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CDC Efforts to Improve Women's Health

Statement of

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Introduction

Good morning. I am Dr. James Marks, Director of the Centers for Disease Control and Prevention's National Center for Chronic Disease Prevention and Health Promotion. I am pleased to be here today to participate in this important public health hearing on women's health.

Burden Background

As this Subcommittee knows, the burden placed on our society by chronic diseases is enormous. Heart disease, stroke, diabetes, and cancer combine to cause 63 percent of the deaths or 1.5 million Americans in the United States each year. In addition, more than ten percent or 25 million Americans experience major limitations in daily living due to a chronic disease or condition. The combination of chronic disease death and disability accounts for roughly 70 percent of the $1.2 trillion spent on health care each year in the United States.

The increasing burden these diseases and risk factors impose on the health of women in our society is also problematic. Let me be more specific, while heart disease and stroke are commonly viewed as diseases that primarily affect men, more than half of all people who die of heart disease and stroke are women. Lung cancer has now surpassed breast cancer as the leading cause of cancer deaths among women and a woman who smokes has over four times the risk of dying from lung cancer as she does from breast cancer. Despite that fact, 22 million adult women currently smoke and over two million high school girls smoked during the past month.

Diabetes is now the sixth leading cause of death in the general population, and diabetes disproportionately affects racial and ethnic minority populations, the elderly, and women. More women than men have diabetes and subgroups of women suffer disproportionately from this disease. For example, between 1990-2000, diabetes rates in women aged 30-39 years increased 50 percent. In addition, women with gestational diabetes, a unique and serious condition in women, have up to a 63 percent risk of developing type 2 diabetes later in life.

Unfortunately many of these cases are undiagnosed and these women with diabetes are at a greater risk – two to four times – for cardiovascular disease and stroke. Physical activity is a key factor in reducing a woman's risk for cardiovascular disease and stroke and yet 75 percent of adults are not physically active. This figure is even more striking when you consider more women than men are physically inactive. Further complicating this problem is the growing obesity epidemic in our society and among women with an estimated 50 percent of U.S. women older than 20 overweight.

The onset of chronic diseases and conditions are not the only preventable health risks facing American women today. Maternal mortality remains an important public health issue in the 21st century. Over the last 20 years trends in maternal morbidity and mortality have not improved and, even more alarming, the racial and ethnic disparities associated with maternal death in the United States have not decreased. Racial and ethnic disparities persisted among black, Native American, Hispanic and Asian immigrants, or older women who were more likely to die (300 to 400 percent) than their white or younger counterparts. The *Healthy People 2010* goal is to reduce the maternal mortality ratio to 3.3 maternal deaths per 100,000 live births and

eliminate racial disparities in health outcomes. With the current ratio at 9.9 per 100,000 live births, we have much work to do to this goal and prevent needless maternal deaths. In addition, we are also striving to prevent the even more common pregnancy-related complications such as hemorrhage, ectopic (tubal) pregnancies, pregnancy-induced hypertension, infection, and postpartum depression. For every 100 pregnant women who go to the hospital for delivery, 20 are hospitalized before delivery for complications. For every 100 women who deliver an infant, 31 have a complication during labor and delivery. Again, Healthy People 2010 sets a reasonable goal of no more than 24 women with complications per 100 deliveries and we have a long way to meet this goal.

CDC has accomplished many noteworthy improvements in the area of women's health, including in the area of breast and cervical cancer, diabetes , etc. and developing effective prevention strategies designed to reduce the burden of these risk factors and diseases.

Prevention Research

Prevention research represents the scientific foundation upon which CDC relies, to engage in our mission as the nation's prevention agency. Prevention research identifies the risk factors for disease, designs and tests interventions to prevent them, and develops and evaluates systems to deliver the interventions to the populations who need them. Prevention research serves as a transition vehicle that carries the basic biomedical research from the lab bench to the public health trench where the preventive services can be effectively delivered and sustained

over time. Prevention research results form the backbone of public health policies, standards and guidelines, best practices, and evaluation of their impact on health outcomes.

CDC's prevention research activities include two complementary areas: the Prevention Research Centers and the Extramural Prevention Research Program. CDC's Prevention Research Centers are a national network of academic, public health, and community partners that collaborate to conduct scientific research and put the results into everyday practice. The first three centers were funded in 1986, and over 15 years later, the program is comprised of 26 academic research centers in 24 states. Each center conducts at least one core research project with an underserved population that has a disproportionately large burden of death and disability, often due to adverse socioeconomic conditions. The centers work with diverse groups, such as women, adolescents, and the elderly and in geographically distinct areas, such as Harlem, Appalachia, and the U.S.-Mexico border.

The unique contribution comes from the close and long-standing relationships that develop between researchers at the academic institutions and the people they serve. Because of ties to surrounding communities, built through community advisory groups, researchers can develop and introduce prevention strategies desired by the communities. Moreover, by understanding community attitudes and beliefs and by making the most of community resources, researchers can simultaneously address multiple health risk factors. Further, academic affiliations often enable researchers to engage with communities in which government researchers traditionally might not have been welcomed. Prevention researchers also help

develop community capacity to sustain healthy behaviors and activities after the researchers are gone.

In other CDC supported studies, investigators developed and pilot-tested materials appropriate for different socio-cultural groups. Researchers also have tested the effects of church-based interventions and health promotion strategies that incorporate spirituality. Some studies resulted in highly tangible benefits–such as walking trails that promote physical activity among men as well as women in a community. The contributions to women's health research also included more than 50 research instruments and assessment tools–such as measurement scales, surveys, and focus group guides–and more than 20 training curricula and instructional materials. The measurable improvements that occurred in the health of the women who participated in these studies also should not be overlooked or underestimated.

CDC's Prevention Research Centers at the University of Alabama at Birmingham (The Wilcox County Health Project) and the University of North Carolina at Chapel Hill (Health Works for Women) are two examples of this program in action. While death and disability from heart disease are higher for African Americans than whites, less is known about how to reduce heart disease risk factors among African Americans than for whites. In 1998, the University of Alabama's Center for Health Promotion started a demonstration project to reduce the risk for cancer and heart disease among African Americans living in three rural communities in Wilcox County, Alabama. About 70 percent of the county's residents are African American, and nearly half live below the poverty level. The intervention began by recruiting Community Health Advisors (CHAs), who were trained in leadership skills, community problem solving, and

strategies for reducing risks for chronic diseases–in themselves, in their families, and among their neighbors. Nearly all of the more than 50 CHAs who graduated from the project's training were women. The CHAs conducted community wide health promotion activities as well as classes on nutrition, physical activity, and smoking cessation. Ongoing activities that hold promise of reducing disease risks include the creation of walking clubs and Farmer's Markets (to compensate for fresh fruits and vegetables not readily available at local grocery stores), the distribution of anti-smoking materials and heart healthy cookbooks, and the construction of a walking trail. While the participants benefit from this research, the researchers collect valuable data about how to design cost-effective interventions that can be articulated and widely disseminated to women and men in comparable communities. Only through close community participation, trust, and mutual benefits is such knowledge gained through the Prevention Research Centers.

The University of North Carolina's Center for Health Promotion and Disease Prevention conducts some prevention research in the workplace, an environment that serves as a creative partner for research and dissemination. Health Works for Women focuses on women working in textile manufacturing in a rural section of North Carolina. Many of the women who live and work in the area are at a higher than average risk of developing chronic diseases such as heart disease, cancer, or diabetes. The program, which is unique in its focus on blue-collar women, is increasing physical activity, improving nutrition, and decreasing smoking, and increasing screening for breast and cervical cancer among participants. As in Alabama, women are recruited as lay health advisors and trained to educate co-workers about healthy ways of living. The

women engaged in the study have credited the program with having given them guidelines and group support. Researchers codify the elements that contribute to the program's success and replicate them at other sites. They also note the extra benefit from this type of intervention: the reach beyond the worksite, into the participants' homes, churches, and communities. Testing and disseminating approaches such as these does not require a research laboratory but partnership and shared values.

In discussing women's health, it is important to recognize that our prevention researchers also are addressing the passage into womanhood, which does not begin at one given age. Several centers, including the Johns Hopkins University's (JHU) Center for Adolescent Health Promotion and Disease Prevention and the University of Minnesota's National Teen Pregnancy Prevention Research Center, are promoting healthy development among young women. At JHU, researchers are studying relationships between health behaviors and school performance of middle school youths. At Minnesota, researchers are conducting peer health education training to evaluate its effectiveness on preventing pregnancy among 13 to 17 year olds at high risk for pregnancy.

The Prevention Research Centers have the flexibility–as well as the requirement–to draw on multidisciplinary faculty with expertise in public health, medicine, psychology, nursing, social work, education, and business. The knowledge from all these disciplines must converge so that the research and practice communities can understand and successfully address the inherent complexity of chronic health problems. The Prevention Research Centers long-term alliances

with state and local health departments, other health care delivery programs, and community and voluntary organizations have enabled the translation of research findings into practice.

Over many years now, prevention research in general and CDC's Prevention Research Centers in particular have demonstrated remarkable contributions to enhancing women's health, contributions crucial to sustain.

In 1999, CDC established the Extramural Prevention Research Initiative to begin to unlock the extraordinary benefits of prevention research. A $15 million appropriation launched this initiative and provided support for investigators in academic settings with linkages to communities. The driving principles of the initiative are to:

- Support population-based research priorities identified by CDC and external experts in prevention science and public health practice;
- Incorporate community goals and perspectives in research design and conduct;
- Support investigator-initiated extramural research;
- Use external peer review to identify the highest-quality research; and
- Ensure translation of research findings into public health tools and best practices.

The initiative is now in its second funding cycle and anticipates about 30 new projects will be funded in FY02. What is unique about this second funding cycle is that practitioners, policymakers, and community members are being invited to participate with researchers in

identifying important research questions and in interpreting and applying the research findings so that the research will have greater relevance and usefulness for individual communities. The program announcement was published on February 21, 2002 and can be accessed on CDC's website at the following address: http://www.phppo.cdc.gov/eprp/PRPA02003.asp.

While CDC has dedicated significant resources to the prevention research, the value of this research lies in the ability of the public health community to translate this research into effective public health practice. Without this translation the potential savings in lives and dollars will never be realized and prevention research will fall into the abyss of "research for research's sake." At CDC, we are dedicated to developing public health programs that are built in the foundation on prevention research and dedicated to saving lives and reducing the economic burden of health care on our society. Prevention research can play a vital role in developing prevention interventions, improving the delivery of prevention services and improving the quality of health care. The following programs will describe how prevention research has and will provide the necessary foundation for current and future public health initiatives.

Developing Prevention Interventions through Research

Safe Motherhood is a universal issue that affects women, men, children, the workplace, health systems, and society as a whole. It encompasses women's health before, during, and after pregnancy, and is grounded in the understanding that healthy pregnancies can occur only in the context of general good health for women. Safe motherhood addresses the physical, mental, cultural, and socioeconomic aspects of women's lives. In the fall of 2001, CDC and its partners

held the National Summit on Safe Motherhood, which brought together a broad spectrum of researchers, clinicians, program experts, policymakers, and advocates to address the complex challenges of safe motherhood. This summit established four major goals that need to be considered to address the health risks associated with motherhood in this society. These goals include: reducing the rates of maternal mortality and complications; eliminating disparities in maternal health outcomes; collecting good data on the frequency of these complications and good research to find out why these problems occur; and, utilizing these research findings and moving to evidence-based prevention interventions. I would like to take this opportunity to review the challenges associated with these goals and the current CDC efforts to address these challenges.

Maternal mortality is not decreasing according to evidence compiled by CDC's National Center for Health Statistics. In addition, CDC's Pregnancy Mortality Surveillance System (PMSS), a cooperative effort with state health departments, provides evidence that the risk of maternal death is generally underestimated by relying on death certificate information alone. Through PMSS, CDC collects birth and death certificates for pregnancy-related deaths and compiles all available information in PMSS. This information can be used to monitor the number of pregnancy-related deaths and to analyze factors associated with them. For pregnancy complications, we have estimated their magnitude from data based on numbers of hospitalizations during pregnancy; however, due to changes in prenatal medical management, today this information is unable to capture the complexity and spectrum of these complications.

The elimination of population disparities is key to reducing the rates of complications and mortality. PMSS has also given us information about disparities. A woman's race, ethnicity, and age affect her risk of pregnancy-related health consequences. These disparities are most evident for pregnancy-related deaths. In addition to racial and ethnic disparities, the risk of death also differs by age. Women aged 35-39 are twice as likely to have a pregnancy-related death compared with women age 20-24, and the risk is even greater for women over 40. Since pregnancies among women in their late 30s have increased by 74 percent, and among women over 40 by 38 percent in the last quarter of a century, the number of women exposed to this increased risk is rising. CDC collaborates with private and public partners across the United States to address the disparities issues. These collaborations include:

- A study with University of Illinois at Chicago to define severe complications during pregnancy and risk factors for these conditions;
- A study with Columbia University to investigate illness during pregnancy from infectious causes;
- A research effort with the state of Massachusetts to determine the reasons some women who have had a cesarean section experience uterine rupture during a vaginal birth later in life;
- A collaboration with the Massachusetts Department of Health to develop the first comprehensive data set for a state population of births conceived using assisted reproductive technology;

! A publication with professional and public health organizations, and other Federal agencies to guide states in the conduct of maternal mortality reviews, titled "Strategies to Reduce Pregnancy-Related Deaths. From Identification and Review to Action;"

! A project with Wake Forest University to investigate risks for maternal mortality and the reasons risks differ according to race;

! A collaboration with the Health Resources and Services Administration through the Maternal and Child Health Epidemiology Program (MCHEP) to provide technical assistance to states to enhance their capacity to gather and use data. Through MCHEP, epidemiologists specializing in maternal and child health serve eleven states (California, Georgia, Hawaii, Mississippi, Michigan, Louisiana, Ohio, Maryland, Colorado, Maine, and Kentucky) and two Indian Health Agencies (Northwest Portland Indian Health Board and the Indian Health Service regional office in Albuquerque);

! A collaboration with states on the Pregnancy Risk Assessment Monitoring System (PRAMS) to monitor risk factors for adverse pregnancy outcomes; and,

! A National STD-related Infertility Prevention Project which provides routine screening for chlamydia of at-risk women at family planning clinics and in managed care settings.

Despite these efforts, neither complications nor disparities among American women can be fully addressed due to inadequate data sources. There is no standardized method to define conditions that are considered pregnancy-related illness. Even pregnancy-related deaths, events that generate vital records, are undercounted and sometimes improperly classified. The recent shift to management of complications in an outpatient setting further hinders our ability to accurately measure these conditions. Therefore, estimating the burden of these conditions on a state and national level is difficult. CDC is planning a workshop to address problems associated with defining and measuring maternal morbidity, and to investigate the use of previously unexplored data sources. Collecting accurate data is essential to drive a meaningful research agenda.

Finally, we learned from the National Summit on Safe Motherhood that local, evidence-based public health prevention will occur only when we have improved maternal health data and enhanced research in maternal health. As we learn more about maternal complications and their risk factors, researchers at national and state levels, universities, and in the private sector will have a rational basis to design interventions and demonstration projects. We have made much progress but there is still much to do to, reduce maternal deaths and complications and eliminate disparities.

Improving Prevention Services

One of CDC's most successful prevention interventions has been the National Breast and Cervical Cancer Early Detection program. Recognizing the value of appropriate cancer

screening, Congress passed the Breast and Cervical Cancer Mortality Prevention Act of 1990 (Public Law 101-354) which enables CDC's National Breast and Cervical Cancer Early Detection Program to provide critical breast and cervical cancer screening services to underserved women, including older women, women with low incomes, and women of racial and ethnic minorities. As the flagship of CDC's cancer control efforts, this program has saved lives, and raised the consciousness of Americans everywhere about the importance of screening and early detection in preventing deaths from cancer.

Through September of 2000, more than 3.0 million screening tests have been provided to over 1.8 million women. That number includes 1.6 million Pap tests and 1.4 million mammograms. Almost half of these screenings were to minority women, who have traditionally had less access to these services. Over 9,500 women have been diagnosed with breast cancer, more than 40,000 women were diagnosed with precancerous cervical lesions, and 715 women had invasive cervical cancer.

The program's success is due in part, to a large network of professionals, coalitions and national organizations dedicated to the early detection of breast and cervical cancer. This success has been reflected in a broader effort to promote screening to the general public. As a result, the percentage of women aged 40 and older who reported ever having a mammogram increased from 64 percent in 1989 to 85 percent in 1997, and the percentage of women who reported receiving a mammogram within the previous two years increased from 54 percent in 1989 to 71 percent in 1997. Disparity rates for mammography utilization among most minority groups have either been eliminated or reduced substantially, and overall, there has also been a

recent decline in the rate of breast cancer mortality among all women. While there remains much to be done, our most recent mortality data shows that 18.8 women per 100,000 die of breast cancer. This achieves our Healthy People 2010 goal of reducing mortality from 23 women per 100,000 to 20.6 women per 100,000.

While we acknowledged the importance of preventing or curing all cancers, let me be clear: we know *today* how to prevent up to 30 percent of all deaths from breast cancer. It's not a new scientific breakthrough; it's mammography–this technology and the recommendation for regular screening has been around since the late 70's. Mammography is currently the single most effective method for diagnosing breast cancer early. The longer breast cancer remains undetected and untreated, the greater the likelihood it will spread. The five-year survival rate drops from 97 percent when breast cancer is diagnosed at the local stage to 21 percent when it is detected after having spread. We know these figures are not lost on this Committee. In fact, exemplifying Congress's commitment to saving lives was demonstrated in October 2000 with the signing of the Breast and Cervical Cancer Treatment Act of 2000 into law. This law gives states the option of providing full Medicaid benefits to uninsured women who are screened with breast or cervical cancer by the CDC screening program and found to need treatment. We commend Congress, this committee, the National Breast Cancer Coalition, and the American Cancer Society for this unprecedented legislation. To date, 37 cover the new Medicaid option.

What's our vision for the future of the breast and cervical cancer early detection program? Quite simply, we want no woman to die because she lacked knowledge, access or finances for screening services. The science is there but the challenge lies in identifying,

educating and motivating women who have rarely or never been screened for breast cancer. This is challenging and labor intensive work that relies on CDC's outreach efforts to bring the science of screening into the lives of the women who need it the most – those most at risk for cancers that are preventable and survivable.

Improving Quality of Care

Today, through the diligence of science and research, and the constancy of surveillance, we know a lot about diabetes– and that knowledge base is expanding rapidly. Through significant advances in diabetes research, we know that improving nutrition, increasing physical activity, controlling blood glucose levels and improving access to proper medical treatment can delay or stop the onset and progression of diabetes complications. Applying our knowledge could prevent much of the suffering caused by the devastating complications from diabetes. And now, there is strong evidence that prevention or delay of the onset of diabetes is possible if we can develop effective strategies and interventions targeting weight loss, increased physical activity, and improved nutrition.

As part of a comprehensive effort to improve women's health, CDC launched a new National Initiative for Diabetes and Women's Health to focus national attention on the unique impact diabetes has on women's health and how it can affect future generations. Cosponsors in this endeavor include the American Diabetes Association (ADA), the American Public Health Association (APHA), and the Association of State and Territorial Health Officials (ASTHO). This initiative consists of three phases: the preparation and publication of *Diabetes & Women's*

Health Across the Life Stages: A Public Health Perspective, a monograph that examined the issues that make diabetes a serious public health problem for women (available at http://www/cdc/gov/od/oc/media/r010509.htm or http://www/cdc/gov/diabetes); the development of *Proposed Recommendations for Public Health Action* focused on the strategies, policies, surveillance, and research for improving the lives of women diagnosed with or at risk for diabetes (completed in November 2001); and finally, the preparation of the *National Action Plan for Diabetes and Women's Health - A Public Health Initiative* that will outline how the recommendations should be implemented, by whom, and in what time frame during a national diabetes summit scheduled for August 2002.

This year marks the 25th anniversary of CDC's diabetes program-- a program established by Congress to translate diabetes research into public health practice. The program began in 1977 with an appropriation of $1.5 million to fund 10 states and 10 FTE's. Today, the diabetes program funds all 50 states, the District of Columbia and eight U.S. territories to implement diabetes prevention and control programs. Since its inception, the goal of CDC's diabetes program has been to reduce the preventable burden of diabetes by translating diabetes research into public health practice. CDC's diabetes program accomplishes its mission by developing surveillance systems for use at state and local levels, especially for monitoring the diabetes burden among certain racial and ethnic populations; developing and implementing innovative interventions and prevention strategies for eliminating racial and ethnic health disparities; and by informing and educating people with diabetes, providers and policy makers about the seriousness of diabetes and the importance of preventing diabetes related complications. The program has

built a national network of state-based diabetes control programs, and it has a strong track record and impressive outcome data.

The diabetes program to date has focused on tertiary and secondary prevention. The program has evolved with advances in diabetes research science; and since 1994, moved away from providing direct care for a few to influencing improved quality of care on a large-scale (i.e. health systems) to help all people with diabetes. This approach requires strong partnerships at the national and state levels and accountability based on the progress achieved in meeting explicit and concrete national objectives.

CDC relies heavily upon the States to provide the essential framework for delivering population-based diabetes prevention and control programs. The programs are required to work with partners to improve the quality of, and increase access to diabetes care, to involve communities in improving diabetes control, to inform and educate health professionals and people with diabetes about the disease, and to identify high risk populations, including American Indians. These state-based diabetes control programs are the primary implementation arm of CDC's National Diabetes Program.

The accomplishments of the state-based diabetes control programs reflect several process and intermediate outcome measures. One example of these measures is glucose control, which is measured by the blood test - A1C (the blood glucose test all persons with diabetes should have about twice a year which provides a long-term measure of glucose in the blood). A1C levels predict future diabetes complications, and in general, the lower the A1C measurement, the better. Obtaining this test is the first step; reducing the A1C level is a necessary second step.

Both performance indicators are now used within the HEDIS system. Other indicators of program performance include prevention behaviors, e.g. examining eyes or feet; and some data on more distal outcomes, such as lower extremity amputations.

To illustrate the depth and breadth of the impact the diabetes control programs, I will share the accomplishments of four Diabetes Control Programs (DCPs)- Michigan, New York, Project DIRECT in NC, and Minnesota. These programs represent efforts in rural, urban, community and managed care settings. They focus on different populations and approaches, but common elements cut across them - funding, technical guidance, effort, time and commitment to evaluation. These programs represent a small number of DCPs, currently 16, that receive expanded funding to provide statewide diabetes control activities.

Michigan

The six regional Diabetes Outreach Networks are the cornerstone of the Michigan DCP. These networks, especially in rural areas, create partnerships among hundreds of community agencies to strengthen diabetes prevention, detection, and treatment throughout the state. The first network UPDON was established in the rural Upper Peninsula. It was our first indication that improved distal outcomes could be examined. After its first 5 years, UPDON showed promising decreases in hospitalizations and lower extremity amputations, in the 25 percent range. More recent data from 1997 show continued, impressive improvement in key preventive

care practices, including A1C testing, foot exams, eye exams, flu and pneumococcal vaccinations, and lipid profiles.

The remaining Diabetes Outreach Networks of MI have expanded this model, and there are now more than 26,000 persons with diabetes in the Quality Care Improvement Project. The the rate of A1C testing has doubled in about 4 years. Getting the right test at the right time is the first step in preventing diabetes complications. The next step will be to improve A1C levels. Because of such compelling data, the state of Michigan itself now contributes more money to diabetes prevention and control than CDC - just over $3 million per year, in essence a 4 to 1 match with CDC's funds.

New York

The New York State Diabetes Prevention and Control Program adopted and modified the Michigan model for more urban settings by establishing regional community coalitions and academic Centers of Excellence to improve the quality of diabetes preventive care and access to care. Examples of the interventions include complex programs to get community groups and clinicians to achieve consensus on what should be done, and then to identify specific activities to convert this consensus into reality, e.g. mailing reminders about pending clinic visits; or having people with diabetes take their shoes and socks off in the exam rooms to help stem the rate of amputation.

From 1996 to 1999, hospitalization rates for persons with diabetes decreased by 30 percent and lower extremity amputation rates decreased by 36 percent. In addition, rates of

annual A1C testing more than quadrupled, increasing from about 15 percent in 1994 to 77 percent in 1999. The public health interventions that underlie these impressive gains do not rely on new molecular or genetic science. Rather, they represent thoughtful, cooperative, and sustained efforts to take existing science, and then decide how to change the actual delivery of diabetes preventive care.

Minnesota

Project IDEAL, Improving Diabetes Care through Empowerment, Active Collaboration, and Leadership, is an important DCP project which targets a managed care setting. The Minnesota Health Department and HealthPartners developed project IDEAL, a large managed care organization. IDEAL is a system-wide approach that enables clinics to re-engineer delivery of chronic disease care by changing the structure and process of diabetes care, through a variant of case management.

The IDEAL project demonstrates that it does take time to achieve, document, and publish concrete results. For IDEAL, teams were formed in 1994, baseline data were collected from 1995 to 1996, the intervention was conducted in 1997-98, and the project is now in the dissemination phase.

During the pilot, substantial increases were observed in annual eye exams, foot exams, and microalbumin testing, and these findings were replicated in the intervention. In addition, average A1C values decreased during the trial from 9.2 percent at baseline to 7.7 percent in the second year, and this contribution effect has been duplicated in cross-sectional data for the entire

medical group, with reductions from 8.6 percent in 1994 to 7.4 percent in 1999. For reference, a 1 percent decrease in A1C is associated with a 40 percent decrease in microvascular complications. Another important note: these levels of A1C - in the low 7's - are comparable to those obtained with intensive treatment in the Diabetes Control and Complications Trial and the U.K Prospective Diabetes Study, two landmark clinical trials with relatively unlimited resources.

Similarly, average LDL-cholesterol concentrations decreased from 132 to 116 mg/dL from 1995 to 1999. Other impacts of this strong collaboration include a higher priority for diabetes care in GroupHealth, application of the IDEAL methodology to address asthma, heart disease, hypertension, and other conditions. In addition, Stratis Health, the Minnesota Medicare PRO, is implementing IDEAL with its clinics.

This strong collaboration has resulted in a higher priority for diabetes in managed care, and application of the IDEAL methodology to address heart disease, hypertension, and asthma.

These examples, from diverse settings - rural, urban, community and managed care - demonstrate that DCP's can make a real difference in improving the quality of diabetes care. These interventions provide an array of proven, effective programs for other states and communities. With adequate funding, guidance, and time, they clearly work. They achieve outcomes comparable to those in the most rigorous clinical research studies. If the approaches are further disseminated, the public health impact will be substantial.

Diabetes is a prototypical chronic disease. It is serious, common, costly, and complex. It imposes an enormous and growing public health and societal burden. For women, the impact of diabetes is unique and profound. The quality of care for many people with diabetes, while

improving, still remains poor. Through translation research, state DCP's and their collaborators have developed a potent and growing array of science-based interventions to reduce the burden of diabetes, through secondary and tertiary prevention.

The compelling new evidence for primary prevention of diabetes indicates that investment in translation research for primary prevention must now complement ongoing work to improve the quality of care. The states and CDC are beginning to wrestle with this important and exciting challenge.

Building On Our Successes

Finally, let me describe an ongoing effort to utilize the success of one prevention program as a springboard for testing the efficacy of another prevention program. As this Committee knows, Congress established CDC's Well Integrated Screening and Evaluation for Women Across the Nation (WISEWOMAN) program in 1993 as a pilot preventative services program that utilized the existing breast and cervical cancer-screening program as an opportunity to offer low-income women additional screening services.

CDC, currently supports 12 WISEWOMAN projects in 11 states. These projects utilize the existing state-based breast and cervical cancer screening system to offer women heart disease screenings, chronic disease risk factor screening, dietary and physical activity interventions, and medical referrals when appropriate. Since the programs inception, approximately 10,000 low income and uninsured women have been screened for heart disease risk factors. Between 50 and 75 percent of the women screened at each site were found to have either high blood pressure or

high cholesterol. Women screened for these risk factors were provided intensive individual counseling, group counseling, and lifestyle classes aimed at improving nutrition and physical activities levels.

CDC is currently evaluating the effectiveness of these interventions. The goal of this preventive research effort is to determine interventions that most effectively prevent or delay cardiovascular and other chronic diseases among these at-risk women. CDC is currently in the process of evaluating the effectiveness of these programs, in part, through collaboration with the Prevention Research Centers and anticipates that the program will continue to test prevention interventions and disseminate the successful strategies as they are identified through the program. Once these interventions are identified, CDC will work with states to implement the interventions where appropriate.

Conclusion

Prevention research provides us with the opportunity to link basic biomedical research to the world of public health. The biomedical breakthroughs of today and tomorrow provides the fuel to ignite public health interventions that will save lives and reduce spiraling economic costs. The ideal of a cure for these diseases is something we should always strive for no matter the circumstances. However, until these cures are discovered, we need to use the basic research as effectively as possible and save lives through prevention. We should always strive for prevention even after cures are found, since there are often side effects to disease and to medication.

Let me share a story about one life saved by the prevention research I have described here today. It's Beth's story. Beth's husband David lost his job after 28 years. Before David lost his job, Beth made sure to get a mammogram every year. This time, Beth waited five years before she was checked. She might never have had another one if she hadn't found out about Ladies First, the Vermont breast and cervical cancer-screening program. When Beth went in for her free mammogram, it was none too soon. Beth's mammogram showed a lesion that turned out to be cancer. The good news is that doctors caught Beth's cancer early enough to treat it successfully. With other help from Ladies First, the cancer treatment was not a financial burden for Beth or her husband. Beth credits Ladies First with saving her life.

There are many Beths out there, and we love to hear their stories. But what concerns us most are the Beths we don't hear about–the women who do not get regular screening because they don't know about the programs or the programs do not exist yet. We want to identify as many of these women as possible and catch their diseases early so that we can make the science work for those who need it the most and those who need it now.

That concludes my testimony. I would be happy to answer questions from the Subcommittee.