Health (N Y) (2013), PMID 23409910.

[3] Gentry, Q. M., Nolte, K. M., et al. (2010). "Going Beyond the Call of Doula": A Grounded Theory Analysis of the Diverse Roles Community-Based Doulas Play in the Lives of Pregnant and Parenting Adolescent Mothers. *The Journal of perinatal education, 19*(4), 24

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[5] Gentry, Q. M., "Going Beyond the Call of Doula."

[6] Tillman, Tricia., *Utilizing Doulas to Improve Birth Outcomes for Underserved Women in Oregon.*

[7] Chapple, W., Gilliland, A., Li, D., Shier, E., & Wright, E. (2013). An Economic Model of the Benefits of Professional Doula Labor Support in Wisconsin Births. *WMJ.*

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[9] Data Source: U.S. Agency for Healthcare Research and Quality, HCUPnet, Healthcare Cost and Utilization Project. Rockville, MD: AHRQ.

[10] Bureau of Vital Statistics data compiled by Bureau of Maternal, Infant, and Reproductive Health, New York City Department of Health and Mental Hygiene, August 2011, available at http://www.nyc.gov/html/doh/downloads/pdf/ms/bimt-medicaid-coverage.pdf.

[11] New York State Department of Health, Vital Statistics 2011, Table 13: Live Births by Financial Coverage and Resident County New York State - 2011 available at http://www.health.ny.gov/statistics/vital_statistics/2011/table13.htm; New York State Department of Health, Vital Statistics 2011, Table 14: : Live Births by Method of Delivery and Resident County New York State - 2011 http://www.health.ny.gov/statistics/vital_statistics/2011/table14.htm; Hodnett ED, Gates S, Hofmeyr GJ, Sakala C. Continuous support for women during childbirth. *Cochrane Database of Systematic Reviews* 2013, Issue 7. Art. No.: CD003766. DOI: 10.1002/14651858.CD003766.pub5.

Testimony of Choices in Childbirth and Childbirth Connection

Nan Strauss, Director of Policy and Research for Choices in Childbirth
New York City Council Health Committee
Public Hearing: Examining Women's Preconception Care & Health Outcomes for Moms
November 13, 2013

Good afternoon, Chairwoman Arroyo and City Council Members. My name is Nan Strauss and I am the Director of Policy and Research for Choices in Childbirth, an advocacy organization working to ensure that every mother and child has access to care that is safe, healthy, respectful, and deeply satisfying. We are very pleased to submit this testimony jointly with Childbirth Connection, a 95 year-old national non-profit advocacy organization that works to improve the quality and value of maternity care. As organizations focused on improving the quality of care during the childbearing year, our role here today is to connect the dots between maternal health outcomes, the pre-conception and interconception periods, and the childbearing year.

I appreciate the opportunity to be here today because the need for improvement is pressing, and because we have so many opportunities to improve maternal health.

Maternal Mortality and Maternal Health in the United States

The United States spends the most of any country on maternity care, yet has maternal mortality ratios higher than 45 other countries. The US is just one of 26 countries around the globe where maternal mortality is getting worse.[1]

Appalling racial disparities have persisted for over six decades. Nationally, African American women have been three to four times as likely to die from complications of pregnancy and birth, compared with non-Hispanic white women, and in fact, all races and ethnicities fare worse than white women, including Latinas, Native American/Alaska Natives, and Asian and Pacific Islanders.[2]

Maternal deaths signify problems far beyond those captured in the maternal mortality ratio, because the deaths are just the most visible tip of the iceberg. For every death, approximately 50 women suffer a complication so severe that they nearly die – known as a near miss. That means that in the US, one woman nearly dies from pregnancy related complications every 10 minutes. These life-threatening complications have risen 75% between 1998 and 2009.[3]

Maternal Mortality and Maternal Health in New York City

In 2010, the New York City Maternal Mortality Review Team reported that New York City women fare even worse than those nationwide. The maternal mortality ratio (MMR) for New York City has been higher than the national average for the last 40 years, and is currently among the highest in the nation. Between 2001 and 2005, the NYC MMR (23.1 deaths per 100,000 live births) was twice that of the nation (11.8 deaths per 100,000 live births), and five times greater than the Healthy People 2010 goal of 4.3.[4]

New York City racial disparities are even worse than those nationwide: African American women in New York City are more than seven times more likely to suffer a pregnancy-related death than white women.[5] Other women of color also face greater risks than white women, with the pregnancy related mortality ratio more than twice as high for Hispanic and Asian/Pacific Islander women than it is for non-Hispanic white women (19.1 and 17.5, respectively, vs. 8.6 per 100,000 live births).[6]

The outcomes vary significantly by borough and neighborhood:

- The Bronx and Brooklyn had the highest rates of pregnancy related deaths (34.1 and 31.1 per 100,000 live births, respectively) and Manhattan reported the lowest (14.0).
- Neighborhoods with the highest pregnancy related mortality ratios included the Northeast Bronx (57.8), South Bronx (41.7), Bedford Stuyvesant/Crown Heights (66.5), Flatbush (55.9), Canarsie (47.9), Jamaica (64.1), Southeast Queens (54.3), and Rockaway (47.4).[7]

Key Factors in Improving Maternal Health

A number of factors contribute to these poor outcomes, but several are particularly relevant to today's hearing:

- Rising numbers of women are entering pregnancy with unmanaged chronic conditions that add to risk of complications or death during pregnancy and birth for women and infants. Diabetes, hypertension, heart conditions and asthma, as well as obesity are among the factors contributing to worsening maternal health. In New York City, nearly half (49%) of the pregnancy related deaths between 2001-2005 occurred in women classified as obese, and more than half of women (56%) had at least one chronic health condition.[8] Because these conditions are more prevalent among African Americans, these factors fuel outcome disparities.

- Medical interventions that are beneficial in particular circumstances are being used routinely in situations where the risks may outweigh their benefits, and no-risk, low-tech solutions are being underutilized. The high cesarean rate, widely recognized as well beyond what is needed and appropriate, is associated with excess mortality and morbidity, including the rise of near-miss conditions such as placenta accreta, placenta previa, and cesarean scar ectopic pregnancies. Among New York City women who died of pregnancy-related causes, nearly 8 in 10 gave birth by cesarean.[9]

- Postpartum support and interconception care are woefully lacking, resulting in needless deaths and complications that arise in the postpartum period and missed opportunities to foster healthy birth spacing and ensure women's health for the future. Many women have no access to support in the critical first days following their return home from the hospital, despite the fact that complications frequently develop during this period. This also leaves many women without breastfeeding support or information about family planning options.

- Data collection and maternal mortality and morbidity review must also be strengthened to better identify at-risk populations, and to allow for the analysis of severe morbidity or "near-misses" to prevent problems before they result in deaths. While we have a basic level of understanding of the alarming disparities that currently exist in maternal morbidity and mortality in NYC, the data are not as specific as needed to better understand these disparities to target interventions to reduce them. NYC's population is the most diverse in the nation, and different ethnic sub-groups as they have vastly different health profiles. For example, Puerto Rican women are more likely to give birth to low-birthweight infants than women from other Hispanic groups and Mexican-American women have much higher rates of hypertension-related mortality than Puerto Rican and Cuban women.[10]

Addressing Chronic Conditions Prior to Pregnancy

Increasingly, women are entering into pregnancy with chronic conditions that put their health at risk on multiple levels, and even affect health beyond this pregnancy into the next. Women who are uninsured and lack affordable access to primary care including contraceptive services and information are more likely to enter pregnancy with untreated health conditions.

The rise in chronic conditions, including diabetes and hypertension, heart conditions and asthma, as well as obesity are among the factors contributing to worsening maternal health. In New York City, nearly half (49%) of the pregnancy related deaths between 2001-2005 occurred in women classified as obese, and more than half of women (56%) had at least one chronic health condition.[11]

The New York City Department of Health and Mental Hygiene has recognized that obesity, underlying chronic conditions and poverty are all associated with maternal death, and are contributing to the racial disparities because each of those factors disproportionately affect New York City's African Americans.[12]

During the preconception period, chronic conditions can be managed and treated to improve a woman's health, but by the time a woman is pregnant, it is too late to effectively address the problem. For example, women with diabetes are advised to effectively manage their glucose levels beginning three to six months prior to pregnancy. When glucose levels are too high, risks include miscarriage, premature delivery, birth defects, and respiratory distress syndrome. Risks to mothers include developing preeclampsia, cesarean delivery, and infections. Because babies organs are formed by just 7 weeks into pregnancy, waiting until pregnancy is discovered is too late to prevent birth defects or miscarriage.[13]

Reducing High Intervention Rates to Reduce Maternal Complications and Deaths

Maternity practices developed to treat specific problems are often used routinely for all pregnant women regardless of their risk of harm. When interventions are used in situations where they have *not* been demonstrated to confer benefits, women are needlessly exposed to potential harm. Currently, cesarean delivery, labor induction and augmentation, and continuous electronic fetal monitoring all may be overused while non-technical, beneficial practices including the use of non-medical comfort measures during labor are frequently

underutilized. Improving the quality of care will require attention to the rising intervention rates to ensure that the risks of interventions are balanced by their benefits.

One in three babies is now born surgically,[14] and cesareans have become the most common operating room procedure in the US.[15] The cesarean rate has increased approximately 60% since 1996. No research has demonstrated that the rising rates of cesarean births have improved maternal or infant health, yet data shows that the overuse of medical procedures has increased infant and maternal morbidity.[16]

A comparison between states that have a cesarean rate above the national average of 33% (including New York State) and those below the national average, has documented a 21% greater risk of maternal mortality among the high cesarean rate states.[17] For women, cesareans can increase the risk of cardiac arrest, hysterectomy, blood clots, major infection, hospital readmission, and death. Increased risks to babies include respiratory distress syndrome, death, and chronic problems such as asthma, diabetes, allergies, and obesity.[18] Risks are magnified in subsequent pregnancies, with repeat cesareans increasing potentially life-threatening complications such as abnormalities of the placenta, hysterectomy, and uterine rupture.

Among New York City women who died of pregnancy-related causes, nearly 8 in 10 gave birth by cesarean.[19] While this number is not "risk-adjusted" to reflect whether these women had additional complicating factors, the magnitude of the discrepancy is cause for concern and requires further investigation. The role of cesarean section should be included maternal mortality reviews.

Improving Support for Women During the Postpartum and Interconception Periods

A significant percentage of women suffer childbirth-related complications that do not manifest themselves until after returning home. Hemorrhage, pulmonary embolisms, and infections, three of the leading causes of maternal death all may develop in the days following hospital discharge. Timely and comprehensive postpartum care is critical for addressing these complications.

For most women in the US, their only postpartum care consists of a single visit to a doctor's office six weeks after childbirth,[20] but that would be too late to avert or ameliorate complications that arise in the crucial first days following the return home. The days following birth are also a critical period to establish breastfeeding, which improves the health outcomes of both babies and mothers.

The postpartum period is intertwined with women's health in the interconception period. Screening for postpartum depression, type 2 diabetes, and other conditions, are recommended for all or some groups of women at postpartum checkups, as is ensuring that women have information about and access to family planning options, but all too often these recommended practices fall through the cracks.

Women who receive no family planning information or services before or during their check-up six weeks following birth may find themselves quickly pregnant again. Becoming pregnant again too soon following birth significantly increases health risks to both women and their babies, and women are 2.5 times more likely to die if they become pregnant again within 6 months of giving birth.[21] Yet data collected by the CDC found that among women who had recently given birth and were not trying to become pregnant, more than half were not using contraception.[22] The high rate of unintended pregnancy further contributes to the numbers of women who are not able to obtain care for chronic conditions prior to becoming pregnant.[23]

Home visits by a trained community health worker – such as a community based doula - can help women to recognize complications that may develop and ensure that they are addressed before progressing to become more serious. Home visits are an optimal time to engage women in learning about how they can keep themselves and their babies healthy and safe, not just in the immediate period following birth but in the future as well. In many other countries, multiple home visits are the standard of care for all women following childbirth. Home visits can also provide essential information about family planning options and help connect women to needed services.

Enhancing Data Collection Capacity to Reduce Alarming Racial, Ethnic and Geographic Maternal Health Disparities

While we have a basic level of understanding of the alarming disparities that currently exist in maternal morbidity and mortality in NYC, the data are not as specific as needed to better understand these disparities to target interventions to reduce them. NYC is home to more races and ethnicities than any other city in the nation, and it is critical to understand/identify different ethnic sub-groups as they have vastly different health profiles. For example, Puerto Rican women are more likely to give birth to low-birthweight infants than women from other Hispanic groups and Mexican-American women have much higher rates of hypertension-related mortality than Puerto Rican and Cuban women.[24]

In order to reduce maternal morbidity and mortality, we must first pinpoint where the disparities exist within NYC's multi-ethnic citizenry. Health information technology (IT) is essential to the more granular data collection that is vital to this effort.[25] As part of standard practices of care, providers collect patients' race and ethnicity information. This information is increasingly collected and (subsequently) stored in electronic health records (EHRs), which over 1,800 NYC providers are utilizing.[26] Currently the EHRs certified through the federal EHR "Meaningful Use" Incentive Program categorize race and ethnicity into five general groups: white, black or African-American, Hispanic or Latino, Asian, Native Hawaiian or other Pacific Islander, and American Indian or Alaskan Native. While this is the standard set at the federal level by the Office of Management and Budget, it can be improved. NYC can take the initiative to advance beyond these standards and require more granular data collection, such as that recommended by the U.S. Department of Health and Human Services, which adds needed granularity for Hispanic, Asian, and Pacific Islander populations.[27]

Enhance Care Coordination and Planning through Health IT

According to the New York Academy of Medicine, preventing maternal morbidity and mortality requires better coordination and information sharing across providers, hospitals, and community-based services.[28] While the crux of care planning and coordination is human interaction, health IT can "help make necessary information more readily available and actionable, connect all people who have a role in an individual's care plan, and provide a shared platform for the ongoing maintenance and management of an individual's care and wellbeing."[29]

To this end, NYC could build such a platform for the purposes of maternity care, connecting not only providers of pregnancy, delivery, and postpartum care, but the women themselves, as well as any members of their care team that they identify, such as family members, friends, and other key supports. Moreover, this kind of maternity care platform can also connect community entities from which women receive services and supports. This would be especially vital for underserved women because for many such populations, health is tied to basic survival needs such as food, shelter, and transportation, rather than just to clinical care.[30] As a first step, such a maternity care platform could be ushered through NYC's Medicaid Redesign Team as one of its initiatives. As over half of all births in NYC are covered by Medicaid, creating a maternity care platform for Medicaid recipients would impact a significant portion of NYC's childbearing population.

Maternal mortality and morbidity statistics should serve as an alarm bell, alerting us all to the need for an immediate coordinated response. By responding to that alarm, by taking concrete action to address factors contributing to the high maternal mortality ratios, systemic changes will go far beyond preventing additional maternal deaths. Shifting the model of care can improve the quality of care and health outcomes for each of the 120,000 women who give birth in New York City each year. Addressing factors contributing to past deaths would prevent hundreds of near misses and thousands of complications that have a lasting, even lifelong effect on the health of women giving birth and their babies.

EFFECTIVE STRATEGIES FOR IMPROVING MATERNAL OUTCOMES

While others have comprehensively addressed the preconception period, I am going to focus on strategies that have demonstrated positive health outcomes during childbirth and that have continued benefits in the interconception period.

The most direct approach to improving outcomes is to ensure that all women have access to high-quality evidence-based maternity care practices: care that reduces the risk of unnecessary harm and increases the likelihood of positive outcomes. We must also ensure that women get the support they need during the critical postpartum period that will increase the likelihood of a healthy interconception period.

Midwifery Model of Care

We strongly support access to the midwifery model of care for all women throughout the city who would prefer it. A midwifery model focuses on pregnancy and childbirth as a normal and healthy event, and prioritizes protecting, supporting, and enhancing the normal physiologic processes of labor, childbirth, and breast-feeding. Principles associated with a

midwifery model of care also include a focus on a patient-centered, individualized approach to care; evidence-based care; information, communication, and shared decision-making; health promotion and disease prevention; a comprehensive approach to health and wellbeing including counseling, services, and support; meeting the needs of vulnerable populations; and a collaborative healthcare team model.

The midwifery model of care has demonstrated positive outcomes in varied contexts including among at-risk populations in inner-city and rural settings.[31] Often women are able to spend more time in a prenatal visit with midwives or family physicians which facilitates the provision of information and fosters trust and communication. Studies have found midwives achieve lower cesarean rates, shorter hospital stays and higher breastfeeding rates among the women they serve. A systematic review of midwife-led care found that it resulted in fewer admissions to the hospital during pregnancy, less use of pain relief medication during labor and childbirth, and more spontaneous vaginal births, while resulting in equivalent rates of infant deaths.[32] Health care providers comfortable with a patient-centered model of care may also be better equipped to address mental health issues and social issues that are important to maternal health. We therefore welcome the decision of the Health and Hospitals Corporation to reopen the award-winning midwifery led program at the North Central Bronx Hospital.

As a means to achieving both high quality, evidence-based childbirth care and adequate postpartum support to improve women's health in the intrapartum period, we strongly recommend expanding funding for doula care, including obtaining Medicaid funding for doulas, so that all women who want doula support have access to it. Community-based doula programs are a uniquely effective way to reduce non-beneficial medical interventions, improving interconception health, and are well-suited to reducing health disparities and providing culturally competent services.

Doula Support

Doulas are trained to provide (non-medical) emotional, physical and informational support to a woman before, during, and after labor and childbirth. Doulas offer a continuous presence at birth, share information about labor and comfort measures, and may facilitate communication by helping women to articulate their questions, preferences and values with clinicians and hospital staff.

Documented Benefits of Doula Care

Doula care has been shown to improve birth outcomes and reduce health disparities. Substantial evidence demonstrates that doula support increases the likelihood of safer, healthier, and more satisfying birth experiences. Specific benefits identified in the scientific literature include:

- Lower Cesarean rates by 28%
- Shorter labors
- Fewer forceps or vacuum births
- Less need for anesthesia or analgesia such as epidurals
- Higher Apgar scores for babies [33]
- Increased breastfeeding[34]

Reducing Unnecessary Medical Interventions with Doula Support
Doulas can help increase the use of safe, beneficial, evidence-based measures that are currently underutilized. These include

- facilitating nonsupine positions for giving birth
- supporting the woman's wish for freedom of movement in labor
- the use of birthing balls, massage and tubs for comfort during labor[35]

In some cases, providers may pressure women into accepting medical interventions that they do not believe to be beneficial. The national Listening to Mothers III survey of women's maternity experiences, has documented that women report experiencing pressure from a care provider to undergo medical interventions: 25% of women who had labor induction, 25% of women who had cesarean section, and 19% of women who did not have epidurals reported receiving pressure from a care provider to have these interventions.[36] By offering information to their clients about evidence based childbirth practices and by helping women to articulate their own preferences and values, women with doula support may be more likely to make independent decisions about care practices.

Doula Programs Serving Women in Low-Income Communities
Doula care may be particularly beneficial for women from low-income, medically-underserved, and at-risk communities, and can help reduce health disparities by ensuring that women most at risk for adverse birth outcomes have the added support they need to maximize their chances to have a healthy pregnancy, childbirth, and postpartum period.

Community-based doula programs offer low- or no-cost services tailored to meeting the specific needs of the community they serve. Community-based doula programs expand access to doulas by eliminating cost-barriers, and often offer a comprehensive approach to meeting their clients' needs. In addition to their presence at birth, community based[37] doulas may have several visits with clients before and after birth to provide childbirth and breastfeeding education, offer referrals for needed health or social services, assist with creating birth plans and inform the client about birth options.

Some community-based doula programs use a peer-to-peer approach, pairing pregnant women and teens in underserved areas with a trained doula from their own community.[38] One in five African American and Hispanic mothers report poor treatment from hospital staff during childbirth due to their race, ethnicity, cultural background, or language (compared with only one in twelve white mothers), [39] When doulas come from within the same community as clients, they may be particularly well-suited to address issues related to discrimination and disparities by bridging language and cultural gaps, and serving as a health navigator or liaison between the client and the service providers.

Comprehensive Approach to Care in Community Based Doula Programs
In community based doula programs, the doulas often go beyond the traditional role of providing childbirth support, but also serve to ensure that women's needs are met in a comprehensive manner. Medicaid-insured women have greater need for basic services in

pregnancy than women with private insurance, and have reported needing help with food, nutritional counseling, treatment for depression, and help with smoking cessation.[40]

Community based doulas can connect women with health care as early as possible; assist with navigating the health care system; offer pregnancy and childbirth education; coach women through labor with relaxation techniques, pain management, and decision-making support; assist families in the months after childbirth; and provide breastfeeding support. The projects use a peer-to-peer model to reduce cultural and language barriers and assist families with communicating effectively to get their health needs met. Community-based doulas can assist medical clinicians in improving communication with women, keep women in care longer, and increase positive outcomes.[41]

Doulas Can Improve the Value of Maternity Care

Expanding access to doula care has the potential not only to improve health outcomes for women and babies, but can also bring down the cost of care by reducing the use of unnecessary medical interventions. Medicaid costs for Cesarean delivery in New York are nearly $6300 greater than vaginal births, so reducing unneeded cesareans, as well as epidurals and instrumental deliveries, can result in significant cost savings. Critical examinations of the potential cost-savings associated with Medicaid and private insurance reimbursement have recently been undertaken by multiple states including Minnesota,[42] Oregon,[43] and Wisconsin [44], to assess the potential for simultaneously reducing overall costs associated with unnecessary medical intervention, while improving birth outcomes and satisfaction. The Minnesota study found that Medicaid reimbursement for doula services would likely result in a reduction of Medicaid spending, because savings from reduced cesarean rates would exceed the expense of reimbursing the doulas.[45]

New York State Statistics

- In New York State, the average Medicaid cost is $6,294 higher for a cesarean ($16,940) compared with a vaginal birth ($10,646).[46]
- New York State had 239,736 births in 2011, nearly half of which were covered by Medicaid.
- More than one third (34.3%) of New York State women give birth by cesarean, and an estimated 40,000 of New York State's cesarean births were covered by Medicaid.
- Because doulas can reduce cesareans by 28%, if all women receiving Medicaid had doulas attend their births, New York State could save more than $70 million in reduced medical expenditures (not accounting for the cost of paying the doulas).

New York City Statistics

- New York City had 118,719 births in 2011.
- Nearly 6 of 10 births (57.9%) in New York City in 2009 were covered by Medicaid.[47]
- The cesarean rate for New York City was 32.5%, slightly lower than the national average of 32.8%

Estimated Savings from Reduced Cesarean Rate - New York State [48]

*Note: These figures do not include the cost of reimbursing doula services.

Births per year – NY, 2011	% NY births covered by Medicaid, 2011	No. NY births covered by Medicaid	NY Cesarean section rate	Estimated No. Medicaid covered Cesareans in NY	Estimated % of Cesareans prevented with doula support	No. cesarean sections preventable through doula utilization	Difference in Medicaid cost for cesarean vs vaginal births	Resulting savings to NY Medicaid per year
239,736	48.6 %	116,581	34.3 %	39,987	28%	11,196	$6,294	**$ 70,469,890**

Doula's Impact on Postpartum and Interconception Health

Many doulas include at least one postpartum follow-up home visit with mothers and babies, and community based doulas often provide more extended follow-up services. During these visits, doulas can offer breastfeeding support, nutrition counseling, and counseling on family planning options among other supportive services.

The first days at home are a critical time for new mothers, and home visits can provide essential information and support to remain healthy. Home visits from a trained support person can help a woman recognize signs and symptoms of a developing complication, such as an infection or embolism, two of the leading causes of pregnancy related deaths that often develop after women have returned home. A study from Denmark revealed that 74% of infections manifest after women are discharged from the hospital. It is important to note that these infections were nearly five times as likely in cesarean births compared with vaginal births, highlighting the importance of avoiding unnecessary surgery and the impact that high cesarean rates have on overall health outcomes. These outcomes have remained hidden in U.S. due to data collection limitations, including the difficulty of conducting data collection after hospital discharge.[49]

The period shortly following birth is likewise an important time to discuss family planning options with women so that they can plan when and whether they want to have additional children, and they can incorporate information about healthy birth spacing into their decision-making process.

The early days in the hospital and at home are also the critical period for establishing breastfeeding. While the health benefits of breastfeeding for infants are widely recognized, they also offer improved long-term health outcomes for mothers. Failure to breastfeed is associated in mothers with an increased risk of developing premenopausal breast cancer, ovarian cancer, retained pregnancy weight gain, type 2 diabetes, and metabolic syndrome.[50]

Increased breastfeeding rates associated with doula care could also improve health outcomes while reducing costs. A recent cost-analysis of the potential benefits of breastfeeding indicates that achieving widespread adoption of optimal levels of breastfeeding (1-year) could significantly reduce costs associated with premature maternal death from breast cancer, diabetes and myocardial infection.[51]

Doulas can support women developing their capacity to navigate the health care system and becoming educated about how to stay healthy in the long term. This can have a positive impact throughout the rest of that woman's life, and throughout the time she is managing

health care decisions for her child. Pregnancy and childbirth is a unique time to engage and empower women as active participants in their own health care, and that of their children. For many women, childbirth is their first meaningful interaction with the health care system as an adult. Women are highly motivated during pregnancy and birth to become more engaged and educated health care consumers.

Not only does doula care have the potential to improve health outcomes around the period of birth, and through the interconception period, but the effects can last a lifetime. It is widely recognized that patients actively involved in their health care enjoy better health outcomes and incur lower costs.[52]

In the recent national *Listening to Mothers III* survey of women who gave birth in 2011-12, women with Medicaid were less likely than privately insured women to know about doula care, but more likely to say they would have liked to have had a doula, indicating an unmet need for doula services among Medicaid recipients. Among women covered by Medicaid 36% had never heard about doula care, compared with only 19% of those with private insurance. Of those who did know about doulas, 35% of Medicaid beneficiaries said they would have liked to have had doula care, compared with 21% of privately insured women. [53]

To improve maternal health outcomes and to address the unmet need for doula care, Choices in Childbirth has been working with The Doulas for All campaign - a statewide initiative spearheaded by the New York Coalition for Doula Access (NYCDA). The Coalition is composed of more than 100 doulas, activists and consumers who have joined together from all across the state to advocate for equitable access to doula care by petitioning the state for Medicaid reimbursement. The Coalition's efforts are endorsed by dozens of community-based health and women's organizations, many of whom are testifying here today.

CONCLUSION

We know that change is possible. Examples of effective programs and studies demonstrate that it's possible to achieve significantly improved outcomes. We need to ask, what will it take to move the dial in terms of improving maternal health outcomes overall? What are the first steps toward accomplishing that goal?

To that end, we are proposing that the City pass a resolution in support of the New York Coalition for Doula Access for the NYS Medicaid program to make doula care a reimburseable service, and designate $500,000 to fund the development and expansion of community-based doula services in low-income, medically underserved communities in New York City. We support the dedication of $2,000,000 to fund pilot programs in preconception and interconception care for low-income New York women. In addition, we suggest enhancing data collection capacity in order to reduce alarming racial, ethnic and geographic maternal health disparities and enhancing care coordination and planning through Health IT.

Thank you for your time and attention.

Contact Information:

Nan Strauss, JD
Director of Policy and Research
441 Lexington Ave., 19th Fl.
New York, NY 10017
212.983.4122
nan@choicesinchildbirth.org

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Preconception and Interconception Health: The Next Frontiers in Extending Women's and Babies' Lives

A Concept Paper on City and State Policy

May 2013

Prepared by:
Citywide Coalition to End Infant Mortality
c/o Federation of County Networks, Inc.
127 West 127th Street, 3rd Floor
New York, New York 10027

Executive Summary

The Citywide Coalition to End Infant Mortality (CCEIM) is composed of over thirty (30) community-based maternal and child health providers funded in part by the City Council's Infant Mortality Reduction Initiative. Over the last eleven years, the CCEIM has worked hand in hand with the City Council and the New York City Department of Health and Mental Hygiene to reduce high infant mortality and low birth weight rates in high-risk communities throughout New York City. The CCEIM is dedicated to ending the disparities in infant mortality in poor neighborhoods throughout New York City. We have approached this problem from the perspective that infant mortality is a multifaceted issue tied to medical care, health care access, cultural, economic, and social issues. Our coalition has learned that multifaceted approaches must be utilized to assure its decline.

During the past 11 years, the Infant Mortality Reduction Initiative has focused on providing case management, health education workshops, and targeted screening and referral services to women in the prenatal and perinatal periods of pregnancy. A key goal has been educating pregnant women about, and connecting them to, prenatal care. There have been substantial reductions in the rates of late or no prenatal care and of infant mortality. However, the rates of preterm birth and low birth weight have not changed in communities of color. The CCEIM recognizes the value of prenatal care. However, prenatal care alone does not address the importance of the woman's (and the man's) health before or in between pregnancies. The leadership of CCEIM would like expand its purview to also address the health of women and men of childbearing age, regardless of whether or not they are thinking about becoming parents. This model of care is called preconception care. Key components of preconception care include: physical assessment, risk screening, vaccinations, and counseling. For women in between pregnancies, CCEIM agencies will offer interconception care, which will address birth spacing, chronic diseases, obesity, diabetes, high blood pressure, smoking cessation, STI testing and depression. Due to the fact that fifty percent of pregnancies are unplanned, it is important that women will have the screenings, counseling, education and information they need to have a positive birth outcome.

The city's vital statistics indicate that even though infant mortality has been reduced to its lowest level ever at 4.9 infant deaths per 1,000 live births, the rates in many communities of color are double the citywide rate. The emphasis on prenatal care has addressed some of this disparity but not all of it. This concept paper provides an overview of the statistics and issues related not only to infant mortality but also to poor birth outcomes and maternal mortality. Infant mortality, preterm births and low birth weight infants are all linked to the health of the women prior to pregnancy, in particular, the chronic health conditions -- i.e., overweight, obesity, high blood pressure, diabetes -- that potential mothers may have developed over their life course.

Therefore, the Citywide Coalition to End Infant Mortality has been working on redesigning the Infant Mortality Reduction Initiative based on the evidence that addressing the health of the woman and some of the pre-existing chronic disease issues prior to becoming pregnant will improve maternal and birth outcomes. The following are the CCEIM recommendations in order implement the redesign of the Initiative.

Preconception and Interconception Health Concept Paper
Citywide Coalition to End Infant Mortality

1. The **Citywide Coalition to End Infant Mortality (CCEIM)*** calls on the Mayor and the New York City Council to allocate **3.0 million dollars** to the New York City FY 2014 budget for the Infant Mortality Reduction Initiative. During the past three budget periods, the allocation has decreased by $500,000. The additional funds would increase community-based agencies' capacity to provide targeted preconception and interconception services to women and families in the highest need community districts and to implement a redesigned Infant Mortality Reduction Initiative that provides targeted outreach, screening, and referral, one-to-one counseling, case management, doula care, support groups, and health education services in a tightly coordinated Preconception/Interconception Model of Care. This would result in a targeted zonal approach to services.

2. Redesigning the Infant Mortality Reduction Initiative to address birth spacing, unintended pregnancy, chronic diseases, obesity, diabetes, high blood pressure, smoking cessation, STI testing, stress and depression in the most vulnerable populations where disparities are most evident during the preconception and interconception periods. An emphasis on diabetic preconception care would be included. A focus on the preconception health of teens and women in the zonal areas where there is a high incidence of low birthweight and preterm births.

3. Four core goals would be addressed: (a) reducing the rate on unintended pregnancy; (b) increasing the inter-pregnancy interval; (c) identifying and reducing the risk factors for chronic diseases that impact on birth outcomes; and(d) increasing breastfeeding rates in the target communities. These goals would be addressed through strategies on four levels, --individual, interpersonal, community, and policy/systems -- using the socio-ecological model framework.

4. Information on environmental risks including neighborhood conditions and their impact preconception/interconception health, health care and birth outcomes would be included.

5. Developing and implementing policies that support the health of women, men and families will improve birth outcomes, reduce disparities and improve the chronic disease health outcomes of residents of New York City.

6. Continued support for the Citywide Evaluation of the Infant Mortality Reduction Initiative. The data collected and analyzed as well as vital health statistics on birth and chronic disease outcomes will be used to determine model effectiveness in reducing health disparities and possible replication in other communities in New York City and statewide.

We believe that redesigning the Infant Mortality Reduction Initiative is critical with improving the health of women, men and their families across the life course, improving birth outcomes of infants, and reducing chronic diseases and health disparities in our most economically challenged and culturally disparate communities in New York City.

Preconception and Interconception Health Concept Paper
Citywide Coalition to End Infant Mortality

I. Scope of the Problem

a. Infant Mortality, Preterm Birth and Low Birth Weight Infants

The Infant Mortality Rate (IMR) is a universally accepted, significant social indicator of the wellbeing of any group. The data on the IMR in New York City (NYC) provides strong evidence to substantiate the need for the IMRI program to shift from concentrating on the prenatal and perinatal periods to the preconception and interconception periods. When one reviews the infant mortality, pre-term birth and low-birth weight data from the NYC Department of Health and Mental Hygiene for the ten-year period 2001-2010, the following issues are evident:

- The problem of infant mortality is interrelated with preterm births, low birth weight infants, maternal mortality, and the health and health care of women prior to pregnancy, preconceptional and/or interconceptional, chronic disease prevention, and increasing breastfeeding rates.
- Overall IMR in New York City (NYC) declined 19.6% in the period 2008-2010 from 6.1 to 4.9infant deaths per 1,000 live births. (The IMR is the number of infant deaths during a calendar year per 1,000 live births during the same year.)
- Women with education beyond a high school degree (13+ years of education) consistently had a lower infant mortality rate compared to those with a high school education (12 years of education) or those who had not completed high school, < 11 years of education, except for African American women, whose babies died at higher rates regardless of educational level.
- Despite the citywide gains, those areas with persistently high rates are generally those with the most poverty and the highest percentages of people of color. For example, from 2008-2010, the three-year average infant mortality rates were as follows: Brownsville (9.9), Bedford Stuyvesant (8.5), East New York, (8.7), East Harlem (6.6), Manhattanville (5.7), Central Harlem, (7.5), The Rockaways (7.5), Jamaica (7.3), Fresh Meadows (6.1), Queens Village (5.9), Williamsbridge (7.0), Morrisania (7.8), East Tremont (7.4), and Mott Haven (7.1)[1].In 2010, approximately 1 in 11 infants (8.8%) in New York City were born with low birth weight (weight less than 2,500 grams or five and a half pounds) and almost 1 in 10 (9.6%) were preterm births (less than 37 weeks gestation). However, in the communities mentioned above, these rates were much higher.

The 4.9 citywide infant mortality rate in 2010 is misleading, however, because closer examination of the data by borough indicates that Staten Island and the Bronx had much higher rates: 6.6 and 5.7, respectively.

When the data is disaggregated by race/ethnicity, there is further cause for concern. In 2010, the infant mortality rate among non-Hispanic blacks was the highest at 8.6, followed by Puerto Ricans (6.4), other Hispanics (4.3), non-Hispanic whites (2.8), and Asian / Pacific Islanders (3.4). [2] Based on this data, it is safe to say that in NYC in 2010, it was 3 times more likely for a black infant to die than a white infant.

The community districts that have the highest rates for preterm births and low birth weight infants mirror the same communities with the highest infant mortality rates. Preterm babies born before the 34th week of pregnancy are at the greatest risk of early death and life-long health problems. In addition, infants born late preterm, between 34 and 37 weeks of pregnancy, are less

healthy than infants born after 37 weeks. Late preterm infants are more likely than term babies to suffer from complications at birth such as respiratory distress; to require intensive and prolonged hospitalization; to incur higher medical costs; to die within the first year of life; and to suffer brain injury that can result in long-term neurodevelopmental problems.[3] Therefore it is essential that a focus on the neighborhoods with greatest needs is incorporated into consideration for the types of preconception and interconception care and education programs that are considered and implemented,

b. Maternal Mortality in NYC

In 2010, the NYC Department of Health and Mental Hygiene published a report, ***Pregnancy-Associated Mortality, New York City, 2001-2005***[4], that focused on 161 maternal deaths that occurred in New York City. The report's findings were:

- Black, non-Hispanic women were more than seven times more likely than white, non-Hispanic women to die from pregnancy-related causes.
- Women 40 years of age and older were 2.6 times more likely than women under age 40 to suffer a pregnancy-related death.
- Almost half of all women who died from pregnancy-related causes (49%)%) were classified as obese.
- More than half of women who died from a pregnancy-related cause (56%) had at least one chronic health condition (e.g., hypertension, asthma, and/or heart-related conditions).
- Embolism, hemorrhage, infection, and pregnancy-induced hypertension accounted for nearly two-thirds (63%) of all pregnancy-related deaths.

A maternal death is defined as those deaths that are either caused by or exacerbated by the pregnancy state and which occur either during pregnancy or within 42 days of the end of a pregnancy.

From 2005 to 2009, the NYC maternal mortality ratio increased from 17.1 per 100,000 live births to 24.5 per 100,000 live births. However, the maternal mortality ratio for Black, non-Hispanic women ranged from 8.3 times (2005) to 6.7 times (2009) more than that for non-Hispanic women.

This report[5] also delineates pregnancy-related mortality ratios for United Hospital Fund (UHF) Neighborhoods. Pregnancy-associated mortality is death from any cause while pregnant or within one year of the end of pregnancy. The UHF neighborhoods with the highest pregnancy-related mortality ratios are the same community districts (Northeast Bronx 57.8, South Bronx 41.7, Bedford Stuyvesant-Crown Heights 66.5, Flatbush 55.9, Canarsie 47.9, Central Harlem 35.5, Jamaica 64.1, Southeast Queens 54.3, and Rockaway 47.4)[6] with the highest rates of infant mortality, preterm and low birth weight infants, and pre-pregnancy obesity. These are also the neighborhoods/community districts that have large percentages of Black, non-Hispanic women.

Overall, 49.1% of women who died of pregnancy-related causes were obese, with the condition more common among black women (60.2%). In addition, more than half (55.9%) of women who died had at least one preexisting chronic health condition. Hypertension (13.0%), asthma (11.8%), and cardiac conditions (10.6%) were the most common preexisting health conditions

among women who died from pregnancy-related causes.[7] Black women had the highest percentage of deaths for all four leading causes of pregnancy-related deaths, 82% of embolism deaths and 65% of deaths due to pregnancy-induced hypertension.

c. Trends in Infant and Maternal Mortality, Racial/Ethnic Inequities in NYC

The infant and maternal/pregnancy-related mortality statistics delineated above indicate the racial/ethnic inequities faced by women and communities of color. Infant mortality, preterm births and low birth weight infants are most prevalent in the communities that have large black and Hispanic populations. As noted, these are the same communities in which the maternal/pregnancy-related mortality ratios are high. The chronic health conditions are also the same, obesity and hypertension. The rate of late or no prenatal care for women giving birth in New York City is 7.2 percent.

The inequities in infant and maternal mortality probably have more to do with preexisting chronic health conditions than with prenatal care. Mothers who were overweight or obese prior to pregnancy from 2008 to 2010 resided in the same community districts that have the highest infant and maternal mortality rates as well as large black populations. Non-Hispanic Black and Puerto Rican mothers were more likely to be obese (28.7% and 28.5%, respectively) compared with other Hispanic mothers (18%), non-Hispanic white mothers (9.4%), and Asian/Pacific Islander mothers (4.9%).[8] A 2012 *Epi Data Brief* on pre-pregnancy weight and infant mortality[9] also reported that:

- Infant mortality was highest among infants born to obese mothers, followed by those born to overweight mothers, and lowest among those to healthy-weight mothers.
- Among infants born to obese mothers, the highest infant mortality rate (IMR) was among non-Hispanic blacks at 9.2 per 1,000 live births, followed by Puerto Ricans and Asian/Pacific Islanders, both at 6.4.
- Infants born to other Hispanic and non-Hispanic white mothers who were obese had an IMR of 5.1 and 4.1 per 1,000 live births.

The trends in infant and maternal mortality are interrelated with the health of mothers prior to pregnancy and the chronic health conditions with which many of them live. There is also a convergence of the maternal and infant vital statistics and the communities which have the more severe concerns and problems. Therefore it is critical to provide preconception and interconception care for women across the life course to address the chronic health conditions that they experience.

d. Rise in the Cesarean Section Rate

In the period of 1996 to 2007, the cesarean section rate increased dramatically, from 22.9 to 33.7 per 100 live births in New York State. However, in recent years, the New York City cesarean section rate (which had also been rising previously) has more or less leveled off, ranging from 32.8% (2008) to 33.3% (2009) to 32.8% (2010) of live births. Non-Hispanic black and Puerto Rican women had the highest cesarean rates at 37.3% and 38.9% in 2010, respectively as compared to non-Hispanic white women, 30.0% who had the lowest rate.

Cesarean delivery involves major abdominal surgery, and is associated with higher rates of surgical complications and maternal rehospitalization as well as with complications requiring neonatal intensive care unit admissions. The rise in cesarean deliveries is also correlated with the increase in late preterm (34 to 37 completed weeks of gestation) and term (over 37 completed weeks of gestation) births.[10] In addition to clinical reasons, nonmedical factors suggested for the increase in cesarean deliveries include maternal demographic characteristics (e.g., increasing maternal age), physician practice patterns, maternal choice, more conservative practice guidelines, and legal pressures.

e. Teen pregnancy and poorer birth outcomes

In 2009, the national teen birth rate was 39.1 births per 1,000 females, which was a decrease of 37% from 61.8 births per 1,000 females in 1991 and the lowest rate ever recorded. The birth rates for black and Hispanic teens were 59.0 and 70.1 births per 1,000 females, respectively, compared with 25.6 for white teens nationally.[11] In New York City, the teen birth rate decreased 18% from 31.2 (2005) to 27.3 (2010) per 1,000 females aged 15-19. The city's teen pregnancy rate declined 18% from 94.2 per 1,000 females in 2005 to 76.5 per 1,000 females in 2010. Over this same period, teen birth and pregnancy rates also declined for Hispanic, non-Hispanic black, non-Hispanic white, and Asian and Pacific Islander teens.

Teen childbearing is associated with adverse consequences for mothers and their children and imposes high public sector costs. In New York City, over 88 percent of teen births are paid for by Medicaid and 90 percent are not married. In addition, births to teens are at greater risk for low birth weight, preterm birth, and death in infancy. In 2010, the infant mortality rate in New York City for teens aged less than 18 years was 9.2 deaths per 1,000 live births and 7.6for those aged 18-19 years. Both of these rates are higher than the overall citywide infant mortality rate of 4.9. For the period 2008-2010, the overall citywide low birth weight and preterm birth rates for teen live births were 10% and 10%, respectively. However, the rates varied for community districts from a low of 4.5% in Bayside to a high of 20% in Murray Hill for low birth weight infants, and percentages of preterm births ranged from a low of 3.4% in the Midtown Business District to a high of 14.3% in Battery Park/Tribeca. The community districts with the poorest birth outcomes for teens mirror the same communities with the poorest outcomes for women overall.

With teen pregnancy, it is important to review and analyze sexual risk behaviors, contraceptive use, sexual reproductive health education by schools and parents, and social media in order to determine preconception care and prevention messages and activities.

e. Unintended pregnancy rate

According to the Centers for Disease Control and Prevention, an unintended pregnancy is "a pregnancy that is mistimed, unplanned, or unwanted at the time of conception."[12] Unplanned pregnancy in New York City is a difficult indicator to measure. Of the 124,791 live births in NYC in 2010, 45% of the women were unmarried at the time of birth and 45% of the births were the results of first-time pregnancies.[13,14] Across all age groups citywide, the highest percentage of spontaneous or induced terminations occurred among women 20-34 years of age.[15]

Teenaged women (defined as those between 15 and 19) have the highest rates of unintended pregnancies – 87% of all pregnancies in that age range, according to the NYC Health Department.[16] In 2010, 10% of births in the Bronx were to women aged 15-19, the highest percentage of any borough as compared to the other boroughs' percentages were Staten Island (5%), Brooklyn (5.5%), Queens (5%), and Manhattan (4.5%).[17]

A striking gap also exists between the teenage pregnancy rate and the teenage birth rate.[18] In the Bronx among women 15-19, the birth rate is 39.4 and the pregnancy rate is 99.4. The NYC average is a birth rate of 27.3 and a pregnancy rate of 76.5. Citywide only 30-35% of pregnancies in women 15-19 years old result in live births. The remaining 65-70% of pregnancies results in either spontaneous or induced terminations. In terms of ethnicity, citywide non-Hispanic black pregnant teenagewomen have the lowest percentage of live births at 27%.[19] The percentage among non-Hispanic white teenagers is 48%.

Unplanned pregnancies have several potential health risks for both the mother and fetus. Women are more susceptible to contracting sexually transmitted infections including the Human Immunodeficiency Virus. Damaging pre-existing behaviors such as smoking and inadequate regulation of chronic diseases can result in DNA damage to the fetus and decreased oxygen supply in placental blood.[20] In many cases, the deleterious effects take place during the first trimester and result in birth defects before a woman is even aware that she is pregnant.

II. Prenatal care, even of the highest quality, is not enough to solve these problems

One of the most consistent findings of research on maternal and infant health in recent years is the impact of women's long-term health issues. All of this research has led to a consensus in the field that prenatal care, even of the highest quality, is not enough to reverse the poor birth outcomes which remain stubbornly high nationally and in New York City, particularly in communities of color. Some conditions – whether medical, nutritional, or psychosocial – cannot be reversed in time to prevent harm to the embryo. In addition for various reasons, many women in New York City do not enter prenatal care until late in pregnancy.

a. Impact of obesity and chronic illnesses among women

According to a position paper of the American Dietetic Association and American Society for Nutrition, "Obesity in pregnancy carries with it not just increased risks for the pregnant woman during gestation, but also risks for the future health of the child, or, in public health terms, the health of the next generation."

The paper details the research finding that levels of birth defects, fetal death, and stillbirths are higher among obese than non-obese women. The two professional societies strongly recommend preconceptional and interconceptional counseling on the problems that obesity poses for pregnancy, and delineate methods for reducing it. They state: "The long-term goal of healthcare professionals must be to reduce the proportion of women who are obese during the reproductive period and increase public awareness about the importance of a healthful lifestyle (healthful diet, moderate to vigorous levels of physical activity, and emotional well-being) before and during pregnancy."[21]

b. Impact of cardiovascular disease and diabetes

Women in the preconception period who have cardiovascular disease and/or diabetes present important health risks to their future babies as well as to their long-term health. Studies show that the higher a woman's risk of cardiovascular disease, the likelier that her infant will have low birth weight.[22] High blood pressure in pregnant women poses numerous risks to their infants which may include: preterm birth, placental abruption (separation of the placenta from the uterus), and ultimately, fetal death.[23] Because of these risks to both the future baby and the woman herself, it is important to develop strategies in the preconception period to combat the incidence of cardiovascular disease and diabetes and to provide treatment.

Women who have pre-pregnancy diabetes have a greater risk of complications, such as fetal heart defects, fetal death, and preterm births.[24] Regarding women's long-term health, poor glucose control in diabetics has been linked to higher risk for high blood pressure, kidney disease, nerve damage, heart disease, and blindness.[25] According to the National Ambulatory Medical Care Survey, women who control their diabetes through preconception care have the potential to reduce the risk of miscarriage, of which there are approximately 113,000 a year.[26] Two studies found that "the savings resulting from avoided adverse pregnancy outcomes in women with diabetes outweigh the added costs of preconception care."[27] Thus, emphasizing diabetic preconception care is crucial to the future health of babies and the long-term wellness of women.

c. Impact of environmental exposures on reproductive health

In recent years, it has become increasingly clear that environmental toxic exposures can have a major impact on the health and well-being of women who become pregnant and their children. The major categories of environmental exposures that affect these populations[28] are polycyclic aromatic hydrocarbons (PAHs – compounds found in air pollutants), hazardous chemicals such as pesticides, phthalates, bisphenol A (BPA), fire retardants, and polychlorinated biphenyls (PCBs); and heavy metals such as lead.

Many studies of newborns and their mothers in Harlem, Washington Heights, and the South Bronx have found links between several of these toxins and low birth weight, preterm births, and delayed child development. Recent research has focused on endocrine-disrupting compounds – chemicals and heavy metals found to interfere with hormone signaling, which in turn can damage the reproductive, neurological, and immune systems.[29] Yet a survey of Bronx residents and workers by the Bronx Health Link found that fewer than 40% of adults who had children were given information on environmental risks during the woman's pregnancy.[30]

d. **Impact of women's long-term stress on successful conception and fetal development**

Long-term stress takes its toll on the health of prospective mothers. According to the Mayo Clinic, long=term stress triggers the release of the stress hormone cortisol from the adrenal glands, which in turn releases glucose into the bloodstream. [31] For stress sustained over a long period of time, the constant exposure to cortisol and other stress hormones can disrupt the body's processes, putting a person at risk for heart disease, sleep problems, obesity, memory impairment, digestive problems and depression. Elevated cortisol levels can also have adverse effects on the developing fetus. Cortisol can cross the placenta and possibly retard fetal growth, and can induce spontaneous abortion or preterm labor.[32,33]

Behavioral changes in women in reaction to stress may include: smoking, under- and over-eating, and alcohol consumption. Long-term effects of these behaviors can manifest themselves in decreased oxygen and nutrient supply in the blood crossing the placenta to the growing fetus, birth defects associated with Fetal Alcohol Syndrome, preterm delivery, and an increase in childhood obesity.[34,35,36] A study conducted on young mothers at a WIC center in the Bronx shows that women who are anemic prior to conception have a greater risk of experiencing preterm birth.[37]

In a study of African American women, "Effects of Social and Psychosocial Factors on Risk of Preterm Birth in Black Women," participants of this research reported facing discrimination at the institutional level among academicians and health providers because of the cultural stigma of being on Medicaid.[38] When women perceive discrimination in the quality of medical care, they are highly unlikely to return to that same medical provider for further services and, in some cases, may refrain from seeking further medical care altogether. Another study of African American women found that stress also stems from their awareness of not being told that preconception counseling services exist, whereas these women perceive that non-Hispanic white women from a higher socio-economic background and their partners are readily given that information by medical providers.[39]

e. Impact of women's trauma (various forms of violence and abuse) and lack of access to mental health care

Intimate partner violence (IPV) is defined as "physical, sexual, or psychological harm by a current or former partner or spouse" of women older than 16 years of age.[40] Women who are pregnant and the victims of IPV have high rates of stressand are more likely to smoke or use other drugs, deliver a preterm or low birth weight infant, or have an increase in infectious complications, and are less likely to obtain prenatal care. IPV can also result in housing instability and homelessness.[41]

Nationwide, at least 1,400 women die annually as the result of IPV. Although whites have an overall higher rate of IPV, African American women are more likely to be murdered. The majority of murders in married couples involve spouses who are age 35 or older, whereas the majority of murders in dating couples occur in a younger age group (ages 18 to 24).

Culture has an influence on the health-seeking behavior of women who have experienced IPV. Among the most vulnerable, undocumented women who have experienced IPV are more likely to seek refuge in faith-based organizations, rather than go to battered women's shelters or the police.[42] For some undocumented couples, if a woman attempts to leave her partner because of IPV, that partner may attempt to prevent her from leaving by hiding her travel documents, shaming the woman to her family or threatening to report her to the police or the Department of Homeland Security, thereby sabotaging her ability to remain in the USA.[43] Increased stress also leaves a woman with a depressed immune system, making her susceptible to infections. Women who experience IPV have a higher risk of contracting sexually transmitted diseases and HIV because of forced sex.[44]

The website of the Mayor's Office to Combat Domestic Violence (www.nyc.gov/domesticviolence) provides citywide information on counseling and legal services for women who have been victimized by IPV.

f. Current guidelines/practices for screening pregnant women for chronic conditions
Preconception medical screening is critical for informing women of the risks that they might face should they become pregnant. Some of the screening tests are specific to the particular risk factors the patient has, and others are done as a matter of good medical care.[45] If a woman has a history of a fetal loss – due to early loss of heartbeat, IUFD (intrauterine fetal death), early abruption, early severe preeclampsia, or poor obstetric history -- then often a thrombophilia workup is done. Thrombophilia is an abnormality of blood coagulation that increases the risk of thrombosis (clots in the blood vessels). This workup includes the Lupus Anticoagulant, various antibodies, and some genetic testing looking for factors in blood that can predispose to blood clotting.

If a woman is very obese, medical providers often conduct diabetic screening, as many young women are undiagnosed diabetics because they do not have regular visits to the doctor. These women have better outcomes in pregnancy when their conditions are discovered and managed early. If a woman has hypertension, physicians screen for her kidney function as a predictor of their pregnancy outcomes.

Other preconception screening tests include: varicella, hepatitis B and C, syphilis, and TORCH screening (an acronym for Toxoplasma gondii, other viruses such as HIV and measles, rubella (German measles), cytomegalovirus, and herpes simplex). All these infectious agents are teratogens (agents that are capable of causing birth defects), and among the leading causes of illness and death in young infants.[46]

III. Preconception care, Interconception Care, and the Life Course Approach

a. Definitions
Preconception and interconception care is the medical care a woman or man receives from health professionals that focus on the parts of health that have been shown to increase the chance of having a healthy baby before he or she conceives and the time before the next pregnancy. The Life Course Approach brings together the various biological, behavioral, psychological, social, and environmental factors that contribute to health outcomes over the course of a person's life. When working to improve birth outcomes, this approach allows us to move beyond the needs of women while they are pregnant and recently postpartum. It provides health education and services across the lifespan, thus including young children, adolescents, the family and social networks of both women and men of childbearing age. It includes chronic disease prevention and management, folic acid use, substance use, and factors related to living, working, and social conditions. Given that the rate of unintended pregnancy is 50 percent in the US, approaches that affect the overall health of men and women during their reproductive years, whether they plan to have children or not, are crucial.

b. Models that Work in New York City and Elsewhere

For years, the March of Dimes has funded programs of research, community service, education and advocacy to save babies. Preventing prematurity is their current national campaign and their recent funding priority has included providing or enhancing preconception health education and/or services. Northern Manhattan Perinatal Partnership, in collaboration with the Federation of County Networks, both members of the Citywide Coalition to End Infant Mortality, are recipients of these funds for a preconception peer education program.

The Center for Preconception and Inter-Conception Care at Montefiore Medical Center is currently providing services to women who are between pregnancies or have yet to become pregnant. Their program is also funded by March of Dimes and offers preconception testing that benefits women being treated for conditions such as sickle cell anemia, hypertension, heart disease or diabetes that may cause a high-risk pregnancy. Screening and preconception care can minimize complications for mother and fetus later on. Women seeking preconception counseling, not because of special issues but in order to be well-prepared for pregnancy, are also welcome.

Pre- and interconception care is not just one visit. It is ongoing care of women and men to determine and address health risks. Ensuring a medical home and chronic disease screening and management are important parts of this care model. Coordination of specialists, including mental health providers, and social services are also important. The term "preconception health" can be misleading – it is not just about improving pregnancy outcomes, it is about improving health outcomes. The use of "preconception" as an adjective before the term health simply implies that the health promotion activities are meant to be conducted anytime before a pregnancy occurs to address risk factors across the lifespan – including adolescence. Many public health programs are recognizing that health trajectories, including reproductive health, are developed over the course of a lifetime and health behaviors initiated during adolescence can have a great impact not only on future reproductive outcomes, but also on present and future health.[47]

c. Health education

The health education part of the Infant Mortality Reduction Initiative (IMRI) is a beneficial component that will be very useful in the new model as well. The focus of the health education curriculum for the new model will cover topics such as:

- Alcohol misuse
- High blood pressure
- Diabetes
- Folic acid use
- Hepatitis B
- HIV/AIDS
- Obesity
- STIs
- Maternal stress
- Smoking
- Substance abuse

The health education workshops can continue to be offered to community middle and high schools students. Many of the teachers in the schools currently receiving the services of IMRI are uncomfortable talking to their students about many of the above topics or they don't feel

equipped to do so. Several of the IMRI providers also have access to Head Start parents to offer interconception health education workshops which will cover the same topics. With additional funding, the leadership of IMRI can develop curricula for many of the topics to ensure a consistent message, with consideration of cultural competency and literacy level.

d. Social Marketing

The social marketing component will need to be a multi-faceted approach to reach women and men of childbearing age with preconception health messages. This should include facets such as: print material for pediatricians', obstetrician/gynecologists', and internists' offices; a website to list IMRI citywide agencies that offer preconception and interconception health services and resources; and social media websites such as Facebook and Instagram.

IV. Strategy Recommendations

Based on the preceding research and evidence, the CCEIM recommends the following:

1. The **Citywide Coalition to End Infant Mortality (CCEIM)*** calls on the Mayor and the New York City Council to allocate **3.0 million dollars** to the New York City FY 2013 budget for the Infant Mortality Reduction Initiative. During the past three budget periods, the allocation has decreased by $500,000. The additional funds would increase community-based agencies' capacity to provide targeted preconception and interconception services to women and families in the highest need community districts and to implement a redesigned Infant Mortality Reduction Initiative that provides targeted outreach, screening, and referral, one-to-one counseling, case management, doula care, support groups, and health education services in a tightly coordinated Preconception/Interconception Model of Care. This would result in a targeted zonal approach to services.

2. Redesigning the Infant Mortality Reduction Initiative to address birth spacing, unintended pregnancy, chronic diseases, obesity, diabetes, high blood pressure, smoking cessation, STI testing, stress and depression in the most vulnerable populations where disparities are most evident during the preconception and interconception periods. An emphasis on diabetic preconception care would be included. A focus on the preconception health of teens and women in the zonal areas where there is a high incidence of low birthweight and preterm births.

3. Four core goals would be addressed: (a) reducing the rate on unintended pregnancy; (b) increasing the inter-pregnancy interval; (c) identifying and reducing the risk factors for chronic diseases that impact on birth outcomes; and(d) increasing breastfeeding rates in the target communities. These goals would be addressed through strategies on four levels, --individual, interpersonal, community, and policy/systems -- using the socio-ecological model framework.

4. Information on environmental risks including neighborhood conditions and their impact preconception/interconception health, health care and birth outcomes would be included.

5. Developing and implementing policies that support the health of women, men and families will improve birth outcomes, reduce disparities and improve the chronic disease health outcomes of residents of New York City.

6. Continued support for the Citywide Evaluation of the Infant Mortality Reduction Initiative. The data collected and analyzed as well as vital health statistics on birth and chronic disease outcomes will be used to determine model effectiveness in reducing health disparities and possible replication in other communities in New York City and statewide.

We believe that redesigning the Infant Mortality Reduction Initiative is critical with improving the health of women, men and their families across the life course, improving birth outcomes of infants, and reducing chronic diseases and health disparities in our most economically challenged and culturally disparate communities in New York City.

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TESTIMONY OF ROBERT LEDERER,
DIRECTOR OF RESEARCH, POLICY, AND ADVOCACY FOR
BRONX HEALTH LINK, INC.
City Council Health Committee - Public Hearing on
Women's Preconception Care and Health Outcomes for Moms
November 13, 2013

My name is Robert Lederer, and I am the Director of Research, Policy, and Advocacy for Bronx Health Link, Inc., a health education, research, and advocacy organization linking Bronx consumers and providers, residents and researchers, and constituents and policy makers. I am also representing the Citywide Coalition to End Infant Mortality, a network of 30 agencies citywide that provide services funded through the City Council's Infant Mortality Reduction Initiative, several of whose members you have just heard from. Thank you for the opportunity to speak today.

Over the past 11 years, the Infant Mortality Reduction Initiative has provided women in the prenatal and perinatal periods of pregnancy with health education workshops, case management, targeted screening for support needs, and referral services. We want to thank the Council, and especially this Committee's Chair, Councilmember Arroyo, for working diligently each year to maintain funding for this vital program. A key goal of the Initiative has been educating pregnant women about, and connecting them to, prenatal care. In some of the neighborhoods served, there have been reductions in the rates of late or no prenatal care and of infant mortality. However, in general, the rates of preterm birth and low birth weight, as well as maternal mortality, have not changed in communities of color.

One of the most consistent findings of research on maternal and infant health in recent years is the impact of women's long-term health issues – especially overweight, obesity, diabetes, high blood pressure, cardiovascular disease, environmental health conditions, long-term stress, and trauma and abuse. Also significant is the impact of stress-related behaviors such as tobacco smoking and alcohol consumption. All of this research has led to a consensus in the field that **prenatal care, even of the highest quality, is not enough to reverse the poor birth outcomes and maternal mortality rate**, all of which remain stubbornly high nationally and in New York City, with extremely disproportionate rates in communities of color. Some conditions – whether medical, nutritional, or psychosocial – cannot be reversed in time to prevent harm to the embryo or to prevent the death of the mother. In addition for various reasons, many women in New York City do not enter prenatal care until late in pregnancy.

As a result, nationwide, more and more programs providing maternal and infant healthcare are moving toward the Life Course model, which treats healthcare and prevention as a life-long continuum. The part of this that we are focusing on today is preconception and interconception care, both of which emphasize the importance of providing women, as well as men, with the services of physical assessment, medical and social screening, health education and counseling, treatment, and social/psychological services, both significantly *before* and *between* pregnancies.

This year, the Infant Mortality Reduction Initiative is being redesigned so that its educational services more effectively reach young women and men during the vital period before they conceive a child. We are placing more emphasis on what women can do *before* pregnancy to improve their baby's health, as well as their own. This includes addressing several of the chronic illnesses and stress-related behaviors listed earlier. In addition, the program is making active efforts to recruit young men to educate and counsel them on the ways both they and their women partners can improve their health to boost their chances of having a healthy baby. Finally, in the coming year, the geographic targeting of our services citywide will be fine-tuned to focus on the preconception health of teens and women in the zonal areas where there is a high incidence of low birthweight and preterm births.

But it is important to emphasize that **the Infant Mortality Initiative, even with its redesign to emphasize the preconception period, cannot substitute for a dedicated program to provide preconception and interconception *care.*** Again, the Initiative's services are limited to education, training, outreach, case management, screening for support needs, and referrals. And even for these services, at the $2.5 million level at which it has been funded for several years, the program only reaches a fraction of the women and men in need around the city. (Furthermore, the recent refocusing on women and men in the preconception period, while funding stayed constant, means that the program is now able to reach fewer pregnant women than before – which risks reversing the progress that's been made in birth outcomes.) But in the area of preconception and interconception *healthcare services* – that is, physical assessments, screening for chronic conditions and appropriate referrals, case management, one-on-one counseling, support groups, and doula care – there are very few programs around the city. Let me emphasize that pre- and interconception care is not just one visit. It is ongoing care of women and men to determine and address health risks. Ensuring a medical home and chronic disease screening and management are important parts of this care model. Coordination of specialists, including mental health providers, and social services are also important.

Therefore, we are proposing that the Council launch **a new initiative – separate from but complementary to the Infant Mortality Reduction Initiative – to establish a network of pilot programs for preconception and interconception care around the City at existing healthcare institutions.** Building on existing small, successful programs here in New York and around the country, and utilizing guidelines from the federal Department of Health and Human Services,

the new initiative would develop a tightly coordinated model of care providing the services that I just listed. These would be targeted to neighborhoods with the highest levels of chronic illness among women and with the least access to existing services. Of course, those services would be carefully coordinated with the ones currently provided by the Infant Mortality Reduction Initiative to avoid duplication. In order to ensure sufficient funds for each pilot in different boroughs, and for evaluation to occur, we are requesting $2 million.

In addition, we believe that a growing body of evidence shows the tremendous value of providing women with the services of trained doulas, who provide physical, informational, and emotional support to women during pregnancy, childbirth, the postpartum and interconception periods. Having the constant support of a doula by a laboring woman's side has been shown to improve birth outcomes, control costs, and reduce health disparities. Therefore, as a complement to our proposed Preconception/ Interconception Care Initiative, we are proposing that the Council support a $500,000 program to launch doula-care pilot projects around the City. We are also requesting a resolution of Council support for the proposal by the New York Coalition for Doula Access for the New York State Medicaid program to make doula care a reimburseable service.

In closing, we ask that the Health Committee lead the City Council in inaugurating these two important models of healthcare for those with the greatest needs around the City. These initiatives have the potential to become national models, accelerating the transformation of maternal and infant healthcare into a Life Course Approach that will dramatically improve health outcomes for women, men, and infants around the country. We look forward to working with you and your staff in the coming months in crafting legislation to bring about these life-saving programs.

Thank you for your time and attention.

Contact information:

Robert Lederer
Director of Research, Policy, and Advocacy
Bronx Health Link
(718) 590-2617
bob@bronxhealthlink.org
www.bronxhealthlink.org

Fort Greene Strategic Neighborhood Action Partnership

P.O. Box 050226, 324 Myrtle Ave, Brooklyn, New York 11205 718.694.6957 Fax 718.694.6958 www.fortgreenesnap.org

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Testimony of Georgianna Glose OP, DSW , Executive Director of
Fort Greene Strategic Neighborhood Action Partnership, Inc.
City Council Committee – Public Hearing on Women's Preconception Care and Health Outcomes for Moms

Wednesday, November 13, 2013

Hon. Councilmembers and guests thank you for the opportunity to address a critical health issue. My name is Georgianna Glose and I am the executive director of a small community based agency serving Fort Greene. Our work in the community focuses on three public housing developments: Ingersoll, Whitman and Farragut. Our community has experienced a great transition in the last 10 years. Some of the changes have been wonderful, but some changes have left the residents in the dust.

Residents of the public housing development live on less than $11,000. a year. In our neighborhood 17% of the adults over 25 who live in public housing have not completed ninth grade and 41% have no GED. The ethnic breakdown of the public housing facilities is approximately 78% African American, 18% Hispanic and 4% other. In addition one census tract 185.01, is the second poorest in the city. All of these statistics are indicators are risk factors for high infant mortality and low birth weight. Infant mortality among women of color is twice that of whites. Researchers can tell us why this is happening by using the social determinants of health, substance abuse, obesity, asthma, lack of access to health care, and poor health prior to pregnancy. One significant statistic is that for every dollar spent on prenatal care and services $3.38 is saved in medical care.

For communities like Fort Greene a significant task is reaching out to young women and families to support them and provide vital information regarding services, opportunities and care. Our small community based agency has provided over 3500 individual contacts with residents in the last three years. We provide workshops, referrals and case management to mom and their families. We are successful because we are able to serve women in their own community. We are able to provide referrals in a way that helps the participant access the services needed. These essential services have helped us reach moms and potential moms and work to provide the essential information for a healthy baby.

In the last twelve years of our work, supported by the NYC Council, we have been able to document or work and to understand more clearly how policy focus and change can make a huge difference the lives of the families we serve. Our research and work in our communities

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Fort Greene Strategic Neighborhood Action Partnership

P.O. Box 050226, 324 Myrtle Ave, Brooklyn, New York 11205 718.694.6957 Fax 718.694.6958 www.fortgreenesnap.org

documents the disproportionate rates of infant and maternal mortality in communities of color. We recognize that the many factors contribute to the intractability of these statistics, some of the factors include the what we refer to as the sociological stressors of health, including poverty, diabetes, stress, high blood pressure, obesity, asthma, trauma and abuse. Therefore we come to you today to offer opportunities to develop a comprehensive approach to affect change in this area. We recognize that the emphasis for care must be on the preconception and interconceptional period of a woman's life. A healthy mom is more likely to have a healthy baby. Therefore we are asking to launch a new initiative to establish a network of programs for preconception and interconceptional care at existing healthcare institutions at a cost of 2 million dollars. These programs will provide physical assessments, screening for chronic conditions and appropriate referrals to case management, one on one counseling, support groups, and other care. We envision these pilot programs as working integrally with the existing Infant Mortality Reduction Initiative Programs. In addition, we see an important need in expanding and supporting doula care offered to pregnant and parenting families for $500,000.

Thank you for your time and interest in this important matter. We look forward to working with you in the future.

Entrepreneurs Corner

SNAP's Entrepreneurs Corner provides

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Testimony of Joyce Y. Hall, MPH
Former Executive Director, Federation of County Networks, Inc.
Director of Practicum and Career Development
MPH Program, LIU Brooklyn
City Council Health Committee Hearing:
Women's Preconception Care and Health Outcomes for Moms
Wednesday, November 13, 2013

My name is Joyce Y. Hall, former Executive Director of the Federation of County Networks, Inc. and currently Director of Practicum and Career Development, Long Island University Brooklyn, MPH Program. Thank you for inviting me to attend this hearing and to testify. Women's preconception care and health outcomes for moms has been an issue that I have worked with over the past few years. My testimony today will focus on the need for comprehensive preconception care for women in New York City, particularly African American and Hispanic/Latina women in order to improve maternal and infant birth outcomes.

1. Definition of the Infant Mortality and Preterm Birth

The problem of infant mortality is very closely interrelated with preterm births, low birth weight infants, maternal mortality, and the health and health care of women before, during and after pregnancy in the United States and New York City. Infant mortality is defined as the death of an infant under one year of age. The infant mortality rate is considered to be one indicator of the health of a nation, state, city and community in public health. It is calculated as the total number of infant deaths under age one divided by the total number of live births in a nation, state, city or community. Infant mortality is the result of a variety of sequelae that involves the health of the both mother and infant. The leading causes of infant mortality include: birth defects/congenital malformations, preterm birth/low birth weight, accidents (unintentional injuries) and sudden infant death syndrome. In New York City, preterm birth/low birth weight was the second leading cause of infant death following congenital malformations.

As you are aware, preterm birth is defined as birth of an infant less than 37 weeks of gestation. Normal births usually occur between 38 and 40 weeks of gestation. Preterm babies born before the 34th week of pregnancy are at the greatest risk of early death and life-long health problems. Late preterm infants are more likely than term babies to suffer from complications at birth such as respiratory distress; to require intensive and prolonged hospitalization; to incur higher medical costs; to die within the first year of life; and to suffer brain injury that can result in long-term neuro-developmental problems.[1]. A preterm birth can result from a number of factors and conditions that impacts on the health of the woman during pregnancy.

2. Causes of Infant Mortality and Preterm Birth

Racial and ethnic disparities in birth outcomes in the United States, in particular preterm births and infant mortality, have been well documented [2-6]. An African American woman is three times more likely to give birth to a preterm baby and a baby born to an African American woman is twice as likely to die within the first year of life than a non-Hispanic, white woman in the United States and New York City. In New York City, these birth outcomes are particularly prevalent in communities of color among African American women in the five boroughs in which the majority percent of the population is non-Hispanic black.

There are a several factors associated with preterm birth with include three major areas: (1) medical and pregnancy conditions; (2) social, personal and economic characteristics; and (3) behavioral.[7] The medical and pregnancy conditions include: infection, prior preterm birth, carrying more than 1 baby, overweight and obesity[8], diabetes, and high blood pressure during pregnancy. The social, personal and economic characteristics include: low or high maternal age, black race, and low maternal income or socioeconomic status. The behavioral factors include: tobacco and alcohol use, substance abuse, late prenatal care, and stress.

A 2012 *Epi Data Brief* published by the New York City Department of Health and Mental Hygiene on pre-pregnancy weight and infant mortality[9] also reported that: (1) Infant mortality was highest among infants born to obese mothers, followed by those born to overweight mothers, and lowest among those to healthy-weight mothers. (2) Among infants born to obese mothers, the highest infant mortality rate (IMR) was among non-Hispanic blacks at 9.2 per 1,000 live births, followed by Puerto Ricans and Asian/Pacific Islanders, both at 6.4. And (3) Infants born to other Hispanic and non-Hispanic white mothers who were obese had an IMR of 5.1 and 4.1 per 1,000 live births.

3. Consequences of Preterm Birth *and* Infant Mortality

Infants who are born prematurely have higher rates of cerebral palsy, sensory deficits, learning disabilities and respiratory illnesses compared to infants born at term. The morbidity associated with preterm births extends into later life resulting in great physical, psychological, social and economic costs.[3] In addition, infants born with congenital malformations also are usually preterm. The ultimate consequence of a preterm birth is death of an infant. In addition, there are consequences for the mother which include cesarean delivery, maternal mortality and morbidity, pre-eclampsia and eclampsia.

4. Current Incidence and Prevalence Data in New York City

Overall IMR in New York City (NYC) declined 23% in the period 2009-2011 from 6.1 to 4.7 infant deaths per 1,000 live births. Despite the citywide gains, the areas with persistently high rates are generally those with the most poverty and the highest percentages of people of color. For example, for 2009-2011, the three-year average infant mortality rates were as follows: Brownsville (9.2), Bedford Stuyvesant (7.0), East New York, (8.4), East Harlem (6.9), Central Harlem, (8.5), The Rockaways (7.2), Jamaica (8.4), Queens Village (6.4), Morrisania (7.7), East Tremont (6.6), and Hunts Point (7.6).[7] In 2011, 9.3% of all births in New York City were preterm live births with 13.1% non-Hispanic black births preterm which was disproportionate and more than other racial/ethnic groups (range 7.6% to 9.1%).[8] The community districts with the highest rates mirrored those with the highest infant mortality rates.

5. Comparison of Changes in Incidence and Prevalence in Preterm Birth and Infant Mortality in NYC

Table 1 shows a comparison of the infant mortality and preterm births rates in New York City and the five boroughs in two periods. The infant mortality and preterm birth rates for the boroughs are similar to the citywide rates except for the Bronx which has an infant mortality rate 20.4% higher than the citywide rate and a preterm birth rate that is 6.25% higher than the citywide rate.[10-12] However, this comparison masks the disparities that exist in community districts that have large African American/black and Hispanic populations.

Table 1: Comparison of Infant Mortality Rate and Preterm Births by Borough in NYC: 2006-2010[1]

	Infant Mortality Rate		Preterm Births	
Borough	**2006-2008**	**2009-2011**	**2007**	**2010**
NEW YORK CITY	**5.6**	**4.9**	**9.5**	**9.6**
Manhattan	**4.2**	**3.9**	**8.4**	**9.1**
Bronx	**6.5**	**5.9**	**10.2**	**10.2**
Brooklyn	**5.6**	**4.4**	**9.6**	**8.4**
Queens	**5.0**	**4.5**	**9.2**	**8.7**
Staten Island	**3.5**	**4.8**	**9.8**	**9.7**

Table 2 provides a comparison of the infant mortality and preterm birth rates in Brooklyn, selected Brooklyn community districts and citywide. The selected Brooklyn community districts are those with majority African American/black populations. Only the infant mortality rate in Bedford-Stuyvesant decreased in the two periods. The preterm birth rates increased ranging for 18.3% in Bedford Stuyvesant to 23.6% in Brownsville. East New York is the only community that experienced a decrease in the preterm birth rate from 13.8% to 11.8%.[10-12] Please see the attached charts for the rest of the city.

Table 2: Comparison of Infant Mortality Rates and Preterm Birth Rates by Borough and Selected Community Districts: 2006-2010

	Infant Mortality Rate		Preterm Births	
Borough/Community Districts	**2006-2008**	**2009-2011**	**2007**	**2010**
NEW YORK CITY	5.6	4.9	9.5	9.6
Brooklyn	5.6	4.4	9.6	8.4
Bedford-Stuyvesant	9.7	7.0	10.4	12.3
Brownsville	8.6	9.2	12.7	15.7
East Flatbush	6.3	6.8	11.9	14.4
East New York	8.2	8.4	13.8	11.8

The disparities and inequities in infant mortality and preterm birth rates are multifaceted and probably have more to do with preexisting chronic health conditions than with prenatal care.

6. Why Preconception Care?

Women who access early prenatal care has increased over the past twenty years which has improved the health of pregnant women. However, access to care before and after pregnancy is limited for low income and economically challenged women. The research has shown that the health of women before pregnancy contributes to her health during and after pregnancy. Therefore it is critical to provide preconception and interconception care for women to address the chronic health conditions and stress that she develops during her life course in order to impact on the adverse birth outcomes described.

1. Funding is needed for a preconception/interconception care program pilot for the five boroughs to implement and evaluate effective evidence-based strategies .

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Office of the President

November 11, 2013

FOR THE RECORD

The Honorable Maria del Carmen Arroyo
250 Broadway, Suite 1768
New York, NY 10007

Dear Councilwoman Arroyo:

Thank you very much for the invitation to participate in your upcoming oversight hearing Examining Women's Preconception Care and Health Outcomes for Moms. I congratulate you on addressing this important topic. I regret I am unable to attend, but do wish to advise you of The New York Academy of Medicine's deep, ongoing interest in the subject of Maternal Mortality in New York City.

As you may know, New York City's rates of maternal death are alarmingly high. Between 2001 and 2005, for every 100,000 births, there was an average 23.1 deaths among women due to pregnancy-related factors. This ratio is two times higher than the national ratio and five times higher than the Healthy People 2010 goal of 4.3/100,000.

Furthermore, the mortality rates were seven times higher for Blacks and twice as high for Hispanics and Asian/Pacific islander women compared to whites. Some of New York's poorest neighborhoods had rates almost five times higher than affluent neighborhoods in Manhattan, and women without health insurance coverage had pregnancy-related mortality rates almost four times higher than those covered by Medicaid or private insurance.

NYAM is deeply concerned about these deaths and disparities. CDC estimates that at least half could be prevented. To facilitate steps toward addressing this problem, in 2011, NYAM issued the report *Maternal Mortality in New York: A Call to Action*, which provides clear recommendations that should be taken immediately. I am enclosing this report, as well as recent remarks I made to the National Institute for Child Health and Development on this topic.

I would very much appreciate an opportunity to speak with you further about this important issue. Please reach me at 212-822-7202.

Best wishes for your hearing.

Sincerely,

Jo Ivey Boufford, MD
President

cc: Members of the New York City Council Health Committee

To: the New York City Council Committee on Health re: *Examining Women's Preconception Care and Health Outcomes for Moms*

Submitted by: Dr. Jo Ivey Boufford, President, The New York Academy of Medicine

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Excerpted from remarks made to the National Institute for Child Health and Development on September 5, 2013.

First, let me place my involvement with this issue in context by taking a moment to tell you about The New York Academy of Medicine and why we are involved in this issue.

Founded in 1847, NYAM's mission is to address the health challenges facing the world's urban populations through interdisciplinary approaches to policy leadership, innovative research and evaluation, education, community engagement and conservation of historical knowledge.

Our priority areas are Healthy Aging, Prevention, and Eliminating Health Disparities. One of our key strategies is to convene leaders in a field to work on evidence-based solutions to tough and persistent public health problems. Maternal mortality is certainly one such problem.

In fact, in 1933 The New York Academy of Medicine, in partnership with the New York City Department of Health, published a groundbreaking study "Maternal Mortality in New York City," which analyzed in detail all reported childbed deaths in the city from 1930-1932.

Back in 1933, the experts were concerned that so little progress had been made in reducing maternal deaths. Then, as now, the U.S. had higher maternal death rates than many other developed countries, and, then as now, New York also lagged behind the other states.

The authors of that report wrote:

> "[Maternal death rate figures] indicate, beyond question, the present of a situation disturbing in the extreme... and as such it must be of searching concern to the medical profession and equally to society in general. ... The spectacular progress of the last years in the reduction of many death rates has not been paralleled by any drop in the rate of death from puerperal causes."

They also noted that problem of maternal mortality: "perhaps more than any other has extensive social aspects which are equally important with the medical to assure a happy outcome."

The report went on to reveal that simple preventive measures could dramatically reduce the rate of maternal death and morbidity. This study was a major public policy rallying point in a decades-long movement by doctors and health activists to understand publicize and ameliorate the social, medical and economic factors behind America's high maternal mortality rates.

Now eighty years later, maternal mortality remains a pressing issue, and the U.S. still ranks behind more than 40 countries, with an MMR reported by the CDC of 15.8 for 2006-2009, even though we spend more on maternity care per birth than any nation in the world.

While the 20th century saw a rapid and dramatic decline in maternal deaths into the 1980s, there has been a gradual increase since then that cannot be attributed solely to improved data collection or changes in definition. And New York State and New York City have among the highest rates in the country (Amnesty International, 2010; New York State DOH, 2009).

The NYC rate is more than twice the national rate and almost three times higher than the Healthy People 2020 goal of 11.4. New York State's rate rose almost 50% since 2005-2007 to 24.1 in 2008-2010. (New York State DOH, 2009). The Centers for Disease Control and Prevention estimate that the actual number of maternal deaths may be 1.3 to 3 times higher than the reported rates (MMWR, 1998).

In addition to being well above the national average, maternal deaths in New York reveal alarming disparities in terms of race. In New York State, pregnancy-related mortality rates were almost four times higher for Blacks compared to whites and in NYC nearly 7 times higher.

So we at NYAM set about trying to understand why the problem persists at the level that it does and what is being done to address it. We talked with City Health department leadership, State health department leadership, the NYS ACOG and the NYC hospital association, the state network of community health centers, and health professionals—physicians, nurses, midwives—and patients themselves-- all of whom had been very actively working on the problem, and all of whom agreed on what the major problems were and how to tackle them. But activities were fragmented and leadership on moving them forward had not been sustained.

This is where we thought NYAM could come in. We convened an initial meeting of all of these actors, prepared a White Paper on the state of the problem at national, state and City level and what our informants had advised needed to happen.

We brought people together for a day to learn from each other and to work together in smaller groups on the key issues identified as challenges and to come up with recommendations for action. This became our report: Maternal Mortality in New York: a Call to Action.

The findings and recommendations focused on three specific aspects of maternal mortality: 1) reporting and case review; 2) management of the critically ill patient in the hospital; and 3) primary and secondary prevention before and during pregnancy.

I. Reporting and Case Review

We found that the State and City were using differing definitions of maternal death (pregnancy associated, pregnancy affiliated, and more classic maternal mortality). And there were different methods and timeframes for case reporting and review, with considerable lag time between the event and full analysis of the data and feedback to the professional community.

All agreed that a mandatory, comprehensive, state-wide, hospital-based reporting of all maternal deaths (previous definition "unexpected" deaths) was needed to increase the number of cases captured and create the widest base of data for improving systems and preventing death and disability. This was done about six months after the report, and a system was put in place for state level reviews of cases from the reporting system, cross walked with death certificates and hospital financial discharge data.

There are still problems with capture of all hospital cases, but it's much better. The NYS database would be further enhanced if mechanisms were developed to:

- Capture post-hospital discharge deaths
- Collect and analyze data on "near misses"
- Geocode cases to help pinpoint broader determinants of health affecting maternal mortality and to help target interventions

There was agreement that, ideally, all or an epidemiologically determined subset of cases of maternal mortality should be reviewed by an expert team, ideally on-site, with the information generated communicated directly back to providers and officials in a time frame close to the event to inform interventions and corrective action. But this has proven prohibitively expensive in the NYS environment. NYC reviews deaths in five year retrospective reports and NYS has just completed reviews of the 2005-08 cohort and has identified the cohort of deaths between 2009-11 to begin their chart review. The educational value of these look-backs for educational and systems change purposes are clearly limited with such significant time lags.

II. Hospital Care

Much effort by health professionals and hospital leadership has been put into developing protocols for hospital-based screening and intervention to reduce maternal deaths from the three major causes of: hypertension, hemorrhage, and deep vein thrombosis as well as others, but many are hospital specific, many hospitals don't have them and there is no standardization or State enforcement mechanism for failure to have these protocols or follow them.

There is now a partnership with NYS ACOG and the NYS DOH to standardize guidelines statewide and create a monitoring system. Regional perinatal centers are regulated by the State and are being encouraged to balance their efforts to the care of high risk mothers, not only their high risk babies.

The high rate of C-section , especially pre-term C-Section, is being tackled and monitored by the State and has shown positive results, but there are still facility limitations, staff training and standardization challenges that will need to be addressed.

III. Primary and Secondary Prevention

While a lot of good work has focused on preventing maternal deaths in women in crisis in the hospital, there has been very little attention to systematically preventing the upstream causes that put women at risk for death during child birth in the first place. Clearly contraception is key to preventing unwanted pregnancies, especially high risk groups.

Many primary care providers lack awareness about the changing population of women giving birth – they are older, many with pre-existing non-communicable conditions that affect maternal health like obesity, asthma, cardiac disease, hypertension, and thyroid disorders.

Providers may have difficulty addressing these conditions. And these women may not have easy access to high risk pregnancy consultation and services.

And while hospitals and primary care practices are integrating into ACOs and health systems, pregnancy and childbirth are often seen as loss leaders financially, so the development of protocols to better connect pre-hospital and in-hospital care, to identify high risk patients and to arrange referrals early may not be priorities.

A web based "Pregnancy Health Record" could be designed like a smart card to help key information travel with the patient: the card would be available to all pregnant women as soon as the pregnancy is confirmed. Like a classic children's immunization card, this record could identify a woman's health status, medications, special needs, pregnancy-related risks and chronic conditions. Subject to appropriate confidentiality agreements, it could be made available to all care givers for reading and recording rather than being restricted to the IT system of a particular institution or health system.

IV. More system improvements that could be pursued

While I have mentioned a number of system improvements underway in NYS, there are more that could be pursued, some at the national level and others at the State level:

- Mirror the international call to put the M back in MCH in the United States. Regional Peri-natal Networks in states should assess the degree to which their resources and operations are addressing the needs of high risk mothers as they are high risk infants.

- Come to a consensus on national standards /definitions for reporting of maternal deaths (CDC now convening on this; check list on death certificates)

- JCAHO should assure that its standards for hospital facilities' ambulatory practices are adequate to manage high risk pregnancies and deliveries—dedicated OR's/ICU and recovery beds for high risk women—surgical screening for anesthesia risk upon admission, and medical consult for chronic disease problem risk on admission

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- Public campaign to make women and teenagers aware of health risks of pregnancy and need for preventive services, and to increase providers' awareness of the increased incidence of chronic disease in younger women.

- This has resulted in an increased number of complicated pregnancies without a corresponding shift in the general modification of human, organizational and financial systems to manage these pregnancies adequately

- Assure ACA provision of preconception health and preventative measures like gestational diabetes screening, domestic violence screening, contraceptive services and HPV, STI and HIV screening are fully implemented.

- Presumptive eligibility for Medicaid for all pregnant women continuing through the first year (or at least 90 days) after pregnancy could be a positive step.

- Integrated payment models to bundle prenatal, delivery and post partum care of mothers

- Lower cost OTC emergency contraception –in US $50 vs. overseas $4.

Women's and Children's Health is one of the five priorities in New York State's recently launched Prevention Agenda -- a statewide approach to a Healthy People model. One of the three goals under this priority is Reduction in Maternal Mortality with evidence based interventions and metrics defined and amd available to local community stakeholders. Communities must select two Prevention Agenda goal areas and one disparities target to include in plans that are due to the State in November.

The State Public Health and Health Planning Council have also decided that Maternal Mortality will be a health problem on which we will try to move the needle over the next two years.

Although a terrible personal and family tragedy, maternal death is a rare event at the level of the institution or provider. All agree that State-level leadership and ongoing monitoring is needed to train and motivate providers to change their reporting, prevention, screening, and intervention practices.

V. Complementary interventions targeting racial disparities

The system changes I described will undoubtedly help to address the issue of the enormous disparities in the maternal mortality of women of color, especially African American women. There should be a set of additional interventions that specifically target the causes of these disparities, and we need more and better evidence to help develop them.

So what do we know about the disparities in maternal mortality between blacks and whites?

Despite the changing causes of maternal mortality from the 1980's to the present: the one thing that has remained constant is a disparity in the maternal mortality rate for blacks compared to whites of 3.5-4: 1 (King, 2012; others).

Five conditions (preeclampsia, eclampsia, abruption placenta, placenta previa, and postpartum hemorrhage) that account for 26% of all pregnancy-related deaths were examined for all US births in the years 1988-1999 (Tucker, 2007) in order to assess the relative importance of prevalence or case fatality rates in explaining the disparities:

The amount of the racial disparity attributable to differences in prevalence ranged from 0% to 18% (and for no condition was the difference in prevalence statistically significant); and the amount of the racial disparity attributable to differences in case-fatality rates ranged from 82% to 100% (and for all conditions the difference in case-fatality rates were statistically significant).

Speculation regarding the reasons for higher case-fatality rates among black women include higher rates of pre-existing conditions, such as hypertension, diabetes, or obesity; lower quality of health care (cited in Tucker, 2007); and higher rates of unintended pregnancies in higher-risk women, e.g., women over age 40.

The search for better understanding of modifiable factors like the type of care, cesarean deliveries, obesity and associated chronic conditions, and unintended pregnancy yields mixed results. Let's look at a few.

In a study of the preexisting health conditions and health care factors associated with the three most common causes of serious maternal morbidity after childbirth in North Carolina – hypertensive disorders, obstetric hemorrhage, and puerperal infection – (Harper, 2007), the

analysis of variables designed to measure receipt of appropriate diagnostic and therapeutic interventions revealed some differences relevant to racial disparity.

African-American women were more likely to receive appropriate treatment for hypertensive disorders, but less likely to undergo surgical procedures for hemorrhage. These findings correspond to a significant difference by race in the rate of pregnancy-related death from hemorrhage but not for preeclampsia/eclampsia. There were no differences found in the treatment for infection, nor was there a racial disparity in deaths from infection.

The investigators point out that African-American women had a slightly higher rate of chronic hypertension and rate of overweight/obesity, which combined with doctors' perception of African-Americans' known higher risk for hypertensive disorders may have contributed to their increased likelihood of appropriate treatment compared to whites.

These results regarding hypertensive disorders are very interesting because they stand in stark contrast to the elevated case-fatality rates for blacks found in other studies (Rosenberg, 2006; Tucker 2007), suggesting that at least in regard to hypertensive disorders appropriate treatment may be a significant potential contributor to reduced case fatality for African-American women.

Other risk factors that are, to varying degrees, modifiable and amenable to intervention: cesarean deliveries (although more so elective cesarean deliveries which might not be significant contributors to elevated risk of death); obesity; chronic conditions (which are associated with increased age); and unintended pregnancies, particularly among women who have other risk factors such as age.

Evidence suggest that the increased use of contraception decreases the number of maternal deaths not only by reducing the number of births and the number of times a woman is exposed to the risk of maternal mortality, but also by decreasing the proportion of births that pose a higher risk to women, such as high-parity and older maternal age births (Stover, 2010).

Evidence suggests that 56% of births in New York State are the result of unintended pregnancies, with an unintended pregnancy rate of 66 per 1,000 women ages 15-44, the fifth highest rate among all states in the nation (Finer and Kost, 2011).

Racial and economic disparities characterize unintended pregnancies as is the case with most health outcomes, with the rate of unintended pregnancies four times greater for women living under the federal poverty level than women with household incomes over 200% of the poverty

level, and with black women nearly three times as likely to have an unintended pregnancy (cited in Finer and Kost, 2011).

The proportion of unintended pregnancies among births in the high-risk maternal mortality age range of 35 years and older is 32% nationally (Finer and Zolna, 2011); adjusting this figure by the 1.14 ratio of overall New York to overall national unintended pregnancy percentages among births (56%/49%) yields an estimated unintended pregnancy percentage for New York women age 35 and older of nearly 37%.

STUDY – Bronx, NY

In another study of 77 maternal mortality (8) and near-miss cases (69) from January 1995 through June 2001 at Montefiore Medical Center, in Bronx, NY, a number of predictors for pregnancy-related maternal deaths and near-miss cases were found. Near-miss in this study was defined as an ICU admission, emergency unplanned return to the operating room or delivery room for hemorrhage, eclampsia, emergent hysterectomy, cardiac arrest, cerebral anoxia, shock, or embolism.

In the Montefiore study, older age was a significant risk factor with odds ratios of 2.3 for age 35-39 and 5.1 for age >39.

Race and ethnicity were also significant with an odds ratio of 7.4 for African-Americans and 4.2 for Hispanic ethnicity.

Chronic medical conditions (odds ratio of 2.7), obesity (odds ratio of 3.0), prior cesarean (odds ratio of 5.2), and gravidity (odds ratio of 1.2 per pregnancy) were also significant predictors. Education, marital status, insurance status, and prenatal care adequacy were not significant. (Goffman, 2007)

However, the higher prevalence of obesity and chronic medical conditions among African-American women did not fully explain their elevated odds of maternal mortality and near-miss morbidity.

Race differences remained when controlling for these other significant factors, as well as markers of socioeconomic status. (Goffman, 2007)

While most studies attempt in varying degrees to control for socioeconomic variables , a question posed by David and Collins (David and Collins, 2007) in regard to these attempts is quite important for researchers: "Can all or even most of the multifaceted social, economic,

political, and historical effects of racial discrimination be adequately 'controlled for' with the variables commonly measured?"

All papers published from studies that describe and quantify the racial disparity in maternal mortality note that further investigation into the role of different factors that may contribute to that disparity – social, cultural, economic, health care factors — are needed since they are poorly understood (Tucker, 2007; Panchal, 2001).

STUDY – North Carolina

In a North Carolina study, African-American women were socioeconomically disadvantaged as measured by education level and living in areas with a higher percentage of the population with incomes below the federal poverty level; among medical risk factors, they were less likely to have received prenatal care, and more likely to have hypertension, to deliver before term, and to have had three or more previous live births. Contrary to the investigators' expectations, adjusting for these factors did not significantly reduce the magnitude of the observed increased risk (Harper, 2004).

Though not adequately studied, a consistent finding so far is that the greatest racial disparities are found in low risk strata -- higher income, well educated, healthy people.

Anderson's analysis of data from the 2004 Behavioral Risk Factor Survey Study (BRFSS) showed that 18.2% of blacks experience regular emotional stress and 9.8% physical stress compared to 3.5% and 1.6 % of Whites for each category respectively. The potentially negative life course effects of such stress are beginning to be better understood as are the links to such stress and increase risk behaviors that may have chronic health consequences. The effects of racism may "get under your skin."

The answer to: *"Can all or even most of the multifaceted social, economic, political, and historical effects of racial discrimination be adequately 'controlled for' with the variables commonly measured?"* appears to be NO.

A priority for racial disparities research must be better measures of the effects of racial discrimination on health, and better understanding of the pathways and mechanisms involved.

VI. What do we need?

The findings of these and other studies suggest the following research agenda to advance beyond current descriptive studies and potentially identify points of intervention that could significantly reduce the maternal mortality rate for black women.

Above all, funding to support disparities research in maternal mortality must be a priority.

Then, to better understand these disparities, qualitative case reviews should be conducted along with interviews of women who survived "near-miss" maternal morbidities. Unlike quantitative descriptive data, qualitative input would help us understand pathways and mechanisms – from pre-conception through delivery – that present opportunities for intervention.

Second, we need to develop better quantitative measures of exposures that explain racial disparities.
Qualitative case review can aid in the development of better quantitative measures of exposure to racial discrimination and other unique socioeconomic factors that may contribute to racial disparities in maternal mortality.

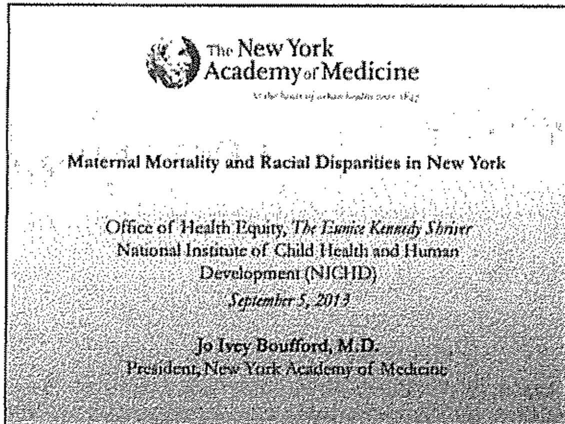
Third, we need to understand the evidence that suggests that increasing income and education do not confer the same protective health benefits to blacks as they do to whites. This might help us answer why the racial disparity is greater among higher education and higher income groups? It should help us identify unique negative exposures for higher education and higher income blacks that undermine the general benefits of increased education and income.

Fourth, we must examine how access and quality of care issues from family planning services and contraception through to pregnancy, delivery and postpartum care can reduce racial disparities in maternal mortality. Most attention to access and quality of care issues is focused at delivery, in the context of a medical crisis event. Access and quality of care should be examined at every step of the pathway.

Fifth, we must improve the completeness and timeliness of maternal mortality and, increasingly, near-miss case reporting and review to enable monitoring and evaluation of the quality and adequacy of interventions and rapid cycle improvement at the facility level.

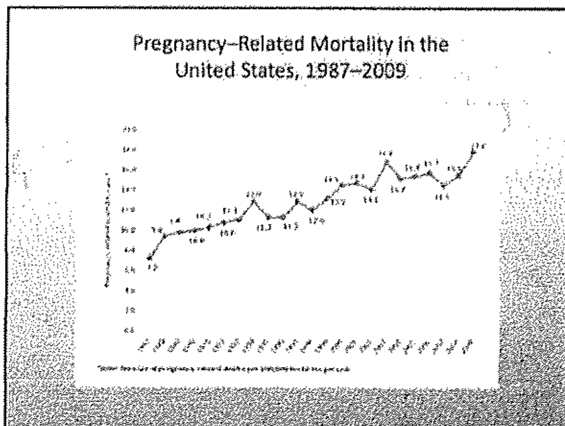
Conclusion:

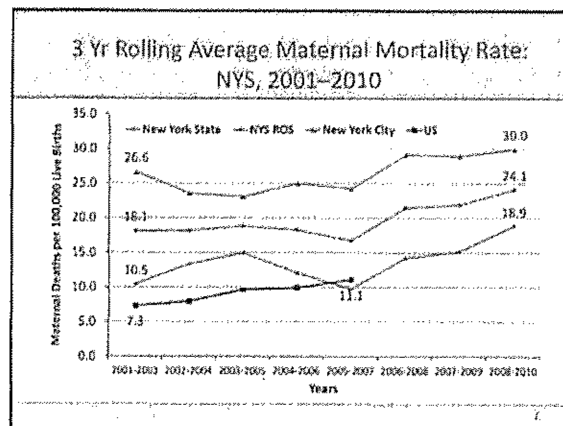
A review of the research on maternal mortality in women of color suggests that a complementary set of initiatives may be required in addition to known systems interventions that can benefit all women to effectively address the impact of race and racial discrimination on the rates of maternal death. We need more research to know what those impacts are and how best to reduce them.

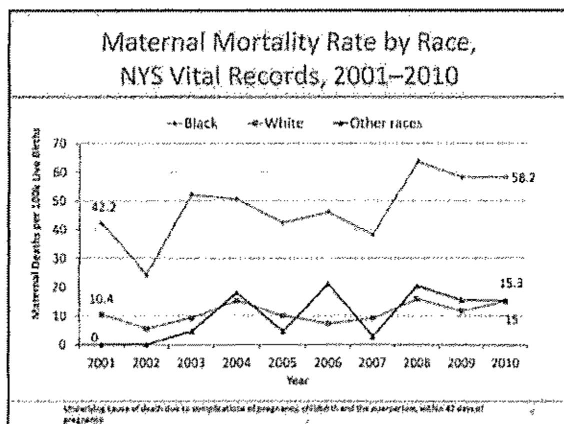


Maternal Mortality in the US

- The United States ranks behind 40+ nations in maternal deaths, with an MMR of 15.8 for 2006-2009
- The US spends more on care per birth than any other nation







Maternal Mortality in New York: A Call to Action:

Findings and Priority Action Steps

February 2011

Reporting and Case Review

Recommendations

- Standardized definition of maternal death
- Mandatory, state-wide, hospital based reporting
- Enhanced data collection:
  - Post-hospital discharge deaths
  - Near misses
  - Geo-coding
- On-site case review

Hospital Care

Recommendations

- State-enforced, mandatory, standardized protocols for screening and intervention to address hypertension, hemorrhage, and DVT
- Expand Regional Perinatal Centers' focus from high-risk babies to high risk mothers
- Review and possibly regulate the high rate of pre-term cesarean sections

Primary and Secondary Prevention

Recommendations

- Prevent unplanned pregnancies
- Provider education on obesity, chronic diseases and other conditions that affect maternal health
- Develop protocols to identify and refer high-risk patients
- Develop protocols to connect pre-hospital and in-hospital care
- Implement web-based Pregnancy Health Records

System Improvements

- Put the M back in MCH
- National consensus on definitions and use
- JACHO standards for high risk Ob facilities
- Enhance pre-conception health
- Public campaign to women and teens and to providers
- Assure ACA supports implemented
- Presumptive eligibility for Medicaid
- Integrated payment models/bundles
- Lower cost OTC emergency contraception

NYS Prevention Agenda 2013-2017 - Priorities

1. Prevent chronic diseases
2. Promote a healthy and safe environment
3. **Promote healthy women, infants and children**
4. Promote mental health and prevent substance abuse
5. Prevent HIV, sexually transmitted diseases, vaccine-preventable diseases and healthcare associated infections

Racial Disparities in the MMR

- During 2006–2009, the pregnancy-related mortality ratios were (CDC PMMS):
  - 11.7 deaths per 100,000 live births for white women.
  - 35.6 deaths per 100,000 live births for black women.
  - 17.6 deaths per 100,000 live births for women of other races

MMR disparity between blacks and whites in the US:

Five conditions accounting for 26% of all pregnancy-related deaths were examined for all US births in the years 1988-1999: *preeclampsia, eclampsia, abruptio placenta, placenta previa, and postpartum hemorrhage*

Finding: the black-white ratio of pregnancy-related mortality ranged from 2.5 to 3.9.

(Tucker, 2007)

Possible reasons for higher case-fatality rates among black women

- higher rates of pre-existing conditions, such as hypertension, diabetes, or obesity
- lower quality of health care
- higher rates of unintended pregnancies in higher-risk women, e.g., women over age 40

Modifiable risk factors

- medical care
- cesarean deliveries (emergent vs elective)
- obesity
- chronic conditions
- unintended pregnancies

Maternal deaths and contraception

Increased use of contraception:

- reduces the number of births and the number of times a woman is exposed to the risk of maternal mortality
- decreases the proportion of births that pose a higher risk to women, such as high-parity and older maternal age births (Stover, 2010; Tsui, 2010).

Poverty and race as factors in rates of unintended pregnancies

- The rate of unintended pregnancies is four times greater for women living under the federal poverty level than women with household incomes over 200% of the poverty level
- Black women are nearly three times as likely to have an unintended pregnancy as white women (cited in Finer and Kost, 2011).

Pre-existing conditions and age account for the racial disparity?

The Montefiore study of mortality and "near-miss" cases from 1995-2001 Looked at age, race/ethnicity, and pre-existing conditions.

Risk factors and their respective Odds Ratios:

- Age 35-39 – 2.3
- Age >39 – 5.1
- African-American race – 7.4
- Hispanic ethnicity – 4.2
- Chronic medical conditions – 2.7
- Obesity – 3.0
- Prior cesarean – 5.2
- Gravidity – 1.2 per pregnancy

Lower Risk & Increased Disparity

- In a study of North Carolina African-American and white pregnancy-related deaths from 1992-1998, a number of established socioeconomic and medical risk factors were examined (Harper, 2004)
- A national study found greater odds ratios of maternal death for blacks compared to whites within the lower risk categories of marital status, years of education, birthweight, parity, and adequacy of prenatal care (Saftlas, 2000).

Lower Risk & Increased Disparity

- Racial disparities are not only about a higher proportion of black people having greater medical and socioeconomic risks (as commonly measured), but the fact that increasing income and education do not confer the same protective health benefits to blacks as they do to whites.

Lower Risk & Increased Disparity

- Racial discrimination has a stronger effect on health outcomes among women at *lower* medical risk (age) and *lower* socioeconomic risk (education)
- The mechanisms by which discrimination operates most strongly are in the domains of seeking employment and working
- BRFS data shows major differences in perceived stress between AAs and Whites

Proposed Research Agenda from a Policymaker Perspective

- Prioritize funding for racial disparities focused research on maternal mortality
- To better understand racial disparities, conduct qualitative case reviews and interviews of women who survived "near-miss" maternal morbidities.
- Develop better quantitative measures of exposures that explain racial disparities.

Proposed Research Agenda from a Policymaker Perspective, cont'd

- Examine the evidence that suggests that increasing income and education do not confer the same protective health benefits to blacks as they do to whites.
- Examine how access and quality of care issues from family planning services and contraception through pregnancy to delivery can reduce racial disparities in maternal mortality
- Improve the completeness and timeliness of surveillance data to enable monitoring and evaluation of the effects of interventions on racial disparities

Maternal Mortality in New York:
A Call to Action

Findings and Priority Action Steps
February 2011

The New York Academy of Medicine

At the heart of urban health since 1847

I. BACKGROUND

The US ranks behind 40 nations in maternal death yet spends more on maternity care per birth than any nation in the world (Gaskin, 2005). New York State and New York City have among the highest rates in the country (Amnesty International, 2010; New York State DOH, 2009). On June 18, 2010, the New York City Department of Health and Mental Hygiene (NYCDOHMH) released a report detailing their review of maternal deaths from 2001-2005 (the full report is available at http://www.nyc.gov/html/doh/downloads/pdf/ms/ms-report-online.pdf). These data vividly illustrate the persistence of the problem: the NYC maternal mortality ratio averaged 23.1 between 2001 and 2005 -- twice the national rate and five times higher than the Healthy People 2010 goal of 4.3 (New York City DOHMH, 2010). New York State's rate for 2005-2007 was also an unacceptably high 16.6 (New York State DOH, 2009), and the Centers for Disease Control and Prevention estimate that the actual number of maternal deaths may be 1.3 to 3 times higher than the reported rates (MMWR, 1998).

In addition to being well above the national average, maternal deaths in New York reveal alarming disparities in terms of race. In New York City, pregnancy-related mortality rates were seven times higher for Blacks and twice as high for Hispanics and Asian/Pacific islander women compared to whites. Some of New York's poorest neighborhoods had rates almost five times higher than affluent neighborhoods in Manhattan, and women without health insurance coverage had pregnancy-related mortality rates almost four times higher than those covered by Medicaid or private insurance.

Many of these deaths -- the CDC estimates half -- could have been prevented by early diagnosis and treatment (MMWR, 1998). Thanks in large part to NYCDOHMH's system of enhanced surveillance and the detailed case reviews conducted by the state's Safe Motherhood Initiative, we know much about the risk factors and causes of maternal deaths in New York – data that should guide prevention and intervention efforts. The NYCDOHMH data suggest that risk factors include obesity, pre-existing chronic health conditions (most commonly hypertension, asthma, and cardiac conditions), and advanced maternal age. The leading causes of maternal death in NYC are embolism (17.4%), hemorrhage (16.8%), pregnancy-induced hypertension (14.3%), and infection (14.3%).

In New York, significant work has been done over the years to improve reporting and case review, develop hospital-based interventions, and to improve community-based prenatal care. Some of these efforts as well as evidence about best practices are summarized in a white paper prepared by The New York Academy of Medicine that is available at http://www.nyam.org/news/docs/MMdraft_061610.pdf. Despite these efforts, the failure to make significant reductions in either the overall rate or the disparities in maternal deaths suggests that much more needs to be done.

To address this problem, NYAM, working collaboratively with NYCDOHMH, convened a half-day symposium on June 18, 2010, which brought together an interdisciplinary group of experts, including obstetricians, anesthesiologists,, hospitalists, family physicians, hospital

administrators, midwives, nurse practitioners, community-based maternal and child health program staff, community health center staff, state and city health officials, advocates and many others. Informed by data presentations in the morning, more than 130 people worked together to identify the key issues and to help form an action agenda, focusing on three specific aspects of the issue: reporting and case review; prevention and risk reduction before and during pregnancy; and management of the critically ill patient from the time of arrival in the hospital. In work group sessions on these three topics, participants generated key findings and recommended action steps needed to reduce maternal deaths throughout New York.

This paper presents crosscutting findings from that meeting as well as the priority areas for action that emerged from the working sessions and from follow-up discussions with key decision makers in the State and City. It concludes with a selected number of recommended action steps. Rather than list all possible actions, we have identified a subset of key issues which we believe can be critical in achieving further progress towards reduction in the rate of maternal mortality in New York. These findings and areas for action are based on the suggestions and areas of consensus that emerged at the symposium and the expertise of those consulted following the meeting and may or may not be supported by published data.

II. CROSS-CUTTING FINDINGS

A. The population of women giving birth is changing. There are more older women, more women who are overweight and obese, and more women with chronic health conditions giving birth today. According to participants at the symposium, this has resulted in an increased number of complicated pregnancies without a corresponding shift in the general understanding about and modification of systems to manage these pregnancies adequately.

B. Preventing pregnancy associated morbidity and mortality requires more effective integration of what are too often multiple separate systems caring for women before they become pregnant and during prenatal, perinatal, and post-partum periods. This requires better coordination and information sharing across providers of community-based prevention and primary care for girls and women, and prenatal, hospital and post-partum care, especially for high risk pregnant women. It also means creating incentives to assure this integration can be sustained.

C. Because maternal death is a rare event at the level of the institution or provider, training and motivating providers to change their reporting, prevention, screening and intervention practices can be difficult, but it must be a priority.

D. With some notable exceptions, the emphasis in maternal and child health has been on the health of the infant and maximizing good birth outcomes for high risk neonates. According to practitioners and to women at the symposium who had given birth, while the focus on healthy babies is critical, it sometimes de-emphasizes the health of the mother and leaves many women feeling disempowered and unable to advocate for their

own health during the pregnancy, birth and post-partum periods. A balanced approach that prioritizes the health of the mother and the health of her baby should be advocated.

E. There is general consensus across the professional and regulatory community on the priority actions needed and that fragmentation of efforts and resource constraints have inhibited completion of a largely shared agenda. Clear leadership and a specific timetable for completion of identified priority action steps are needed.

III. Specific Findings

A. Reporting, Case Review and Data Systems

1. The problem of maternal deaths in New York cannot be solved without accurate, comprehensive, consistent and timely information about the number, characteristics, and causes of these deaths.

2. The two current reporting systems – the enhanced surveillance systems used by NYCDOHMH and the intensive case reviews conducted by the New York State Safe Motherhood Initiative – have different strengths. However, New York State needs a comprehensive system of reporting and review that uses common definitions and has both depth and breadth.

3. State-wide mandatory reporting is viewed as necessary to increase the number of cases captured and create the widest base of data for improving systems and preventing maternal deaths and disability.

    a) While the NYPORTS system has the advantage of being used universally by hospitals, there is great deal of confusion and inconsistency around reporting of maternal deaths. As a result, current NYPORTS reporting is failing to identify a significant number of cases.

    b) Capturing post-hospital discharge deaths is difficult, especially because providers do not always appropriately indicate pregnancy-related deaths on death certificates. The infrequency of these events and the lack of training on how to fill out death certificates contribute to the problem.

    c) Collecting and analyzing data on "near misses" could reveal additional useful information, especially if done in a uniform manner.

    d) Geocoding of cases could help pinpoint broader determinants of health affecting maternal mortality as well help target interventions.

    e) It is critical that the reporting and review system implemented is not in any way punitive and encourages sharing of information as well as assures the confidentiality of data collected.

4. Case reviews need to be both thorough and timely so that information is collected while it is fresh in the minds of staff and their motivation to make system changes is high.

    a) Ideally, all cases of maternal mortality should be reviewed, and the system for that review made clear.

    b) On-site reviews are seen by many as more effective than those conducted remotely. The information collected from case reviews needs to be communicated back to obstetric facilities, community-based providers, and health officials to inform interventions and, where needed, stimulate corrective action. Confidentiality should be assured.

    c) Case reviews should be conducted by knowledgeable experts in the field of obstetrics who have no conflicts of interest in reviewing the case.

B. Prevention and Risk Reduction Before and During Pregnancy

1. Many primary care providers lack awareness about the changing population of women giving birth and risk factors associated with maternal mortality.

2. Obstetricians, family physicians, and midwives managing pregnant women, especially those in freestanding clinics and practices may not have the necessary and easily accessible specialist consultant networks and hospital referral arrangements to assure effective management of the pregnancy-associated risks of pre-existing chronic diseases. These women may be at highest risk if they enter hospitals for delivery which have no prior knowledge of their care.

3. Even though it is a significant contributor to maternal mortality, many providers have difficulty addressing their patients' obesity because they are uncomfortable and/or because they lack the knowledge and resources to do so effectively. Visits for weight loss counseling are not reimbursed, and there is a shortage of certified nutritionists and dieticians. (Many poor and underserved neighborhoods also lack affordable, fresh produce and grocery stores and opportunities for exercise to make healthy choices possible).

4. In general, women are not given information about the risk factors that could affect their health during pregnancy and delivery. According to symposium participants, even women who have had complications or "near misses" are often not told the reasons for the problems or the implications for future pregnancies.

    a. Approximately half of all pregnancies are unplanned, suggesting that education and counseling about family planning, and contraception needs to be expanded.

    b. Providers should make women considering pregnancy aware of risk factors associated with a higher likelihood of pregnancy complications.

c. The post-partum period is a particularly critical, though difficult, time to engage women in their own health care. The period between conceptions can also be an important opportunity to counsel women about family planning and pregnancy-associated risks.

d. Patients who have pregnancy-related complications receive little education about those complications and how to manage them. Patients may also have chronic medical issues that have not been diagnosed or addressed until a woman seeks prenatal care. This may mean that her health is not optimized upon entering the pregnancy, and since pregnancy is a significant stress on the body, this condition may worsen.

5. Systems and financing barriers impede efforts to identify, assess, and intervene with women at risk for maternal morbidity and mortality. These include: lack of insurance coverage for women when not pregnant; non-reimbursable services, like counseling, even for women with coverage; short visit times; information (IT) systems that make longitudinal tracking and transmittal of information among facilities not in the same formal health system difficult; lack of financial incentives for intensive case management of the high risk pregnant woman; and the lack of wide availability of training and tools for screening and helping women at risk.

C. Hospital-based Screening and Intervention

1. High risk pregnant patients are often not identified before or immediately upon admission to the hospital. In addition, many hospitals, particularly those outside of New York City, do not have a properly equipped physical location or clear plan for management of high-risk patients once they have been identified.

   a. Given that embolism is the leading cause of pregnancy-related death among women in NYC, hospitals need better systems for screening and preventing DVT in at risk patients. DVT risk assessment protocols have just been refined to address the complex nature of pregnant women. More research and wider adoption of these and other protocols developed to address critical complications of labor and delivery should be promoted.[1]

   b. Despite the high rates of cesarean sections, many patients – even those at high risk – are not screened appropriately for surgery nor do they meet with anesthesiology staff prior to entry to the OR. Many are cared for post-operatively

[1] In a joint letter to the Commissioner of Health, GNYHA, ACOG and HANYS (dated 3/25/10) made several recommendations involving the promotion of evidence-based guidelines and clinical protocols to address induction and augmentation of labor; management of maternal hemorrhage; and shoulder dystocia. They also recommended training on better coordination and communication of hospital personnel and ongoing education and drills to respond to emergent situations.

in Labor and Delivery rather than being assessed for entry into the post-anesthesia or post-operative units and recovery rooms in the general OR.

c. Some medical interventions surrounding birth have become routinized or used when there is no particular health benefit to the woman or the infant. For example, the March of Dimes has initiated a program to eliminate elective deliveries prior to 39 weeks suggesting that such deliveries are common.

d. Not all hospitals have a rapid response team protocol for post-partum patients which provides for the early identification and assessment of emergent clinical situations and the avoidance of clinical deterioration.

2. Communication systems within the hospital setting can be poor, especially for complicated patients on the obstetric service, which is often physically isolated within the hospital. Labor and delivery staff may not receive important information and guidelines about caring for critically ill patients that other staff receive. Better communication, cross-training, and collaboration between anesthesiology, emergency department personnel, internal medicine specialty staff and labor and delivery staff are especially needed.

3. The rate of cesarean sections in New York is much higher than that recommended by experts, and neither the high rate nor the extreme variability in rates among hospitals is well understood. Multiple factors ranging from the underlying state of the woman's health, patient requests, higher numbers of multiple births to liability concerns, likely contribute to these rates, and each of these factors needs to be explored.

D. Although the Maternity Information Act (NY Pub Health § 2803-j) requires hospitals to provide site-specific statistics on delivery procedures to all incoming maternity patients and all members of the public upon request, evidence suggests that few hospitals comply with this law (Gotbaum, 2006).

IV. PRIORITY ACTION STEPS

A. <u>Reporting, Case Review and Data Systems</u>

1. City and State Departments of Health should resolve any remaining differences in definitions and agree on a standardized statewide system of mandatory reporting of pregnancy related deaths that occur in hospitals or birthing centers that melds the best of NYC DOHMH enhanced surveillance, the NYS Safe Motherhood Initiative, and NYPORTS review. This will require a system that identified all cases of maternal death by routinely integrating the multiple relevant data sources, including (but not limited to), death certificates, NYPORTS, Statewide Planning and Research Cooperative System (SPARCS) data, and medical examiner reports, and birth records).

2. NYPORTS Occurrence Code 915 for Unexpected Death cites maternal deaths as reportable, but the language is not considered by all to be clear. A new and separate Occurrence Code for Maternal Mortality may be advisable, and, given known post-partum risks, consideration should be given to expanding the definition of reportable maternal deaths to at least 30 days post partum.

    a. Clear guidance on any revisions to NYPORTS with regard to reporting of maternal mortalities should be presented to the NYPORTS Council prior to the effective date of implementation.

    b. Education and Training on both existing and new reporting requirements should be conducted by the State Department of Health throughout the State with the assistance of hospital associations to clarify exactly what events are reportable and how they should be recorded (e.g, "expected" versus "unexpected" maternal death).

3. City and State Departments of Health should agree on a professionally robust universal case review system that clearly addresses the confidentiality concerns of individual providers and provider organizations and assures that the results of the reviews are available in a timely manner and in a usable and accessible format to the affected institution and summary information disseminated widely to hospitals, the professional community and community-based providers. Those conducting the reviews should have no conflicts of interest and should be trained and monitored by NYS DOH.

4. The City and State Health Departments should establish a specific timeline for completing steps A1 and 2 and 3, working with partners, including the hospital associations, professional organizations (ACOG) and others to establish a clear process for developing the appropriate training of all involved to participate effectively in reporting, review and analysis of the information to make needed changes.

5. The data gathered through a universal reporting and review system should be analyzed to better understand the racial, ethnic and geographic disparities in rates of maternal mortality and to inform interventions and monitor progress towards reducing disparities.

6. All New York hospitals providing obstetrical services should review their own cesarean section rates, the underlying causes of cesareans, and the criteria for and conditions under which cesarean sections are required and take any necessary actions to address quality problems identified. A broader analysis to better understand the reasons for the variations in cesareans section rates between hospitals is also needed.

7. NYC hospitals should comply with the Maternity Information Act (NY Pub Health § 2803-j) and take steps to insure transparency regarding data about delivery procedures and outcomes. The New York City Council should amend the local administrative code to require that the Department of Mental Health and Hygiene post and disseminate statistics required under the Maternity Information Act in a user-friendly format on its website (See City Council Introduction #0575-2007).

8. The State should support a study of New York's high cesarean section rates, the multiple underlying causes of cesarean sections, and the high variability in rates across hospitals to determine how the many factors likely contributing to these rates can be addressed and whether or not more specific regulatory intervention is warranted.

B. Prevention and Risk Reduction Before and During Pregnancy

1. Revised Prenatal Care Standards (PCAP) for the Medicaid program were issued by NYS in April 2010 and appear to offer comprehensive guidance for providers to assure the integrated care system needed for early identification and management of high risk pregnant women. NYS should consider the need for additional technical support and financial resources to assure effective implementation of this guidance for all women determined to be at high risk according to the New York State Prenatal Care Risk Assessment Form (or some other agreed risk assessment that builds upon or is consistent with ACOG standards).

2. Potential changes that should be considered include extending coverage and services offered for uninsured pregnant women who are determined to be high risk during their pregnancy, delivery and for up to 3 months after their delivery date.

3. A web based "Pregnancy Health Record" could be designed and made available to all pregnant women as soon as the pregnancy is confirmed. It should be able to be conveniently carried by the woman and, subject to appropriate confidentiality agreements, available for use (reading and recording) by all practitioners providing care during the pregnancy, delivery, and post-partum period. Very much like the classic Children's Immunization Card, it can be retained throughout the reproductive life of the woman. The card should be capable of summarizing health status and pregnancy-related risks and flagging any chronic conditions, medications being taken and special needs she may have for all providers and hospital staff. By being web-based, the card's use is not restricted to the IT system of a particular institution (as with most "smart cards") and could help better integrate primary and hospital care, improve continuity of care, flag high risk patients in emergency situations, and increase patients' understanding of their own risks.

4. HANYS and GNYHA should work with CHCANYS to develop and disseminate protocols to better connect pre-hospital and in-hospital care for pregnant women in order to identify high risk patients before they are admitted and assure they are: assessed for cesarean section; seen by anesthesiology or other specialists if needed; and scheduled to deliver in a hospital best equipped to handle complicated labor and delivery.

5. The relevant professional associations, including ACOG, American Academy of Pediatrics, the American Association of Family Physicians, The New York State Association of Licensed Midwives, and New York State Nurses Association, who have already done much to improve maternal and child health, should enhance systems for

public and professional education that highlight the changing population of women giving birth as well as the risk factors for pregnancy itself and, when pregnant, for maternal mortality and morbidity:

- Widely disseminate existing protocols for the management of obesity and common chronic conditions in pregnancy to refocus the attention of the public, providers and public health officials on the health of the woman in the perinatal and post-partum period as well as the health of the infant.

6. Programs for obesity and chronic disease prevention should incorporate education of young girls and women of childbearing age about the potential risks associated with obesity and pre-existing chronic diseases during pregnancy and what they can do to reduce these.

C. Hospital-based Screening and Intervention

1. As it has done for other categories of high cost cases, the State should consider a Medicaid pilot project for enhanced reimbursement of comprehensive systems for identification and management of high risk pregnant women. (NB: *Since the meeting in June, four hospitals in NYC supported by the FOJP and with some funding from United Hospital Fund, have completed a "Care Map for the Obese Parturient";Montefiore has signaled an intention to test the full care map. While the focus is on morbid obesity, the systems developed could have wider applicability to pregnant women with other risk factors, and this approach should be encouraged.)*

2. The New York State Perinatal Centers have statutory responsibility to conduct regional quality improvement activities that include reviews of the perinatal care provided by their affiliate hospitals, including maternal deaths and serious adverse events. They are also charged with making recommendations and providing professional education and training to improve the quality of care within its network. There is some evidence to suggest that capacity of the RPC's to perform these duties is varied. An assessment of how and how well the existing arrangements are addressing maternal mortality is warranted to ensure that the system and individual high performing centers can best serve the women of the state, and to determine whether or not statutory changes may be necessary.

3. ACOG together with HANYS and GNYHA should develop protocols for flagging high risk pregnant women upon arrival at the emergency room or other portal of entry to the hospital and assure that routine OR and post-anesthesia care unit access is available for these patients, if necessary, or that there is a properly equipped and staffed space for management of the delivery and post partum care of high risk pregnant women

4. Statewide leadership to set clear goals, establish priorities, build consensus, coordinate the good work being done by multiple stakeholders, and implement concrete strategies on a specific time frame is needed to prevent unnecessary maternal death. New York State has models for such high-level, standing advisory committees to review and report practice patterns in cardiac and transplantation care with dedicated staff support. The

State should work with the broader professional community to create an appropriate mechanism for strengthening and coordinating statewide efforts to reduce maternal mortality and, if necessary, secure the resources for its implementation.

Evidence suggests that a significant proportion of maternal deaths are preventable. The potential for reducing current rates of maternal mortality through focused attention on improving our systems of prevention and care for preconception, pregnancy, delivery and post-partum care to women is significant. Our goal is clear – making sure that no woman needlessly dies in childbirth. By taking the actions recommended above and through the continued efforts of the many talented individuals and organizations working on this issue, we can and we must reduce the unacceptably high rates of maternal death in New York State.

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Covering Women's Issues. Changing Women's Lives.

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Nov. 13, 2013

Good afternoon Chairperson Maria Del Carmen Arroyo and members of the council's Committee on Health: Inez E. Dickens, Mathieu Eugene, Julissa Ferreras, Rosie Mendez, Joel Rivera, Deborah L. Rose, Peter F. Vallone, Jr., James G. Van Bramer and Albert Vann.

Thank you so much for giving me an opportunity to share with this committee what Women's eNews' team of investigative journalists has determined about the crucial issue of African American maternal mortality and maternity care for all women in New York City.

I am Rita Henley Jensen, editor in chief of Women's eNews, a New York-based daily, online nonprofit news service covering issues of particular concern to women. The life and death of all pregnant women and all new mothers is an issue close to our hearts and a major focus of our journalism.

The Women's eNews team of reporters and editors has worked consistently during the past five years to cover the issues of maternal health nationally and locally. I wish to express enormous gratitude to W.K. Kellogg Foundation for its support of this work and its leadership on maternal and infant health and racial equity.

The maternal mortality rate in the United States is climbing, while around the globe numbers are dropping. The U.S. now

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has higher rates of mothers dying than any other industrialized nation and is ranked 49th worldwide. Rather than be an example for the rest of the nation, New York City has both a high maternal mortality rate and extraordinarily high rates of African American mothers losing their lives during pregnancy or childbirth.

Akira Eady's death is one of many that signals deep problems in New York's care of new mothers and the tragic results. An African American, Akira died shortly after giving birth at Mount Sinai Medical Center in 2007.
Akira's aunt, Carole Eady, recounted to Women's eNews that her niece, employed and with private medical insurance, bled heavily after receiving an epidural. She complained of headaches to the hospital staff. Nevertheless, the hospital released her.

She was brain dead four days after giving birth.
Less than a year after she died, Akira's older son, age 2, was savagely beaten to death while with his father. Carole Eady is now raising Akira's older daughter in her Harlem home. The infant born to Akira is now being raised by that child's father, also in Harlem.

Women's eNews has found that Akira's death is one of many among the city's mothers, especially African Americans, that signal significant issues in New York's care of pregnant women and new mothers.

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- New York City has an overall maternal mortality rate of **24** per 100,000 births, significantly above the national rate of 21 per 100,000.
- In 2011, the maternal mortality rate of African American women in New York City was **46.5** out of 100,000 births, three times the rate for the city's white mothers.
- The president of the New York Academy of Medicine, Dr. Jo Ivy Buford, told Women's eNews that with proper care the numbers could be cut nearly in half.
- Maternal health experts have told the Women's eNews team that for every maternal death, there are 50 "near misses," that is, when a mom nearly dies, a phenomenon best tracked by a hospital's readmission rates.

These numbers understate the extent of New York's maternal health problem because the city's vital statistics include only maternal deaths within 42 days of the end of the pregnancy. Nationally, the Centers for Disease Control and Prevention tracks maternal deaths over a one year period—to record those who die slowly as a result of their pregnancy.

Women's eNews has asked again and again why so many black women and other non-white mothers are dying or suffering extreme complications. Our reporters found that the reasons for these high rates cannot be explained by answers most often offered such as genetics, teen pregnancy, obesity, lack of pre-natal care, poverty, pre-existing conditions or low education. The existing data refute these guesses.

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Women's eNews' investigation has found that Cesarean sections place women at risk for severe complications: embolisms, infections, and hemorrhages that can lead to death and "near misses."

A 2010 New York City health department report revealed that **54 percent** of the women whose deaths were related to their pregnancies underwent C-sections and **only 4 percent** of those who died gave birth vaginally. (Twenty-eight percent died while pregnant and 14 were classified as non-applicable.)

The Women's eNews team was not able to determine if African American women underwent a disproportionate number of C-sections. However, Women's eNews has found that deaths from embolisms, often related to C-section delivery, are dramatically higher for African American women. Based on data from 2001 to 2005, **82** percent of those mothers who died from embolisms were black non-Hispanic, **14** percent were Hispanic, **4** percent were Asian/Pacific Islander and 0 percent where white. Zero percent.

In the other major categories of the most common causes of maternal death, often related to C-sections, racial and ethnic disparities were also pronounced.

New York must record and make public more data to understand how these disparities could exist in a city with

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public hospitals, an outstanding network of private hospitals and generous Medicaid.

To begin to save the lives of mothers, the city must begin with transparency. Hospital by hospital data of maternal deaths—including breakdowns by race and ethnicity as well as methods of delivery and causes of deaths—must be made available to the public.

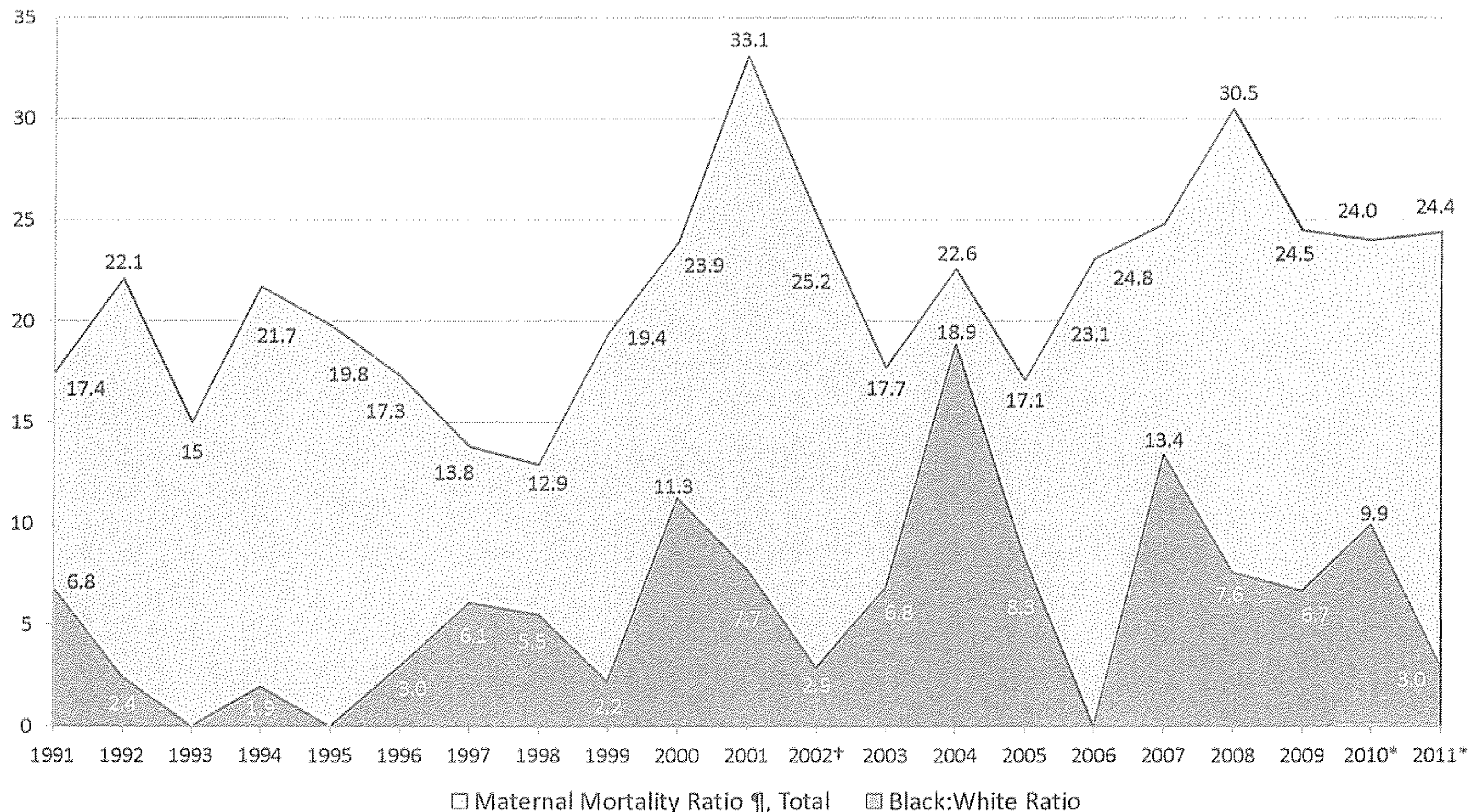
Maternal Mortality Review committees must be permitted to make their findings public.

Only then, with an informed medical community, journalists and citizens, can the city begin to make its hospitals mother friendly.

Women's eNews stands ready to report on the transformation.

I am happy to take any questions.

Thank you again for holding this hearing.



† A cause-of-death coding error was found for 2002. As a result, death of maternal cause was reduced by 1 and HIV disease death increased by 1.

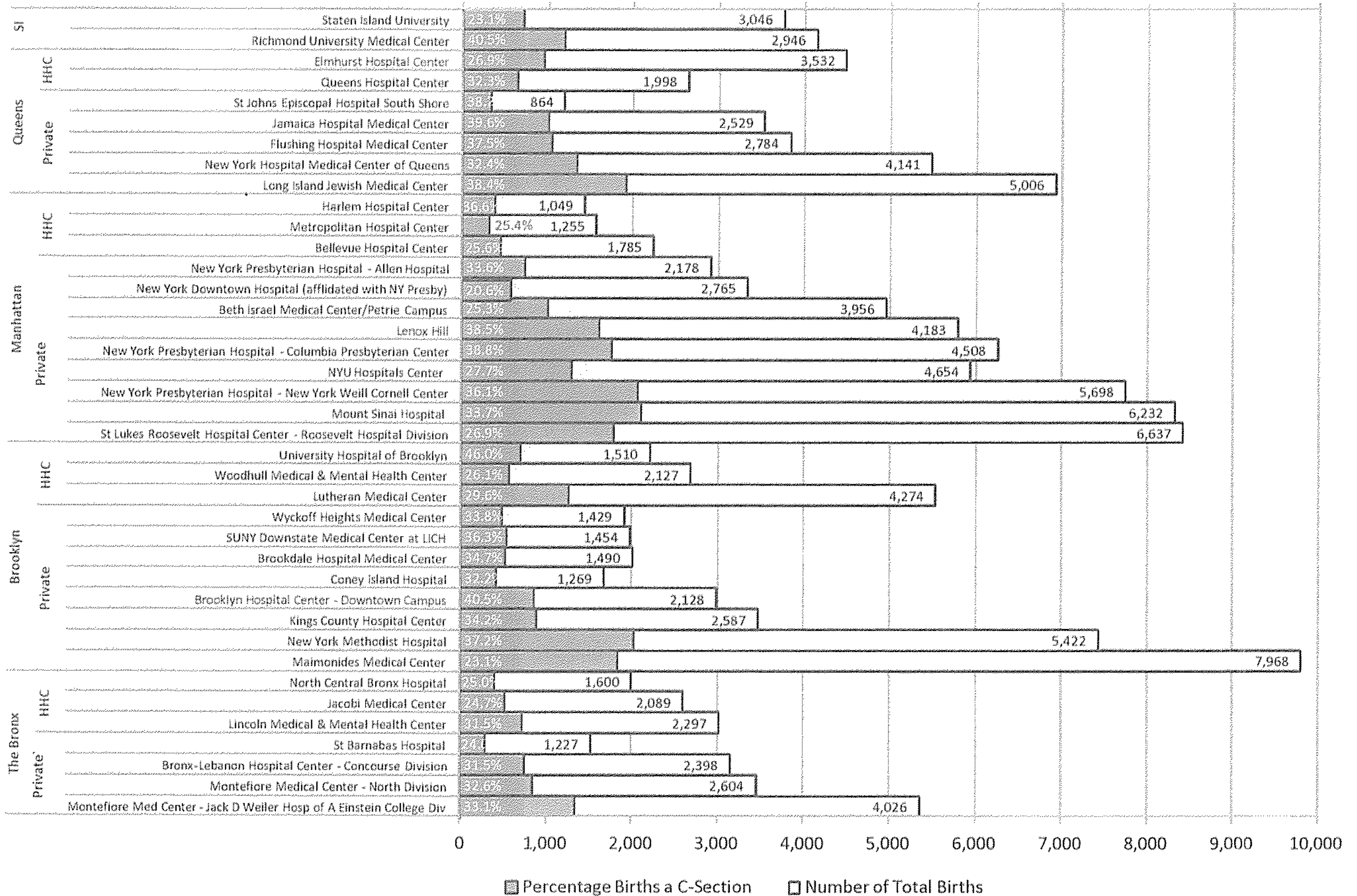
| | Maternal Causes - WHO definition of maternal mortality "death of a woman while pregnant or within 42 days of termination of pregnancy from any cuase related to or aggravated by the pregnancy or its management".

¶ Ratio per 100,000 live births.

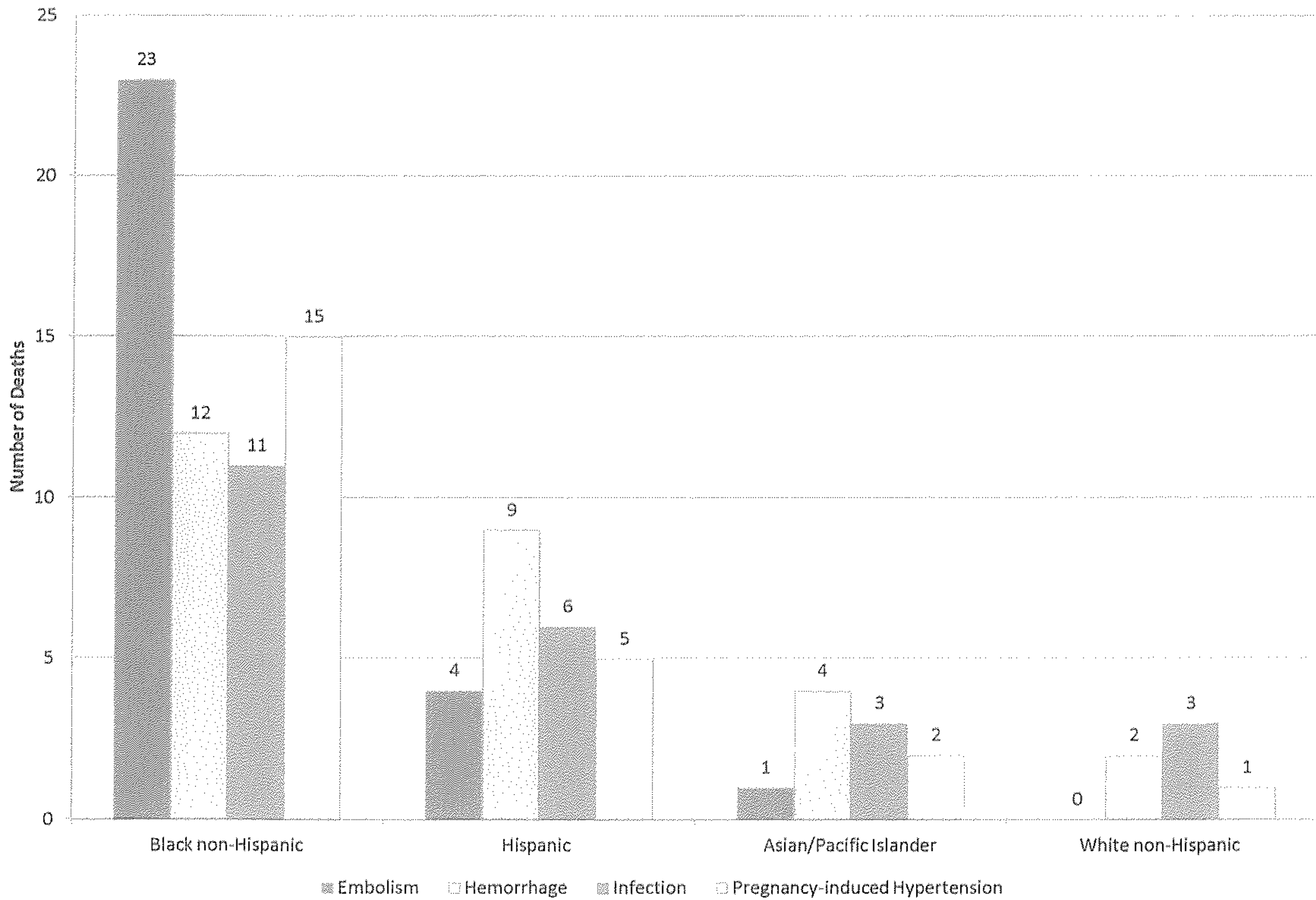
** All data presented from Bureau of Vital Statistics' Annual Summary Reports except for 2010 and 2011 maternal deaths and maternal mortality ratio, which was calculated to complete this table.*

April 8, 2013
Bureau of Vital Statistics
New York City Department of Health and Mental Hygiene

C-Section Rates of NYC Hospitals



Source: New York State Department of Health



Causes of Maternal Death: New York City 2001-2005
Number of Deaths
25
20
15
10
5
0
23
12
11
15
9
6
5
4
4
3
2
1
0
2
3
1
Black non-Hispanic
Hispanic
Asian/Pacific Islander
White non-Hispanic
Embolism
Hemorrhage
Infection
Pregnancy-induced Hypertension

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HEALTHY BIRTHS, HEALTHY MOMS: BLACK MATERNAL HEALTH IN AMERICA

http://womensenews.org/story/black-maternal-health/130831/healthy-births-healthy-moms-black-maternal-health-in-america#.UoKnfXDOkxE

BLACK MATERNAL HEALTH IN NEW YORK CITY

High Death Rate of New York's Black Moms Analyzed

http://womensenews.org/story/110516/high-death-rate-new-yorks-black-moms-analyzed#.UoKnzXDOkxE

BLACK MATERNAL HEALTH

Black Maternal Health: A Legacy and a Future

http://womensenews.org/story/black-maternal-health/090922/black-maternal-health-legacy-and-future#.UoKo33DOkxE

TESTIMONY OF IHOTU ALI, PROGRAM COORDINATOR OF THE THRIVE WOMEN'S HEALTH INITIATIVE AT THE NORTHERN MANHATTAN PERINATAL PARTNERSHIP

City Council Health Committee – Public Hearing on Women's Preconception Care and Health Outcomes for Moms

November, 13, 2013

Good afternoon, Chairwoman Arroyo, Council Members and distinguished guests. It is an honor to testify in front of this committee, I am the Coordinator for the pre-and inter-conception health program at Northern Manhattan Perinatal Partnership in Central Harlem. I also previously worked on our Pre-conception Peer Education Program as well as being a Doula.

In 2006, the Centers for Disease Control, or CDC's Select Panel on Preconception Care produced the Morbidity and Mortality Weekly Report (MMWR) titled, "Recommendations to Improve Preconception Health and Health Care." This report defined preconception care as "a set of interventions that aim to identify and modify biomedical, behavioral, and social risks to a woman's health or pregnancy outcome through prevention and management." This report also outlined ten core recommendations with key action steps, based on four broad categories of interventions, including: 1) clinical physical assessments, 2) risk screening, 3) vaccinations/ immunizations, and 4) counseling and education for positive behavior change and psychosocial support.

In short, preconception care refers to a woman's health at least *3 months prior* to pregnancy that impacts the health of the fetus and overall pregnancy. This is different from prenatal care as the fetal neurological development that occurs in the first few weeks of a pregnancy happen often before women miss their first period, before a pregnancy test comes back positive, and well before prenatal care is established, as in the chart provided to you, where you can see the weekly development of a fetus. The red denotes the most highly sensitive periods where a women's nutritional stores are key to the healthy development of especially the central nervous system and the heart, even before a missed period.

This early care is especially critical to give women who struggle with multiple health issues time and targeted support to improve their health before the added stress and medication restrictions of pregnancy, to focus on their own health first, then being able to focus on the baby's health. Three major health areas where high risk women need support are the following:

1) poor nutrition, especially lacking a daily vitamin of folic acid that comes from greens and vegetables (to reduce risk of birth defects and neurological disorders such as autism and spina bifida),

2) obesity and high blood pressure/hypertension (that can lead to a host of complications including gestational diabetes in pregnancy, deadly eclampsia in labor, and metabolic disease in newborns) and

3) smoking or using heavy alcohol or other substances (that can lead to restricted air flow to the fetus, premature birth, low birth weight and cognitive impairment in newborns).

Many of us know someone who didn't realize they were pregnant and had been drinking – but for women already with limited access to health care and myriad health issues, these unplanned, unprepared pregnancies can have serious implications on the health of the mother during pregnancy and labor, and on the health of the baby.

Interconception care, then, is similarly the health of a woman between pregnancies, including losing excess weight gained during the last pregnancy, breastfeeding and having at least 18 months spacing between pregnancies, and looking at past poor birth outcomes as possible predictors of the future.

There are two main sides of the equation here, one being the health care provider giving medical care to high risk non-pregnant women, such as recommending nutritional supplements, blood pressure medication, or giving the rubella vaccination that cannot be administered during pregnancy. The other side is of a woman who needs to have the knowledge, a plan, and the time and support to adjust her lifestyle to achieve healthier pregnancies.

On the health provider or clinical side, Dr. Michael Lu, Associate Administrator of the Maternal Child Health Bureau uses the acronym FINDS to describe the main items he looks for as preconception risk factors that could lead to birth defects, premature birth, and pregnancy complications: F – family violence (to avoid injury), I – infections and immunizations (such as HIV or STD testing, and the rubella vaccination that cannot be done during pregnancy), N – nutrition (folic acid to prevent birth defects such as spina bifida, and to prevent gestational diabetes), D – depression, and S – stress (which is a major cause of premature birth as well as a piece of why African American women at all education levels are at increased risk).

Health providers can incorporate the preconception model in counseling both female and male patients during reproductive health visits, while counseling on birth control methods or after a negative result pregnancy test. Interconception care should begin during the 3rd trimester of prenatal care for pregnant women, rather than only at the follow-up visit 6

weeks after birth, as many women do not return for that visit and may also at 8 weeks lose public health insurance.

Sexually active patients and pregnant women in their last trimester can also be referred to community-based programs for reproductive health education, nutrition and weight loss support, and case management. Community programs can employ home visits, doulas, and social marketing around preconception and interconception health that raises public awareness and brings in women without medical homes and encourages and facilitates that relationship with a health insurer and primary care doctor.

A handful of community programs around the country offer health education and case management and show documented results. The Strong Healthy Women intervention of the Central Pennsylvania Women's Health Study and Northeast Florida Magnolia Project were successful in reducing rates of STDs, binge drinking and increased self-efficacy, intent to eat healthy and be physically active, and take a daily multivitamin.

At the Northern Manhattan Perinatal Partnership (NMPP), I run one of three programs nationwide under the Healthy Behaviors in Women and Families 3- year funding stream from the Maternal and Child Health Bureau under the Health Resources and Services Administration, or HRSA. We call our program THRIVE and over the past two years, and now into our third and final year of funding, we've run continuous cycles of a ten-week nutrition and fitness education program.

This last cycle was our 7th and gathered 28 women weekly for live cooking demonstrations of healthy snacks and dessert alternatives, fitness classes, and 1:1 reproductive health counseling and life planning. Among our group of African American, African immigrant, and Latina women, about half were obese, a quarter with high depression scores, and virtually all had very high levels of stress and poor eating habits and infrequent exercise.

We screened participants for lack of medical home or insurance, chronic health conditions, and depression and we offer short-term case management including escorting them to local clinics and Medicaid offices, referring to free weight loss and blood pressure counseling, and to drug treatment programs. We also make internal referrals to other programs at NMPP such as our Mom's Support Group, parenting classes, and doula program and keep the graduates of the program in touch through reunions and our Facebook page.

Over the last 10 weeks, over 80% of our participants are now taking daily multivitamins, our weight loss superstar lost 22 pounds, 8 additional women lost 8 pounds each, and the woman with the highest drop in blood pressure was from 146/96 to 102/83. One woman was overweight and said that her biggest dream is "to be a mommy" – now she has already lost 8 pounds, is taking daily multivitamins and eating 5 servings per day of fruits and vegetables , and using condoms regularly (which we provide) before attempting a pregnancy next year. One woman who smoked all the way through her last pregnancy began a series of smoking cessation acupuncture sessions, free at a local acupuncture school and is exercising daily. Another woman said that her biggest dream is to earn her PhD and stay healthy for herself and her family as she has a child with Autism.

Across all cycles, we've seen marked increases in daily nutritional label reading, physical exercise, stress management, self-care, and preconceptional control – and these results were sustained or increased even 8 months after completing the program. 100% of participants say they would recommend this program to other women, and one past participant has said "I wish I could share this program with everyone who is interested in changing something important in their life."

This is clearly a well-loved program, although it takes a steady stream of funding to keep it running and effective, especially in neighborhoods where affordable exercise and healthy food options are very limited. We provide childcare and $5 metrocards to allow moms of young children and low-income families to participate, and we offer discounts and incentives that are key to exposing the participants to new health behaviors, such as purchasing fresh, organic produce from farmers markets and farm shares or getting mini-massage and acupuncture treatments. We also have a small fitness center and offer drop-in fitness classes and personal trainer sessions on site for public use.

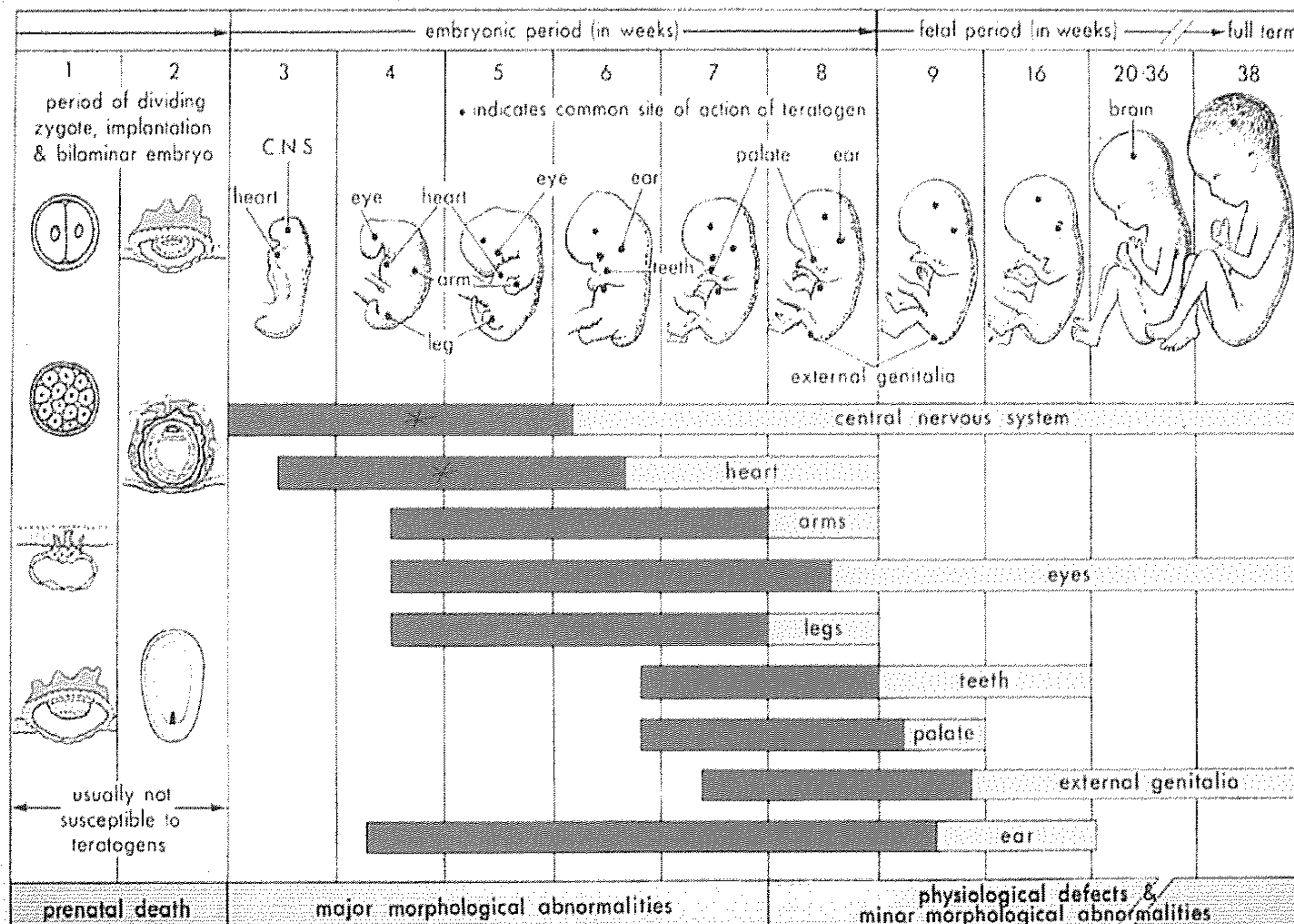
All women deserve access to a healthy lifestyle and we cannot assume as we have, that babies do not also suffer when their mothers suffer, and prenatal care simply comes too late for the type of problems we are seeing now, problems which cannot be addressed during pregnancy due to the sensitivity of the fetus to many medications. I urge the City Council to take a stand for New York City as a model for the country in putting $2 million into citywide preconception and interconception programs and $500,000 for doula care expansion to ensure that this information is not shared in a piecemeal fashion or subject to the end of Thrive funding next year, but becomes sustained common knowledge among women and men.

As most women know to see a doctor and avoid alcohol during pregnancy, let's make it common knowledge to take a multivitamin with folic acid as soon as you become sexually active and to be at a healthy weight before pregnancy. Let's make sure the soil is nutrient-rich before we plant the seed.

Thank you for your time and consideration.

Contact information:

Ihotu Ali
Program Coordinator for the Thrive Women's Health Initiative
Northern Manhattan Perinatal Partnership
(212) 665-2600 x306
Ihotu.ali@gmail.com
iali@sisterlink.com
www.sisterlink.com



MISSED PERIOD
POSITIVE PREGNANCY
TEST

PRENATAL CARE
RECOMMENDED
BY 12 WEEKS

Thrive! Women's Health Initiative
Healthy Behaviors in Women and Families (HBWF) Grantee
Northern Manhattan Perinatal Partnership (NMPP), New York, NY
Program Results Years 1 & 2
June 24, 2013

Program Introduction

Thrive! Women's Health Initiative is a 10-week series of group health education workshops and individual case management that aims to promote positive and sustainable wellness behaviors among women of childbearing age. We primarily serve women ages 18-40, who are high-need residents of Central Harlem and other areas of New York City. Through peer social support and individual counseling, our curriculum focuses on teaching and supporting women as they set and achieve SMART goals for healthy eating, fitness, stress management and reproductive health. The workshops meet for two hours each week (in addition to at least one individual meeting), and periodic group reunion events take place following the conclusion of the formal cycle. Every group meeting includes a breathing/meditative exercise, discussion and activity pertaining to that day's topic, a healthy snack demo, and 30-40 minutes of physical activity (yoga, Zumba or a hula hoop workout). By promoting healthy behaviors and overall wellness for women during the preconception and interconception stages of their lives, we aim to decrease their risk for overweight/obesity and other chronic diseases, and to mitigate related risk factors for adverse birth outcomes with any potential future pregnancies.

Participant Demographics

- **Age**
  - Range: 19-50 years old
  - Median: 34
- **Racial/Ethnic Background**
  - 65.5% Black/African-American/African
  - 28.3% Hispanic/Latina
  - 6.3% Asian, More than One Race, White/Caucasian
- **Highest Educational Attainment**
  - 38.0% Elementary/Junior High School
  - 38.0% High School or GED
  - 7.6% Some College/College Graduate
- **Employment Status:** 61.4% Unemployed
- **Geography**
  - Participants primarily reside in Central Harlem (most common zip code=10027) and other parts of Northern Manhattan, but a few participants have come from elsewhere in Manhattan, the Bronx, Queens, and Brooklyn
  - 9.7% are currently living in a domestic violence or homeless shelter
- **Pregnancy Experience**
  - 77.5% have had at least one pregnancy
  - 39.5% of those with at least one pregnancy reported having at least one unplanned pregnancy
- **Pregnancy Plans**
  - 36.1% are planning to get pregnant within the next 1-5 years
  - 53.0% have no plans to get pregnant in the future

Program Evaluation Structure

- Pre-test survey (at Week #1)
- Post-test survey (at Week #10)
- Weekly workshop survey (Weeks #2-9)

Quantitative Results

- 6 completed 10-week cycles (Cycle 1 began on 2/23/12)
- Total number of women who ever attended one workshop session=128
- Total number of participants who completed Cycles 1-6 (had at least 50% attendance)=87
  - 20.7% of those who completed the cycle attended all 10 workshop sessions
    - 58.6% attended 8 out of the 10 sessions
  - Range of 12-17 graduates per cycle
  - Overall retention rate=67.9%
- Pre-Test Respondents: n=111 | Post-Test Respondents: n=83

Pre-Post Comparison Results

Item	Measure	Pre-Test	Post-Test
Medical Home	Do you have a doctor or other health provider to go to if you are sick or want health advice?	**84.7%** (Yes)	94.0%
Nutrition Labels	In the last 3 months, how often have you read nutrition/ingredient labels on food or drinks?	**36.9%** (Every day or a few times each week)	54.2%
Sugary Beverage Consumption	NOT COUNTING water, plain tea, coffee, or milk, how many beverages (such as juice, soda, etc.) do you usually drink per day?	**45.0%** (2 or more per day)	32.5%
Fruit Consumption	How many servings of fruit do you usually eat per day?	**51.3%** (2 or more per day)	62.7%
Vegetable Consumption	How many servings of vegetables do you usually eat per day?	**55.8%** (2 or more per day)	72.3%
Physical Activity	How often do you do physical activity? (such as: jogging, running, biking, dancing, aerobics, fast-paced walking, playing a sport, yoga, Pilates)	**55.8%** (twice or more per week)	83.1%
Self-Care	In the last 3 months, how often have you "taken time out for yourself" or done activities that are relaxing for you?	**27.9%** (Every day or a few times each week)	44.6%
Folic Acid	In the last 3 months, how often have you taken a folic acid vitamin or a multivitamin with folic acid?	**32.4%** (Every day or a few times each week)	41.0%
Perception of Stress	10-point Perceived Stress Scale (PSS) (Cohen, S., Kamarck, T., and Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior, 24,* 386-396.) Score range: 10-50	**29.2** (Mean total score)	25.6 (12.3% decrease)
Preconceptional Control	There are things I can do before I become pregnant to make sure my child is born healthy. (from Central Pennsylvania Women's Health Study (CePAWHS), Weisman, Hillemeier, et al. 2008)	**50.4%** High Control (Strongly Agree)	72.3%

Table Summary: At post-test, all items showed improved results, most markedly for nutrition label reading, physical activity, and preconceptional control.

Self-Reported Program Impact at Post-Test

Item	Measure	Post-Test (% Strongly agree or Agree)
Eating choices	I think more about the eating choices that I make now than I did before this program.	85.5%
Stress awareness and management	I am more aware of how I handle stress and stressful situations now than I did before this program.	89.2%
Exercise awareness	I think about ways to exercise more now than I did before this program.	86.7%
Health Perceived Control	I feel more in control of my health now than I did before this program.	86.7%
Health Goal Progress	I can think of at least one way that this group helped me make progress with my health goals.	92.8%

Program Satisfaction: At post-test, 100% of program participants have reported that they would recommend Thrive to other women.

Follow-Up Survey Results

- **December 2012:** n=29 (74.4% of all participants up to that point responded)
  - Comprised of participants from Cycles 1-3 (8-mo., 6-mo., 2-mo. follow-up, respectively)
- **June 2013:** n=30 (42.9% of all participants up to that point responded)
  - Comprised of participants from Cycles 1-5 (14-mo., 12-mo., 8-mo., 6-mo., 3-mo. follow-up, respectively)

Item	Measure	10-Week Post-Test	Dec. 2012 Follow-Up	June 2013 Follow-Up
Nutrition Labels	In the last 3 months, how often have you read nutrition/ingredient labels on food or drinks?	**54.2%** (Every day or a few times each week)	**48.3%**	60.0%
Sugary Beverage Consumption	NOT COUNTING water, plain tea, coffee, or milk, how many beverages (such as juice, soda, etc.) do you usually drink per day?	32.5% (2 or more per day)	**44.8%**	**46.7%**
Fruit Consumption	How many servings of fruit do you usually eat per day?	62.7% (2 or more per day)	**58.6%**	**56.7%**
Vegetable Consumption	How many servings of vegetables do you usually eat per day?	72.3% (2 or more per day)	**69.0%**	**63.3%**
Physical Activity	How often do you do physical activity? (such as: jogging, running, biking, dancing, aerobics, fast-paced walking, playing a sport, yoga, Pilates)	**83.1%** (twice or more per week)	**69.0%**	83.3%
Self-Care	In the last 3 months, how often have you "taken time out for yourself" or done activities that are relaxing for you?	**44.6%** (Every day or a few times each week)	**44.8%**	46.7%
Folic Acid	In the last 3 months, how often have you taken a folic acid vitamin or a multivitamin with folic acid?	41.0% (Every day or a few times each week)	**31.0%**	**33.0%**
Perception of	10-point Perceived Stress Scale (PSS)	**25.6**	21.8	**25.1**

Item	Measure	10-Week Post-Test	Dec. 2012 Follow-Up	June 2013 Follow-Up
Stress	(Cohen, S., Kamarck, T., and Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior, 24,* 386-396.) Score range: 10-50	(Mean total score)		
Preconceptional Control	There are things I can do before I become pregnant to make sure my child is born healthy. (from Central Pennsylvania Women's Health Study (CePAWHS), Weisman, Hillemeier, et al. 2008)	**72.3%** High Control (Strongly Agree)	**68.9%**	73.3%

Summary: Results for nutrition label reading, physical activity, perception of stress, self-care, and preconceptional control were approximately sustained or slightly improved between post-test and follow-up. However, results for sugary beverage consumption, fruit consumption, vegetable consumption, and folic acid supplementation declined at follow-up. Results for all items remained improved from their respective levels at pre-test.

Body Measurement Comparison

- At 10-week post-test, the vast majority of participants remained in the same BMI category recorded at pre-test.
  - Weight change range: -15 lbs to +6 pounds (Mean: -0.63, Median: 0)
  - Three participants improved their BMI categories: one moved from obese class 3 to obese class 2, another moved from obese class I to overweight, and another moved from overweight to normal
- From post-test to June 2013 follow-up, again the vast majority of participants remained in the same BMI category.
  - Weight change range: -12.5 lbs to +10 pounds (Mean: -0.78, Median: 0)
  - Three participants improved their BMI categories: two moved from overweight to normal (3 and 14 month F/U) and another moved from obese class I to overweight (8-mo. F/U)
  - One participant moved from normal to overweight (6-mo. F/U)

<table>
<tr><th>Body Mass Index Category</th><th colspan="2">% Pre-Test (n=90)</th><th colspan="2">% Post-Test (n=61)</th><th colspan="2">% June 2013 F/U (n=30)</th><th>Compared to % Female Central/East Harlem Residents (n=109,000)*</th></tr>
<tr><td>Underweight (Less than 18.5)</td><td colspan="2">0%</td><td colspan="2">0%</td><td colspan="2">0%</td><td rowspan="2">34.9%</td></tr>
<tr><td>Normal (18.5-24.9)</td><td colspan="2">20%</td><td colspan="2">19.7%</td><td colspan="2">36.7%</td></tr>
<tr><td>Overweight (25.0 -29.9)</td><td colspan="2">28.9%</td><td colspan="2">36.1%</td><td colspan="2">33.3%</td><td>34.5%</td></tr>
<tr><td>Obese Class 1 (30.0-34.9)</td><td>26.7%</td><td rowspan="3">51.1</td><td>22.9%</td><td rowspan="3">44.2%</td><td>16.7%</td><td rowspan="3">30.1%</td><td rowspan="3">30.6% (all obese classes combined)</td></tr>
<tr><td>Obese Class 2 (35.0-39.9)</td><td>14.4%</td><td>11.5%</td><td>6.7%</td></tr>
<tr><td>Obese Class 3 (Greater than 40.0)</td><td>10%</td><td>9.8%</td><td>6.7%</td></tr>
</table>

**Reference: New York City Department of Health and Mental Hygiene (2012). Epiquery: NYC Interactive Health Data System- Community Health Survey 2011. June 21, 2013. http://nyc.gov/health/epiquery*

Qualitative Results

- **Sample answers to "What do you think was the most important thing you gained from Thrive?" include:**
  1. "I gained strength to love myself and to eat healthier so that I can lower my blood pressure and get down to the weight I'm supposed to be!"
  2. "Refocused my attention on my health. I usually think so much about the health of others, I tend to neglect myself. "
  3. "I learned healthy does not mean bland or boring. Instead it means balance, strength, and commitment.
  4. "Confidence. I feel very sure about myself because here you made me feel like I was part of a family."
  5. "The most important thing I gained was to keep myself healthy in every way of my life, such as eating healthy, exercising, and important facts about gyn health."
  6. "The knowledge of measuring the actual amounts of sugar in junk food, or snacks, or ice-cream, or soda, and so on, so I can control myself to limit and/or avoid them."
  7. "The importance of making small attainable goals & sticking with them. "
  8. "How to watch what I eat. What foods to choose to eat more healthfully. How to incorporate exercise just using my body to stretch and move to music. "
  9. "How to be me and love me more every day."
  10. "Motivation to continue to get and have a healthy mind, soul, and life."
  11. "Finding ways to relieve stress so you can be a better person to function everyday"
  12. "To have a positive mentality, knowledge about eating healthy, yoga, exercise, but above all, that we have spent time together."
  13. "Tips and small changes to improve my mental, physical, and emotional health without stressing and working until I am exhausted."
  14. "The means to be a healthier person!"

- **Sample answers to "What, if anything, has changed in your life relating to your health or overall well-being since you joined Thrive?" include:**
  1. "Yes, my attitude towards life and my being. I am very positive and look for opportunities to be more active."
  2. "I've lost like 15 pounds. That's big for me."
  3. "I have become more determined to set SMART goals and work towards achieving them. Every step towards my goals will be viewed as one more victory."
  4. "I walk more than before and I eat a lot more fruits and veg."
  5. "I've gotten out of my funk. Taken more time for myself."
  6. "I make sharper and conscience and more informed choices."
  7. "I have been seeing the correct doctors for my illness. I am on my way to a healthy life."
  8. "Increased energy and motivation. Conscious of what I eat, less sweets."
  9. "My eating, coping with stress, closer to my husband."
  10. "Motivated to get back to my pre-baby weight."
  11. "Eating healthier and drinking more water."
  12. "I wish I could share this program with everyone who is interested in changing something important in their life."

Summary

At the end of the 10-week cycle, our participants for Cycles 1-6 reported increased levels of physical activity, nutrition label reading, fruit and vegetable consumption, time for self-care, and folic acid supplementation, and decreased sugary beverage consumption and perception of stress. These results were approximately sustained or slightly improved between post-test and follow-up (3 to 14-months) for physical activity, nutrition label reading, time for self-care, and perception of stress. While the results for sugary beverage consumption, fruit and vegetable consumption, and folic acid supplementation did not hold as strongly, they all remained higher than their pre-test levels. In their qualitative responses participants expressed that Thrive helped them to: feel motivated, love themselves, have a positive mentality, feel energized, feel confident, relieve/manage stress positively, and to set and achieve attainable goals.

Our ongoing challenge is to retain participants within the cycle and to follow-up with them afterwards, due to the transience of our population and life circumstances (such as work, school, personal illness, family illness, childcare, etc.) that impede their participation. We are working on finding ways to keep our Thrive alumnae engaged and motivated to continue working on their health goals, and to improve our participation through expanded outreach, increasing participation of clients from Healthy Start and other NMPP programs, and expanding the program for Spanish-speaking women.

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. ______ Res. No. ______
☐ in favor ☐ in opposition

Date: 11/13/13

(PLEASE PRINT)

Name: Dr. Ross Wilson

Address: 40 Worth St. NY NY

I represent: HHC

Address:

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Date: 11/13/13

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Name: Dr. Machelle Allen

Address: 40 WWorth St NY NY

I represent: HHC

Address:

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Appearance Card

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☐ in favor ☐ in opposition

Date:

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Name: DR. Deborah Kaplan

Address:

I represent: Dep't of Health

Address:

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Date: ________

(PLEASE PRINT)

Name: DR. Lorraine Boyd
Address:
I represent: Dept of Health
Address:

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Name: DR. Tamisha Johnson
Address:
I represent:
Address: Dept of Health

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Name: Danielle Sullivan
Address: 221 E 122nd St #1903 NY NY 10035
I represent: Northern Manhattan Perinatal
Address: 127 W 127th Street, NY NY 10027

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Name: Marci Rosa / Corinna Lihser

Address: 40 Worth St. 5th floor

I represent: Public Health Solutions

Address: 40 Worth St. 5th floor

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Date: 11/13/13

(PLEASE PRINT)

Name: Robert Lederer

Address: 851 Grand Concourse, Rm 914

I represent: Bronx Health Link.

Address: ______

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Date: ______

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Name: Nan Strauss

Address: ______

I represent: Choices in Childbirth

Address: and Childbirth Connection

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Date: ______

(PLEASE PRINT)

Name: Chanel Porchia
Address: 375 Stuyvesant Ave Brooklyn NY
I represent: Ancient Song Doula Services
Address: 375 Stuyvesant Ave Brooklyn NY

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Appearance Card

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☐ in favor ☐ in opposition

Date: 11/13/2013.

(PLEASE PRINT)

Name: Joyce Y Hall
Address: LIU Brooklyn, 1 University Place
I represent: CCEIM.
Address: ______

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☐ in favor ☐ in opposition

Date: ______

(PLEASE PRINT)

Name: Pamela Davis
Address: 111-06 Merrick Blvd. Jamaica, NY
I represent: Citywide Coalition to End Infant Mortality
Address: ______

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☐ in favor ☐ in opposition

Date: 11/13/2013

(PLEASE PRINT)

Name: Ihotu Ali
Address: 57 East 117th St. #2, NYC, NY 10035
I represent: Northern Manhattan Perinatal Partnership
Address: 127 West 127th St. NYC, NY 10027

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Appearance Card

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☐ in favor ☐ in opposition

Date: ________

(PLEASE PRINT)

Name: Beverly Fettman
Address: 5910 Arlington Ave Bx 10471
I represent: ________
Address: ________

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Appearance Card

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☐ in favor ☐ in opposition

Date: Nov. 13, 2013

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Name: Rita Henley Jensen
Address: 6 Barclay St. 6th floor
I represent: Women's eNews
Address: 6 Barclay St 6th floor

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Date: ______

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Name: Jacqueline Gilbert, RN
Address: 131 W. 33 St NYC
I represent: NYSNA
Address: same

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Appearance Card

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☐ in favor ☐ in opposition

Date: 11-13-13

(PLEASE PRINT)

Name: Georgianne Glose
Address: 105 Ashland PL Brooklyn
I represent: Fort Greene SNAP
Address: 324 Myrtle Ave Brooklyn

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Appearance Card

I intend to appear and speak on Int. No. ______ Res. No. ______
☐ in favor ☐ in opposition

Date: ______

(PLEASE PRINT)

Name: Eileen Schneider
Address: 131 W 33 St, NYC 10001
I represent: NYSNA
Address: same

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