AN EVALUATION OF THE NATIONAL CENTERS OF EXCELLENCE IN WOMEN'S HEALTH

Executive Summary

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An Evaluation of the National Centers of Excellence In Women's Health

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EVALUATION TEAMS

Quantitative Evaluation Team

Dr. Roger Anderson, Wake Forest University – Team Leader

Dr. Carol Weisman, Chair of the CoE Evaluation Working Group, University of Michigan

Dr. Sarah Scholle, University of Pittsburgh

Dr. Robert Oldendick, Survey Research Laboratory of the Institute for Public Affairs at the University of South Carolina

Dr. Katherine Lind, Survey Research Laboratory of the Institute for Public Affairs at the University of South Carolina

Jillian T. Henderson, University of Michigan

Fabian Camacho, Wake Forest University

Shellie Ellis, Wake Forest University

Kathleen Dziak, Wake Forest University

Qualitative Evaluation Team

Dr. Robert M. Goodman, Tulane University – Team Leader

Dr. Margaret R. Seaver, Boston University

Dr. Seunghyun Yoo, Tulane University

Dr. Suzanne Dibble, University of California, San Francisco

Rachel Shada, Tulane University

Dr. Bonnie Sherman, Boston University

Farley Urmston, University of California, San Francisco

Dr. Nancy Milliken, University of California, San Francisco

Dr. Karen M. Freund, Boston University

Input into the methodology, results and reports also were provided by the CoE Center Directors and the CoE Evaluation Working Group.

CoE Center Directors

Dr. Karen Freund	Boston University
Dr. Janet Pregler	University of California, Los Angeles
Dr. Nancy Milliken	University of California, San Francisco
Dr. Andrea Dunaif	Harvard University
Dr. Alice Dan	University of Illinois at Chicago
Dr. Rose Fife	Indiana University
Dr. Sharon Hillier	Magee Womens Hospital/University of Pittsburgh
Dr. Glenda Donoghue	MCP Hahnemann University
Dr. Timothy Johnson	University of Michigan
Dr. Jerome Strauss, III	University of Pennsylvania
Dr. Delia Camacho	University of Puerto Rico
Dr. Jeanette Magnus	Tulane/Xavier Universities of Louisiana
Dr. Sally Shumaker	Wake Forest University
Dr. Emily Wong	University of Washington, Seattle
Dr. Molly Carnes	University of Wisconsin, Madison

CoE Evaluation Working Group

Dr. Carol S. Weisman	University of Michigan—Chair
Dr. Karen Freund	Boston University
Dr. Margaret Seaver	Boston University
Dr. Allison Diamant	University of California, Los Angeles
Dr. Suzanne Dibble	University of California, San Francisco
Dr. Paula Johnson	Harvard University
Dr. Suzanne Feetham	University of Illinois at Chicago
Ms. Sarah Shirk	University of Illinois at Chicago
Dr. Anna McDaniel	Indiana University
Dr. Sarah Scholle	Magee Womens Hospital/University of Pittsburgh
Dr. Ana Núñez	MCP Hahnemann University
Dr. Jerome Strauss, III	University of Pennsylvania
Dr. Delia Camacho	University of Puerto Rico
Dr. Robert Goodman	Tulane/Xavier Universities of Louisiana
Dr. Roger Anderson	Wake Forest University
Dr. Douglas Levine	Wake Forest University
Dr. Marcia Killien	University of Washington, Seattle
Dr. Julia McMurray	University of Wisconsin, Madison

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ABSTRACT

This report results from a two-year evaluation study of the 15 National Centers of Excellence in Women's Health (CoEs) that were in operation at the initiation of the study in 1999. The evaluation employed both qualitative and quantitative methodologies to assess the following: whether a national model developed for the CoEs was implemented (consisting of five core components: clinical care, research, professional education, leadership development, and community outreach); the type of impact being designated as a CoE had on the academic health centers that housed them; the CoEs' greatest strengths and challenges since receiving national designation (the CoE program began in 1996); the quality of clinical care provided by the CoEs; and the level of satisfaction experienced by patients attending the CoE clinics. The evaluation methods included extensive interviews with representatives from the CoEs and their home institutions, and extensive surveys of CoE patients for comparison with national data and local survey samples taken from three communities in which CoEs also reside.

The study findings indicate that, overall, the national model was adopted across the 15 CoEs in the study, the national designation reinforced credibility for women's health at the academic medical centers that housed them, and the designation further helped stimulate the acquisition of resources for the CoEs. Also, the Centers contributed to a greater focus on women's health issues than had existed previously in the medical and health curricula of academic health centers, and the CoEs aided in the mentoring of women in their professional roles. The Centers were also successful in attaining research funding that focused uniquely on women's health issues, and increased the Centers' presence in local community settings. In terms of clinical care, the CoEs were able to provide a greater array of clinical preventive services and produce higher levels of patient satisfaction when compared to national benchmark data and a sample taken from three communities in which CoEs were located. Many of these services reached subpopulations that often are underserved, including minority and economically poorer communities, and, at the same time, the CoEs served a wider cross-section of women.

Notwithstanding these successes the National Centers of Excellence in Women's Health remain vulnerable to pressures that include attaining adequate funding, having to compete successfully for scarce resources, and overcoming resistance in their home institutions where traditional modes of practice and attitudes predominate. Being involved in the CoEs often requires staff to split time between academic departments and Center obligations, thus increasing staff time and work load pressures.

Considering that the first round of funding for the National Centers began in 1996, their achievements are considerable. Nevertheless, the CoEs remain vulnerable to the pressures just noted. Higher level administrative support within the institutions that house the CoEs appears to be a key ingredient in increasing the future viability of the National Centers of Excellence in Women's Health.

Table 1. Summary of Findings

Evaluation Question 1. Did the CoEs' Core Components (i.e., Research, Clinical Care, Professional Education, Leadership, and Community Outreach) Develop an Interface and Coordinate in Accordance to the National Model?
• The national model influenced the configurations of the CoEs' structure and function.
• The national model had a tangible impact in developing and reinforcing multidisciplinary practices across the CoE core components as illustrated in the model that appears in Figure 1.
Evaluation Question 2. What Impact Did the Designation as a National Center of Excellence Have on the Recipient Institutions?
• The national designation as a National Center of Excellence in Women's Health had substantial impact on the recipient institutions as a catalyst for change in widening the scope of women's health.
• The national designation served to help in legitimizing women's health as a bona fide field in medicine, public health, and the health sciences.
• The institutional leadership emphasized the prestige associated with the national designation, and the value of the designation in attracting additional resources, additional patients, and in fostering collaborative efforts.
Evaluation Question 3. What Were the CoEs' Greatest Strengths?
• Those factors noted under the summary of findings for Question 2 were reiterated as strengths for Question 3.
• Additionally, the CoEs enhanced collaboration among researchers and practitioners, and were able to leverage additional resources.
• The CoEs enhanced opportunities to focus on the uniqueness of women's health.
• The CoEs provided a support system for networking opportunities both locally and nationally.

Table 1. Summary of Findings (continued)

Evaluation Question 4. What Were the Greatest Strengths of the CoE Core Components?
• The research component enhanced opportunities to focus on research that was unique to women's health.
• The professional education component increased gender diversity in the curriculum and in practice.
• The leadership component provided mentoring opportunities for the professional development of women.
• The community component provided opportunities to reach communities that traditionally are underserved.
• The services provided by the clinical care component supported the two hypotheses of the quantitative leg of the evaluation, namely: 1) women served in CoEs received more recommended clinical preventive services and report higher satisfaction with care as compared to women in benchmark and community samples; and (2) stronger primary care relationships with a CoE (e.g., having used the CoE clinics for a longer time period) were associated with more clinical preventive services received and higher satisfaction with care.
• In the national comparison, women served by the CoEs were more likely to receive routine physical exams, Pap tests, physical breast exams, mammograms, cholesterol tests, colon cancer screening, and counseling on: smoking cessation, exercise, alcohol or drugs, domestic violence, and sexually transmitted diseases.
• In comparison with the local community samples for three of the CoEs, women served by the CoEs were significantly more likely to receive Pap tests, mammograms, colon cancer screening, and counseling on hormone replacement therapy, alcohol and drugs, domestic violence, and sexually transmitted disease.
• Women who used the CoE exclusively for first-contact care or used the CoE for more than two years were more satisfied with care and were more likely to receive age-appropriate counseling services than women who used other sites or had used the CoE for less than two years.
Evaluation Question 5. What are the Greatest Challenges Faced by the CoEs?
• Institutional support "from the top" appears critical to the development of new and cross-discipline activities.
• Uncertainty remained regarding the ability to sustain the CoEs.
• In some of the institutions housing CoEs, resistance remained to legitimizing women's health as a bona fide presence within the recipient institutions.
• Continued challenges regarding the lack of women in leadership positions resulted in a sense of vulnerability about the sustainability of the CoEs.

BACKGROUND

This Executive Summary is an abridged report of an evaluation of the National Centers of Excellence in Women's Health. More detailed information on this evaluation may be found in the following places:

- **Anderson, R.T., Weisman, C.S., Scholle, S.H. Henderson, J.T., Oldendick, R., Camacho, F.** (2002). "Evaluation of the Quality of Care in the Clinical Care Centers of the National Centers of Excellence in Women's Health." *Women's Health Issues*, 12(6): 309-326.

- **Anderson, R.T., Weisman, C.S., Scholle, S.H. Henderson, J.T., Oldendick, R., Camacho, F.** (2002). *Evaluation of the Quality of Care in the Clinical* Care *Centers of the National Centers of Excellence in Women's Health*. Final Technical Report, Submitted to the Office on Women's Health, Department of Health and Human Services.

- **Goodman, R.M., Seaver, M.R., Yoo, S.Y., Dibble, S., Shada, R., Sherman, B., Urmston, F., Milliken, N., Freund, K.M.** (2002). "A Qualitative Evaluation of the National Centers of Excellence in Women's Health Program," *Women's Health Issues*, 12(6): 291-308.

- **Goodman, R.M., Seaver, M.R., Yoo, S.Y., Dibble, S., Shada, R., Sherman, B., Urmston, F., Milliken, N., Freund, K.M.** (2002). *A Qualitative Evaluation of the National Centers of Excellence in Women's Health Program*, Final Technical Report, Submitted to the Office on Women's Health, Department of Health and Human Services.

INTRODUCTION

History of the National Centers of Excellence in Women's Health (CoEs)

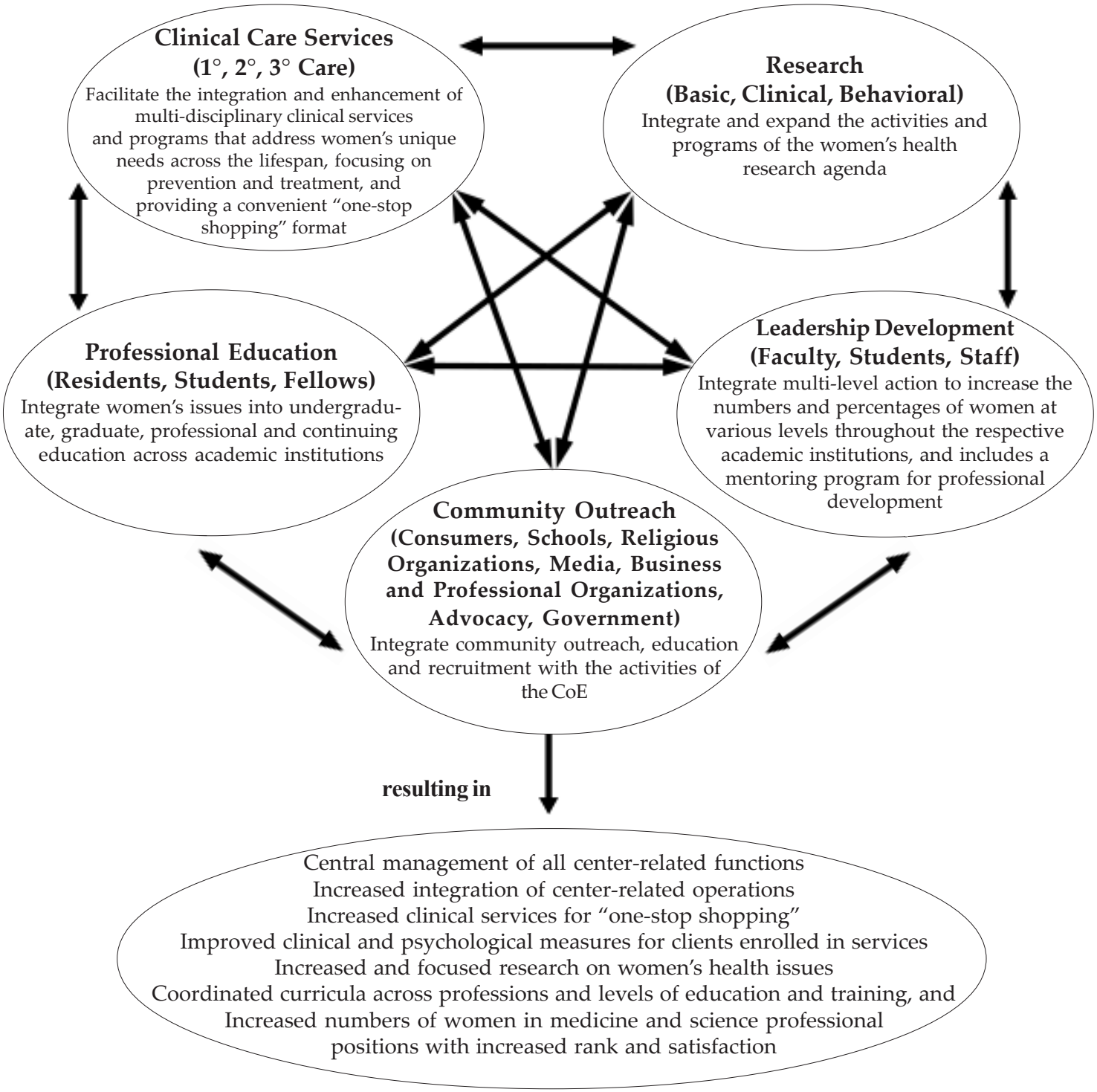
The National Centers of Excellence in Women's Health (CoE) program was initiated in 1996 by the U.S. Department of Health and Human Services' (DHHS) Office on Women's Health (OWH) as a new model for university-based women's health care. It was designed with the goal of enhancing and integrating women's health care, education, and training both within and outside the university structure. Since the initiation of the program, there have been three generations of awards. A total of 18 sites have been funded and, at the time of data collection for the present evaluation, there were 15 CoEs funded and operating at different stages of development, depending on what year their contracts were received. Although each CoE was unique in environment, the nature of the institution that housed it, and the types of individuals involved, each was built according to a national model that placed the utmost value on a multidisciplinary approach to women's health.

The National Model

The multidisciplinary approach was informed by a national model that was developed by the DHHS Office on Women's Health (OWH). The model consisted of five core components: clinical care, research, professional education, leadership development, and community outreach, and each of these components was to develop integrated working relationships with the others as diagrammed in Figure 1.

The Figure 1 "integrated" model was developed in part as a response to the traditional separation of reproductive and non-reproductive health care of women who often must rely upon multiple providers that work in different settings and whose services are not necessarily coordinated (Clancy and Massion, 1992). In accordance with the national model, the original 18 designated CoEs were to establish standards of excellence for a comprehensive, multidisciplinary, and culturally competent approach to women's healthcare. CoEs differ in structure and include "one-stop shopping" models in which comprehensive services are co-located in one facility, and "centers without walls" in which networked services are located in different sites but share a common philosophy of women's health care (Milliken, N, Freund K, Pregler J, *et al*., 2001). Also, the model emphasizes the refinement of curricula at medical schools, schools of public health, and other training institutes to assure that training models integrate conditions which affect women uniquely. Moreover, the CoE model accentuates the mentoring of women to attain leadership positions in academic health centers, as women often are underrepresented in senior leadership levels. The focus in the model on a community interface reflects the value placed on accessible care that involves the community in determining optimum modes of service, and reflects concerns over insufficient community involvement as noted in prominent national reports (IOM, 1988).

Figure 1. A Diagram of the National Model for the National Centers of Excellence in Women's Health



History of the Evaluation

This report results from a two-year evaluation of the 15 CoEs that were funded at the time of the study. To date, there have been relatively few studies of whether modern center-based models for women's healthcare, as exemplified by the CoE program, offered particular advantages over the conventional array of clinic and center-based services. As the CoE model was innovative, the DHHS OWH was interested in understanding how the Centers "fit" into academic health centers because the CoE model required accommodation and departure from traditional clinical practice, education, training, and interactions with the local community.

Moreover, little information has been available on women's views of their experiences with health care, and the qualities that they desire or seek to support their health. For example, Wensing, *et. al,*. (1998) found that relatively few studies of patient priorities for care inquired about topics like exploring patient needs, patient privacy, stimulating self-help needs, burden, and aspects of relationship and support from health professionals (beyond warmth and respect items included in a variable listed as "humaneness").

A CoE Evaluation Working Group was formed in 1998 to assess how the CoEs had an impact on the health care of women, and in 1999, the Office on Women's Health initiated this evaluation study. As part of the evaluation, two study groups—one quantitative and one qualitative—were constituted (see page 5). Through a series of interviews conducted at each of 15 institutions housing the CoEs, the qualitative evaluation team sought to understand organizational issues including: 1) whether the core components (*i.e.*, research, clinical care, professional education, leadership, and community outreach) developed an interface and coordinated with one another as intended according to the national model (Figure 1); 2) the type of impact that the CoE designation had on the recipient institutions; and, 3) the greatest strengths and challenges that the CoEs and their core components embodied. The themes that will be presented in the Evaluation Findings Section are considered to be main effects because they were pervasive in the data and were represented across all 15 CoEs.

The quantitative aspect of the evaluation concentrated in more depth on the clinical care component of the national CoE program. Data collected were used to 1) evaluate the CoE program using a common set of indicators of the quality of care previously developed by experts of women's health care issues, and 2) to provide baseline data for future cross-sectional surveys so that change in the quality of care indicators could be assessed. Two general hypotheses guided the quantitative portion of the evaluation: (1) women served in CoEs receive more recommended clinical preventive services and report higher satisfaction with care as compared to women in community samples; and, (2) stronger primary care relationships with a CoE (e.g., having used the CoE clinics for a longer time period) are associated with more clinical preventive services received and higher satisfaction with care.

EVALUATION METHODOLOGY

Table 2 provides a detailed timeline for both the qualitative interview and the quantitative survey methodologies that inform this evaluation of the National Centers of Excellence in Women's Health (the "X's" in Table 2 indicate the timeline for the qualitative evaluation team's work, and the "#'s" indicate the quantitative evaluation team's timeline). The table indicates that both legs of the study began just prior to the Federal fiscal year (FY 2000) and ended at the conclusion of FY 2002. Thus, the entire evaluation took two years to complete with the qualitative and quantitative evaluation teams working in tandem. The evaluation methodologies for the qualitative and quantitative portions differ because the scientific paradigms from which they are drawn are distinct. Therefore, this section details the methodologies separately, first explaining the qualitative approach, and then the quantitative approach.

Qualitative Evaluation Methodology

The qualitative evaluation team developed a protocol for the interviews that were to be conducted face-to-face at the 15 CoEs. In order to assure comparability during the interview process and to standardize data collection, the interviewers attended a one-day training that focused on interviewing skills. Mock interviews were videotaped and the tapes were critiqued to refine the interviewers' techniques and to increase the consistency of approach across interviewers. Once the data had been collected, the study team met again to standardize coding techniques.

The interviews were conducted on-site at the 15 CoEs. Interview respondents were selected based upon purposeful sampling procedures to assure that interviewees complemented one another in completing coverage of all dimensions of the interview protocol. At each of the 15 sites, interviews were held with a senior administrator (e.g., a chancellor, vice-president, or dean), the Center Director of the CoE, and the component directors of the CoE). On average, six interviews were included at each of the 15 CoEs for a total of 91 individuals who were interviewed. Prior to each interview, the respondent was asked to read and sign an informed consent statement that assured confidentiality and the right to refrain from answering any question that was posed by the interviewer.

All interviews were tape recorded and transcribed *verbatim*. The written transcripts were then analyzed according to methods developed by Spradley (1979) consisting of completing syntactical structures such as: 1) X is a type of impact that the designation as a CoE had on the recipient institution; 2) Y is an example of a strength or challenge of the CoE and its core components; 3) Z is an indication of whether the core components developed an interface and coordinated with one another. The evaluation team hand-coded each qualitative interview to fill in such statements and then entered the information into ATLAS.ti, a software

Table 2. Evaluation Timeline

	Year 2000					Year 2001												Year 2002									
Qualitative Evaluation ("X" = timeline)	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	**Quantitative Evaluation ("#" = timeline)**
Familiarization with the established protocol for the multi-site case	#	X																									**Beginning of the quantitative study**
Coordination of the multi-site case evaluation with the multi-site quantitative evaluation	#	X #	#	X #	#	X #		X		X		X		X													**Approval of the survey instrument by OMB**
Formal training in qualitative data collection	#	#	X #	X #	#	#																					**Preparation and completion of prototype survey**
Selection of key informants	#	#	X #	X #	#	#																					**Helped each CoE secure IRB clearance**
Collection of other data sources				X	X		#	#	#	#	#	#	#	#													**Survey pretest and refinement**
Conduct interviews with key informants at each site						X	X #	X #	#	#	#	#	#	#													**Study operations manual developed**
Transcription of taped interviews							X #	X #	X #	X #	X #	X #	#	#													**Patient name list generated as specified by project protocol**
Formal training in qualitative data analysis											X				#	#	#	#	#	#							**Beginning of the quantitative study**
Coding of transcripts											X	X	X	X	X #	X #	X #	#	#	#							**Survey data prepared**
Entering and sorting of the coded data														X	X #	X #	X #	X #	X #	X #	X	X	X				**Quality assurance report provided**
Developing taxonomies and data matrixes based on the sorted codes																X	X	X	X	X	X #	X #	X #	X #	X #	X #	**Data analysis completed**
Developing evaluation themes based on the interview data																		X	X	X #	X #	X #	X #	X #	X #	X #	**Technical Report completed**
Developing a narrative based on the themes, matrixes, and taxonomies																			X	X #	X #	X #	X #	X #	X #	**Manuscript completed**
Technical Report completed																					X	X	X	X	X		
Manuscript completed																					X	X	X	X	X		

package developed for qualitative research (Muhr, 1997). Once entered, the evaluators compared and contrasted codes so that a taxonomy of similar syntactical statements was formed. Then the taxonomies for each of the 15 CoEs were placed into data matrix displays based on the procedures described by Miles and Huberman (1984). Matrix displays allow for similar and dissimilar data to be compared across respondents and across sites. Once the data were arranged in taxonomies and matrixes, the evaluators organized the data by similar and contrasting patterns to represent the overarching themes that are reported in the Findings Section of this Executive Summary.

Quantitative Evaluation Methodology

The quantitative evaluation focused primarily on the quality of the primary care services provided by the 15 CoE clinical sites in operation in 2001. Quality of care was examined with respect to provision of age-appropriate clinical preventive services (screening and counseling) and patient satisfaction. Two approaches were used to compare the quality of care in the CoE with care generally available in the community. In the first approach, a survey was conducted on a random sample of 3,111 women who used the clinical services at the 15 CoEs. This sample was compared to benchmarks obtained from a nationally representative sample of 2,075 women from the 1998 Commonwealth Fund Survey of Women's Health (Falik and Collins, 2001), a sample of 71,438 women in the 1999 Consumer Assessment of Health Plans Study (CAHPS) – national dataset, and from a local community sample of 611 women aged 18 years and older living in communities served by three of the CoEs. This local community comparison was conducted concurrently with the CoE patient survey. In the second approach, analyses were conducted among women served in the CoEs to assess whether the strength of their primary care relationship with the CoEs was related to the receipt of preventive services and satisfaction with care.

The quantitative evaluation team explored several national data bases and selected the Commonwealth Fund Survey (CWF) because it had both a nationally representative sample and a large number of indicators related to women's health care quality. The CAHPS data provided unique comparative information on satisfaction with care. Satisfaction with health care was measured using a new women-specific tool, the Primary Care Satisfaction Survey for Women (PCSSW), and an item from the CAHPS. Development of the PCSSW was supported by the DHHS Office on Women's Health and by a research grant from the Agency for Healthcare Research and Quality (R01 HS10237-01A1).

For the CoE patient survey, patients were identified from administrative data provided by each CoE. The community comparison sample was identified using random digit dialing. Women were eligible for these surveys if they were ages 18 and over and had at least one primary care visit during the past year.

Overall, the CoE patient survey took about 20 minutes to complete and included five sections: 1) health care utilization at the CoE and elsewhere, 2) receipt of preventive services and counseling, 3) satisfaction with health care at the last visit and overall during the past year, 4) health status, and 5) demographics. In order to ensure comparability with the benchmark data sources, the evaluation team used items from the original benchmark survey *verbatim*, with a few wording changes or additions necessary to capture the focus on the CoE. The survey was translated into Spanish. A briefer version of the survey (excluding topics related specifically to the CoE) was used for the community comparison sample. The survey instrument that was developed for this study

received clearance for use by the US Office of Management and Budget, and was also approved by the Institutional Review Boards of all 15 academic medical centers in which the CoEs were housed and by the University of South Carolina where the Survey Research Laboratory (SRL) was located. Oral informed consent was obtained from all survey participants. The survey data were collected and entered at the SRL. Once a sample subject was contacted, or if the number of callbacks had been exhausted, the patients' names and telephone numbers were removed from the administrative files and the database. The overall response rate for the CoE patient survey (defined as the number of completed interviews out of the total number of completed and partial interviews and refusals) was 70.7% and varied across sites from 57.7% to 84.7%. The response rates for the three community surveys were 52.1%, 53.9% and 59.3%.

Regression models were used to compare quality of care in the CoEs and benchmarks samples. Analyses take into account the lack of independence among observations within the CoEs. In addition, because the CoE patients differed from women in the benchmark data sets on certain key characteristics that may be associated with services received or satisfaction with care, the statistical models were adjusted for region, age, education, perceived health status, and managed care enrollment. Further details of the methodology are provided in Anderson *et al*. (2002).

The regression analyses indicate whether patients seen in CoEs report receiving more screening and counseling services, or significantly higher satisfaction with care, than patients in comparison samples. Differences with a p-value less than 0.05 were considered to be statistically significant (i.e., not due to chance alone). In addition to considering statistical significance, the magnitude of the difference was also examined. There is no "gold standard" for judging the magnitude of observed differences between the CoE and comparison samples. A convention based on standard deviation units (Cohen 1988) was used, although smaller differences also may be meaningful.

EVALUATION FINDINGS

The evaluation findings are organized to answer the evaluation questions that were presented in Table 1. Each question is restated and then followed by the evaluation findings for that question.

Question 1. Did the CoEs' Core Components (i.e., Research, Clinical Care, Professional Education, Leadership, and Community Outreach) Develop an Interface and Coordinate in Accordance to the National Model?
Each Director of a CoE Core Component was asked "would you describe the interface of [your core component] with [each other core component] at your institution? Table 3 summarizes the relationship among the core components and indicates that the CoE model, which emphasized integration among the core components (see Figure 1), largely was achieved. The leftmost column in the table indicates how the Core Component Directors perceived the relationship with other core components. The second column summarizes the most frequently mentioned manner in which each core component interfaced across the 15 CoEs that were evaluated. The two right-hand columns provide quotations from Core Component Directors at different CoEs to illustrate, in the Core Component Directors' own words, the relationships among the core components.

A symmetry among the core components seemed to develop which is reflected in Table 3: clinicians became more involved in research and researchers helped translate findings for application in the clinics; clinicians helped educators develop curriculum materials and educators helped tailor materials for client recruitment and patient education; academic leaders helped mentor students and students assisted in CoE practice and research – such reciprocal relationships were characteristic of the responses provided across the interviews at all 15 CoEs that were evaluated. Thus, the evaluation found that the national model was, in large measure, adopted by the CoEs.

Table 3. A Summary of How the CoE Core Units Interface

Core Unit Directors About Interface Unit	Type of Interface	Illustration # 1	Illustration # 2
Clinical about Research	**Increased clinical involvement in research**	*The clinical program allows opportunities for different people to develop research interests and then we present those at [our] meetings. Different people in the room have input. [It] helps fuel collaboration.*	*Because of the size of the practice that we have, I am asked to participate in clinical research primarily outside of my department.*
Research about Clinical	**Translation of research into clinical practice**	*One of the reasons that our clinical care is so good is because we do a lot of women's health research in the clinical arena, and that then gets translated both to physicians who practice differently, as well as residents and students who are trained differently.*	*Many of the behavioral studies that are going on are applied to clinical practice. For instance, the research on getting women into screening has impacted what we do in terms of delivery of care.*
Clinical about Education	**Curriculum development in women's health**	*[The CoE has] brought up to the surface education on women's health and how we educate. Where do we address adolescent female health in our curriculum? The awareness was stimulated by participation from our dean and lots of faculty from the Center of Excellence.*	*We have created a women's health elective for residents and students since being designated and people have been very responsive about participating.*
Education about Clinical	**Provided education opportunities for clinicians**	*When we began, we worked with the clinical committee to say, 'What types of education do you need for your patients,' or, 'what can facilitate you helping your patients learn more?'*	*[We provide] specific training on how to conduct the questions as part of the clinical interview. We've had women present testimonies of their experience with physicians as a result of their victimization.*

Table 3. A Summary of How the CoE Core Units Interface (continued)

Core Unit Directors About Interface Unit	Type of Interface	Illustration # 1	Illustration # 2
Clinical about Community	**More clinician presence in the community**	*Our hospital has always interfaced with its community, but I have not seen our hospital have so much of a patient education focus as the CoE has brought to our community. Prior to being designated as a CoE, I didn't go to the community frequently and give talks. Now, I [do]. We have always tried to have a community approach to delivering care, but bringing women's health messages to the community is a brand new thing for our institution since we got the designation.*	*Many of us are invited speakers for different women's groups in different organizations, and to other health care providers - family practice providers. Also, the Center of Excellence has enabled me to do community education with the minority population that we serve here at our home base.*
Community about Clinical	**Feeder system for clinical services and research trials**	*Any time we go out in the community, we're telling people that we have clinical trials. It's on our Web site. It's a link to make it as easy as possible for people to participate. We've also developed a series of brochures on women's participation in research, and one of them is for people who design research studies so that they know how to better design a study so that women can participate. The other brochure is one that talks about why somebody might want to participate in research, what are the risks and benefits, and know your rights as you participate in a study.*	*In developing clinical services, we seek community input.*
Research about Education	**Provided support for educational programs**	*Clinical education . . . provides support for students to do research projects at various levels of training, or come out of their clinical training for differing periods of time and train in research methods.*	
Education about Research	**Linked researchers on women's health through the CoE**	*It's through our professional education offerings that many researchers find each other.*	*We're actually cataloging efforts of [non-CoE] faculty that relate to women's health. We were surprised to learn that there were so many doing research on women, but have not identified themselves as women's health researchers.*

Table 3. A Summary of How the CoE Core Units Interface (continued)

Core Unit Directors About Interface Unit	Type of Interface	Illustration # 1	Illustration # 2
Research about Community	**Provided a focus for research**	*We either match a community with a researcher, or a researcher with a community where there is mutual interest and help to build that relationship so that it could be sustained.*	*A lot of the research that goes on here pulls people from the community. Several of my grants take place in communities of low-income minority women.*
Community about Research	**Developed strategies for recruitment into research**	*Our committee is responsible for a couple of initiatives that influence the research arm. We're doing a symposium on the interface of gender, race, and community in terms of recruitment strategies for clinical researchers, and, out of that, we will help to develop a set of strategies for the school and researchers on how they can recruit minority women into research. One of our projects is focused on looking at the process of care outcomes for minority women [as] compared to other women because of the interface that we have between our community outreach and clinical services.*	*We've conducted quite a few focus groups with different community-based agencies and their constituents to try to find out how we can better recruit women of color, in particular, to participate in clinical research and trials.*
Community about Education	**Provided educational opportunities and materials**	*There were studies and investigations going on around serving specific minority populations and the reporting of these findings. The creation of a video in order to increase awareness about breast cancer was geared towards minority populations - geared towards women as a teaching tool.*	*I'm most familiar with our internship program. We've been very successful at bringing in high school students, college students, grad students, and medical residents through the CoE and placing them according to their interests with faculty members. We've been very successful at helping young women see that there are lots of different avenues that you can take in women's health, and connecting them with mentors and opening up possibilities and opportunities for them. We've also had high school students who interned, went away to college, then came back and ended up working for the Center of Excellence.*

Table 3. A Summary of How the CoE Core Units Interface (continued)

Core Unit Directors About Interface Unit	Type of Interface	Illustration # 1	Illustration # 2
Education about Community	**Provided educational awareness sessions and materials**	*We draw upon different faculty in the institution as well as in the clinical programs to give series of talks to women at the workplace. That was a big success in terms of the number of work sites to which we [were] invited to talk on a whole variety of different subjects. Then, we started church programs mainly with African American churches. We went to lots of health fairs, lots of events and gave talks.*	
Leadership about Clinical	**Supported professional growth and career development**	*One of our leadership goals was to make sure that the appointment process accommodated as broad a group of contributors as possible, and that everybody knew the ground rules. We have a new clinician teacher ladder . . . where promotions are possible based on clinical and teaching excellence.*	*I ask chairs and division directors to identify women [for leadership opportunities]. For example, one woman was identified and she was then awarded a grant to attend a professional development program. She subsequently became the director at [a local] hospital.*
Leadership about Research	**Provided mentoring opportunities**	*We structured community-based research around junior faculty development. . . . It spawned mentoring around projects [and] proposals that were then submitted. We gave feedback as a way of mentoring junior faculty in the research domain. There was actually a very powerful connection through that activity.*	
Leadership about Education	**Mentored junior faculty and students**	*There was a real attempt to do a better mentoring program. A lot of difficulties were identified for young women faculty. The CoE has worked most effectively here as a neutral sounding board - getting outside your department with your problems, aggregating the problems.*	

Question 2. What Impact Did the Designation as a National Center of Excellence Have on the Recipient Institutions?

Institutional leaders and the CoE Center Directors from all 15 Centers emphasized that the foremost impact of the national designation was that it acted as a ***catalyst for institutional change in expanding the field of women's health***. The quotations from leaders of different CoEs that appear in Table 4 are reflective of sentiments shared across all 15 CoEs. Prior to the development of the CoE program, women's health was often viewed simply as reproductive health at the institutions in which the CoEs were housed. The development of a CoE, including a clinical component that provided comprehensive care to women at a physically identifiable site (i.e., "one-stop shopping"), and a research component that investigated health among women more broadly, led to the expansion of the concept of women's health as a discipline. Additionally, the quotations in Table 4 illustrate that the institutional leaders consistently mentioned the ***prestige accorded by designation as further legitimizing the CoE as a model for institutional change***, and that the prestige accorded by national designation was instrumental ***in attracting resources that were both internal and external to the institution***. Internally, resources were forthcoming when there was support for the CoE from upper administrative levels within the institution. External resources, such as those from foundations, came with the recognition that it was valuable to be associated with the CoE.

Table 4. The Effect of National Designation on Institutional Change

National Designation as a Catalyst for Institutional Change	*The CoE produced a sea change. It's led to radical change in terms of how we do everything having to do with women's health care.* *Despite all of the focus that we had on women's health, there was a strong focus in everybody's mind on reproductive health. The notion of multi-disciplinary care of women that includes internists, surgeons, and all kinds of other people having a focus on women's health was validated.* *[The institution's leadership] recognizes that we do a lot of research at the Centers of Excellence, and that that's good because they are getting state-of-the-art results. Before [the designation], the leadership didn't recognize the value of research. The CoE has played an important role in moving ahead the mission of women's care and gender-based medicine within the institution.* *The recognition that comes from the rigorous process of evaluation and designation, is well recognized, both internal to the institution as well as the community-at-large, geographically, as being something that has great value. Women's initiatives that are in the community, for example, would have been much more difficult to do if it did not have a Women's Center of Excellence, and [DHHS] sponsorship. It is a source of pride to the institution.*
National Designation as Legitimizing the CoE Model for Institutional Change	*The designation has legitimized women's health as an area of academic pursuit.* *You get value out of [the designation] in a whole variety of ways. From the clinical side of the organization, it [brings in] patients. From the research side of the organization, it brings in research grants with overhead. From the teaching side, it carries out a vital function that any modern medical school now has to have. It adds value, and, as something adds value, the institution supports it.* *[The designation] was one of the cornerstones of [the women's health program] becoming sustainable and developing a life beyond its current leadership. [The designation] confers a stamp of approval from a national judge. [Women's health] was legitimized.*
National Designation as Instrumental in Attracting Resources Both Internal and External to the Institution	*One of the things we've been able to do with our CoE designation is leverage a lot of money successfully outside. I owe a lot of that - there's no question - to the fact that we have very high up support from the corporate structure of the hospital, and they're willing to use their leveraging capacity on our behalf.* *The national designation is something that people are proud of, and they want to be known for excellence in women's health. . . . We have a campaign underway right now, and one of our campaign themes is the Center for Excellence in Women's Health.*

Question 3. What Were the CoEs' Greatest Strengths?

Both the CoE Center Directors and the component directors were asked about the CoEs greatest strengths since becoming nationally designated. Comments shared across all 15 CoEs are reflective of the answers to Questions 1 and 2, namely that 1) the national model took hold, and increased coordination and collaboration; that 2) the CoE served as a driving mechanism for change within the institution; and that 3) a stronger funding infrastructure and greater ability to leverage other funding resulted.

In addition to these strengths, the quotations in Table 5 are indicative of the component directors' sentiments that the CoEs greatest strengths included ***enhancing opportunities to focus on the uniqueness of women's health.*** The CoE lent legitimacy to the pursuit of improved women's health, because the CoE spanned different departments and different schools, and it fostered increased association. Thus, the CoEs ***became an environment for shared identity and mutual action***. The component directors further indicated that increased association through the CoEs ***provided a support system through***

Table 5. Additional Strengths of the CoEs Noted by the Core Directors

Enhanced Opportunities to Focus on the Uniqueness of Women's Health	*It's visibility to get this on the horizon for everybody to recognize that women are a unique component of the population. This came about because of the national agenda which emphasized that, when you do research studies, women can't be just lumped together with men. The new initiative is that women are different and need to be looked at differently, and that's come from the national agenda. I don't believe a local agenda would have been capable of doing that.*
Became an Environment for Shared Identity and Mutual Action	*We've managed to attract a group of women as . . . providers who have similar philosophies, who truly care about the women they're taking care of, and it's really unique to gather that many together in one place. I often think of how honored and privileged I am to be part of a group that works that well together.* *[The center] was a resource for us because it pulled together people from across all the departments - inpatient and outpatient, other parts of the university, people who work on outcomes studies, people who work in basic research, and people who work in the clinical arena - pulled them all together to ask, 'what should we have in a curriculum for medical students?' It was easier because we had the whole group basically together.*
Provided a Support System Through Networking Opportunities	*There's a broad coalition of women brought together to head up the CoE who have been able to call on each other and help each other. That networking, both within the institution and outside the institution, is probably the best achievement. Knowing who it is in administration, who it is in research review that you can call on - it really is the 'old girls network' starting to evolve.* *The networking of the other CoEs together helps. You know somebody plus you know somebody's expertise at other places and you can invite them to come down.* *The networking and the mutual support that goes on at national CoE meetings is especially important.*

networking opportunities. The networks went beyond collaboration within the home institution, extending to the CoEs as a national movement.

Question 4. What Were the Greatest Strengths of the CoE Core Components?

The greatest strengths of the core components were assessed by interviewing the CoE component directors who were asked to characterize the strengths of their respective components since receiving national designation. Additionally, for the clinical care component, a random sample of CoE patients was drawn and compared with data derived from national data sets and from a locally drawn comparison at three of the CoEs. The results that follow identify the strengths of each core component followed by a more in depth analysis of the clinical care component that combines the qualitative findings with the statistical analysis from surveys and national benchmark datasets.

Table 5 presents the themes regarding the strengths of each core component with illustrative quotes from the interviews with the component directors. The most prominent theme across all 15 CoEs concerned ***program enhancements in component operations***. Those concepts noted most prominently included research with a greater focus on women's health issues, coordination, and institutional support; professional educational that concentrated on gender-specific health issues and increased diversity; leadership development such as mentoring; community outreach with an increased focus on community needs and services; and clinical services that were expanded and improved. One of the central themes that emerged regards diversity that includes focusing on minority and other underserved communities with educational programs, networking with community agencies, and making health care services more available to communities of color and of different economic levels.

Strengths of the Clinical Care Component

In addition to the strengths of the core components just noted, the clinical care component enhanced women's primary care services and patient satisfaction, compared with standard care. The quotations in Table 6 illustrated that the types of clinical services were expanded, the types of health care experts who collaborated increased, and clinical services were delivered with sensitivity to the populations that were served. The quantitative survey data also reflect these findings. For instance, Table 7 presents the means for screening and counseling services that are adjusted for region, age, education, perceived health status, and managed care enrollment. The table indicates that a statistically significant higher proportion of women in the CoE sample reported receiving all six screening tests compared to women in The Commonwealth Fund (CWF) sample. Likewise, women in the CoEs were more likely to report counseling for domestic violence, smoking cessation, sexually transmitted diseases, alcohol or drug use, and exercise. The most meaningful differences (effect sizes above .15) were found for physical breast exam, mammogram, colon cancer screening, routine physical exam, Pap test, as well as for domestic violence, smoking cessation, sexually transmitted disease, and alcohol and drug use counseling.

Table 8 presents the adjusted means for comparisons of the three CoEs and the community sample. A higher proportion of women in the CoEs had received four of the six screening services (mammogram, physical breast exam, colon cancer screening, and Pap tests) and four of eight counseling services (HRT, alcohol or drug use, domestic violence, and sexually transmitted diseases). Effect sizes above .15 were found for mammogram and physical breast exam, as well as for counseling for alcohol or drug use, domestic violence, sexually transmitted diseases, smoking cessation, and HRT.

Table 6. Strengths Noted by the Component Directors of Each CoE Core Component

Core	Illustrative Quotations from CoE Component Directors
Research with a greater focus on women's health issues, coordination, and institutional support	*In looking at the behavioral aspects of care - and care here being in chronic illness - women are involved because they have an increased number of chronic illnesses. Even chronic illnesses that aren't women-directed, the women are usually the caregivers or supporters. By my involvement in the CoE - and chronic illnesses being foremost in my mind - it's pushed into all the areas of research. It has really changed.* . . . . . . *[The CoE] added emphasis and helped to expand women's health research. That's a strength which is driven by the fact that the CoE has enhanced the research community within women's health. There's support and nurturing for it within the institution, and that has been its biggest strength.*
Professional Education concentrated on gender-specific health issues and increased diversity	*There's a heightened awareness that women need to be treated differently, and present differently with a number of clinical symptoms and signs. That then spills down to professional education and the training of medical students, who then become house staff, who then will be the future physicians. As they go out, they will be different than the physicians today in the marketplace who came out of medical school believing that everybody was forty years old and was a white male, because every case you had in medical school was a forty-year old, white male. The national agenda has made a big difference.* . . . . . . *Our catchment area has a lot of Latina and African American women. So, a lot of our work can be oriented to a much more diverse group of people. . . . Also a strength is that our science will end up being applicable in a very diverse way because we have pretty ready access to [diverse groups].*
Leadership Development through mentoring	*We have a mentoring program for women faculty and students… And what it does is show young women in their first or second year of medical school access on a different plane to a woman faculty. [The program] helps them see that women are in academic medicine.* . . . . . . *We said at the beginning we would expand our fellowship program. But when you get this many women interested in it, all of this builds on itself…*
Community Outreach with an increased focus on community needs and services	*We've expanded our community centers. When you do that and you have a pretty successful model, the community comes back to you and identifies other areas where the community would like to see the same type of services. . . . I don't really have to advertise much of anything. We're getting calls all the time. We get calls from other places also, to use our facilities as research sites. I just had a meeting the other day with [a program representative] who asked, 'Can we do a program together? … Can we use your facility?'* . . . . . . *There's fair evidence in the literature that patients who ask the fewest questions need the most information. Lower socio-economic patients and minority patients tend to be most intimidated by the health care system and ask the fewest questions. So, we go to them in their beauty shop, I'm sitting in their church, and I am not in control. And so, that's been the greatest strength.*

Table 6. Strengths Noted by the Component Directors of Each CoE Core Component (continued)

Core	Illustrative Quotations from CoE Component Directors
Clinical services that were expanded and improved	*We do a lot of screening for osteoporosis and we promote breast self-exams which go together at the clinic. A lot of patients [continue to] come to us after that experience. We have created awareness of the [importance] of providing more resources for the clinic, and are sensitive to [the needs of] our population. . . . Anything that is not the reproductive system was historically not considered part of women's health.* *One of the early ones that came together here - it actually was slowly in the process of development before the CoE came into being - was the comprehensive breast care center which brings together medical oncologists, oncologic surgeons, radiation therapy, pathology, and radiology, and sees patients with breast disease or breast masses. They see patients who are referred for breast masses, and they do a very thorough and streamlined evaluation. So the woman makes one, maybe two visits, rather than a visit to the internist, a visit to the radiologist, a visit back to the surgeon for a biopsy, a visit back to somebody for discussion. It has really been our vanguard of the sort of programs that we would like to see developed.*

Table 9 shows the results for patient satisfaction. CoE patients enrolled in non-Medicaid managed care plans were more likely than patients in the CAHPS sample to report high ratings of "all your health care in the last 12 months from all doctors and other health providers" (81% vs. 73%). Similarly, CoE patients gave higher ratings compared with those in the community sample (86% vs. 79%). These ratings among CoE patients exceed the national average for health plans reported by the National Committee for Quality Assurance. In addition, CoE patients, compared with the community comparison sample, reported higher satisfaction with care comprehensiveness and coordination (from the Primary Care Satisfaction Survey for Women).

Table 10 shows how the primary care relationship affects quality of care among CoE patients. Approximately 48% of women in the CoE survey reported the CoE was the only source for their primary health care, and 53% had used the CoE for their care for 2 years or longer. Women who used the CoE as their only regular place of care were significantly more likely to be highly satisfied with their care than women in the CoE who used the CoE services in tandem with another place of care, or who did not have a regular place of care. The results, which were consistent for both the CAPHS satisfaction item and the PCSSW care coordination and comprehensiveness scale, showed that CoE patients who used the CoE as a their only regular source of care were 15% more likely to have satisfaction scores in the top 20% of possible scores, compared to other women. Women with more longitudinal relationships with their providers (length of time as a patient at the CoE of more than 2 years) were more likely to have a high number of counseling services (OR=1.17) and higher satisfaction (OR=1.39) on the CAHPS item.

Table 7. Benchmark Comparisons of Screening and Counseling Services: CoE Clinical Sample and Commonwealth Fund (CWF) Sample (Adjusted means [a] and 95% Confidence Intervals)

	CoE Sample	CWF Sample[1]	Effect size[2]
Screening	(n = 3,111)	(n = 2,075)	
Physical breast exam, past year	0.892 (0.871,0.914)	0.754 (0.732,0.775)***	0.278
Mammogram, Ages 50+, past year	0.917 (0.893,0.940)	0.803 (0.762,0.843)***	0.200
Colon cancer screening, ages 50+, past 5 years	0.603 (0.530,0.677)	0.432 (0.369,0.495)***	0.193
Routine physical exam, past 3 years	0.929 (0.910,0.947)	0.856 (0.838,0.874)***	0.173
Pap test, past 3 years	0.952 (0.937,0.967)	0.886(0.870,0.903)***	0.172
Cholesterol test, past 5 years	0.881 (0.859,0.902)	0.832 (0.811,0.855)**	0.100
Counseling (past 12 months):			
Domestic violence	0.165 (0.139,0.191)	0.0735 (0.061,0.086)***	0.323
Smoking (for current smokers)	0.870 (0.834,0.905)	0.748 (0.697,0.798)***	0.210
Sexually transmitted disease	0.189 (0.158,0.221)	0.111 (0.095,0.128)***	0.204
Alcohol and drugs	0.312 (0.286,0.338)	0.231 (0.210,0.251)***	0.171
Exercise	0.612 (0.574,0.650)	0.540 (0.516,0.564)**	0.131
Hormone replacement therapy, Ages 40+	0.464 (0.410,0.518)	0.414 (0.363,0.464)	0.058
Diet and weight	0.534 (0.487,0.580)	0.506 (0.482,0.530)	0.050
Importance of calcium intake	0.476 (0.430,0.522)	0.450 (0.424,0.475)	0.045

*** t-test p<.001 ** t-test p<.01 * t-test p<.05

[a] Means adjusted for: age, perceived health status, education, managed care enrollment, and region.

[1] CWF sample includes women only with a health care visit in last year.

[2] Effect size calculated as Cohen's d: difference between means / Standard Deviation of CWF sample.

Table 8. Benchmark Comparisons of Screening and Counseling Services: CoE Clinical Subsample and Community Comparison Sample (Adjusted means[a] and 95% Confidence Intervals)

	CoE Sub Sample[1]	Community Comparison Sample[2]	Effect size[3]
Screening	(n = 618)	(n = 611)	
Mammogram, Ages 50+, past year	0.900 (0.847,0.953)	0.740 (0.657,0.822)***	0.232
Physical breast exam, past year	0.921 (0.900,0.943)	0.837 (0.807,0.867)***	0.223
Colon cancer screening, ages 50+, past 5 years	0.684 (0.591,0.777)	0.587 (0.498,0.675) *	0.133
Pap test, past 3 years	0.965 (0.950,0.980)	0.943 (0.924,0.961)*	0.097
Cholesterol test, past 5 years	0.870 (0.840,0.901)	0.895 (0.87,0.969)	0.077
Routine physical exam, past 3 years	0.900 (0.876,0.924)	0.891 (0.866,0.917)	0.028
Counseling			
Alcohol and drugs	0.297 (0.233,0.306)	0.152 (0.123,0.181) ***	0.326
Domestic violence	0.180 (0.148,0.212)	0.0904 (0.067,0.113) ***	0.314
Sexually transmitted disease	0.128 (0.097,0.160)	0.0577 (0.399,0.076) ***	0.310
Smoking (for current smokers)	0.855 (0.774,0.935)	0.754 (0.667,0.841)	0.211
Hormone replacement therapy, Ages 40+	0.563 (0.494,0.632)	0.469 (0.411,0.526) *	0.163
Exercise	0.540 (0.499,0.581)	0.573 (0.533,0.613)	0.066
Importance of calcium intake	0.460 (0.418,0.601)	0.485 (0.444,0.526)	0.051
Diet and weight	0.449 (0.409,0.489)	0.449 (0.409,0.489)	0.001

*** t-test p<.001 ** t-test p<.01 * t-test p<.05

[a] Means adjusted for: age, perceived health status, education, managed care, and site.

[1] Survey subsample of three pooled CoEs selected for community comparison study.

[2] Random digit dialed survey of women 18 years and older living in community served by three selected CoEs.

[3] Effect size calculated as Cohen's d: difference between means / Standard Deviation of community sample.

Table 9. Benchmark Comparisons for Patient Satisfaction (Adjusted means and 95% Confidence Intervals)

	CoE Clinical Sample	CAHPS Sample	Effect Size	CoE Clinical Subsample	Community Sample	Effect Size
	(n = 1,876)	(n = 71,438)		(n = 382)	(n = 402)	
CAHPS Score (%8-10)	0.807 (0.775, 0.838)	0.728 (0.721, 0.734) ***[a]	0.088	0.860 (0.825, 0.896)	0.789 (0.767, 0.831)*[b]	0.166
PCSSW Scale[c]	n/a	n/a		(n = 618)	(n = 611)	
				0.297 (0.260, 0.334)	0.140 (0.113, 0.168)***[d]	0.449

* t-test for significance of beta for CoE is significant at $p < .05$.

*** t-test for significance of beta for CoE is significant $p<.001$.

[a] This comparison uses the sample of women who completed 1999 CAHPS for commercial managed care plans and women in the CoE clinical sample who are enrolled in managed care plans and are not insured by Medicaid. Variables adjusted for are region (8 regions used by NCQA + Puerto Rico), age, education, and perceived health status.

[b] This comparison uses women in the community comparison sample and the corresponding CoE clinical subsample who are enrolled in managed care and are not insured by Medicaid. Variables adjusted for are community, age, education, and perceived health status.

[c] The PCSSW Care Comprehensiveness and Coordination scale is scored as a dichotomy: women reporting scores in the top 20% (highest satisfaction) are compared with all others.

[d] This comparison uses all women in the community comparison sample and all women in the CoE clinical subsample. Variables adjusted for are community, age, education, perceived health status, and managed care enrollment.

Table 10. Association of the Primary Care Relationship with the CoE and Quality of Care in the CoE Clinical Sample (n=3,111; odds ratios[a] and 95% Confidence Intervals)

	First Contact (CoE is regular provider)		Longitudinality (CoE for >2 years)	
	Odds Ratio[a]	95%CI	Odds Ratio[a]	95%CI
High preventive care [b]	1.00	0.86, 1.16	1.00	0.87, 1.16
High counseling services [c]	1.08	0.95, 1.22	1.17	1.02, 1.35
CAHPS Score (%8-10) [d]	1.15	1.02, 1.31	1.39	1.17, 1.65
PCSSW Scale [e]	1.15	1.00, 1.32	1.13	0.90,1.43

[a] General Estimating Equations (GEE) adjusted for age, perceived health status, education, managed care enrollment, and type of regular provider at the CoE (regular provider is ob-gyn and regular provider is other health professional; no regular provider at CoE).

[b] Received all of age-appropriate clinical preventive services assessed.

[c] Received counseling on more than 50% of age-appropriate topics during the past 12 months.

[d] Rating of '8' or higher on CAHPS satisfaction score.

[e] The PCSSW Care Comprehensiveness and Coordination scale is scored as a dichotomy: women reporting scores in the top 20% (highest satisfaction) are compared with all others.

Question 5. What are the Greatest Challenges Faced by the CoEs?

Challenges that were noted by the CoE Center Directors at all 15 sites (See Table 11) mainly revolved around the CoEs' ***acceptance, greater collaboration, limited resources, and sustainability***. Table 10 contains representative quotations which illustrate that acceptance, which was enhanced by the federal designation, also contributed, in some instances, to being a barrier to progress in women's health by isolating it within the institution. Similarly, collaboration could be hampered by "turf guarding," which caused some at the home institution to work separately from the CoE. The demands on faculty time required for collaboration proved burdensome and concerns over limited resources were universal and had an impact on the extent to which services could be offered. Although respondents from most CoEs believed that there was institutional commitment to sustain many aspects of the Centers, the ability to maintain the CoEs in accordance with the national model would be a challenge if resources and institutional support were not sustained. The quotations in Table 12 further illustrate, the component directors at all 15 CoEs also believed that ***resource insufficiencies*** remained a challenge to sustainability and added that ***organizational*** *climate* could also limit the further development of the CoEs.

Table 11. CoE Directors' Perceptions of the Challenges Facing the CoEs

Acceptance	*Insofar as people are interested in having this designation - and doing what it takes to have the designation - it's such a double-edged sword, because it has done so many negative things in terms of using people's time without reward and creating kind of a ghetto mentality for women's health. It makes women's health something that's a second-class discipline by under-resourcing it.* . . . . . . *The fact that [the CoE] focused on women's health is an inherent problem. It carries the problem that everything that's about women carries, that people are quick to trivialize it, quick to assume that we're talking only reproductive health issues.*
Greater Collaboration	*I don't know that the CoE designation changes the usual interdisciplinary barriers. The medical school, especially on this campus, is distinctive but not unique for being revenue-oriented; and, therefore, not so into collaborating. That's the biggest challenge to interdisciplinary collaboration. The CoE helps, but it's probably a small help on a big problem.* . . . . . . *The only internal issue that has just driven me nuts is the clinical piece and who wanted to own the women's health issue. The turf issue has been just incredible. Some of the egos you sort of get used to, but it was kind of frustrating.*
Limited Resources	*In the beginning, I would have taken the Center of Excellence designation. . . . Now it will take money to sustain it. Now the projects are formed, public relations is here, and the idea is ensconced in the institution. So now, in order to do substantive things, we need money.* . . . . . . *The existence and the development of these centers has paralleled a …clear, major cutback in funding to academic medical centers. The balanced budget, really cut back Medicare funds especially towards education. A lot of the Medicare funding that was so key to academic medical centers took such a big hit. . . . To some extent, the success of our program needs to be viewed in that light - that success should not be viewed in how much did we grow, but the fact that we survived over the last [several] years.*

Table 11. CoE Directors' Perceptions of the Challenges Facing the CoEs (continued)

Sustainability	*[Funding] is the main factor determining what programs will be launched, and what programs will be sustained. We all think that what we're doing is terribly important and deserves as much funding as we can get institutionally. But, given the nature of a private university and a health system that is financially challenged, our survival is going to be totally dependent upon the ability of the key players to continuously beat the bushes and get the dollars to make the programs happen. We will be opportunistic and that, unfortunately, does influence one's overall strategy. We have a plan, but some programs will not be high priority because the dollars may flow for some other activity just by the quirk of the fact that there's a donor or foundation out there that wants to fund a program. We certainly submit a lot of proposals that we want to do, but those are big ticket items and oftentimes those proposals aren't successful. Some of the ones that pop up out of blue and are targeted in areas that we hadn't really been thinking about, we'll pursue.* *So the [CoE] may not necessarily grow in the vector that was mapped. It's going to take some jigs and jags, dependent upon where the dollars are.* *Being a designated CoE has allowed us some leverage where we were able to get a meeting with the Dean of the School of Medicine to discuss the advancement of women, and what was being done, related to recruitment of women. That the meeting was fairly unsatisfying. . . .There is currently no system within our university to take into account how many women full-professors there are. When I asked the Dean specifically, he said that he had no such figures. I asked him if he planned on collecting such figures, and he said that they could potentially begin to track that. But, he indicated there wasn't really money set aside to do this. I do not believe that, as yet, we have been very successful in leveraging entry of women into the leadership positions here.*

Table 12. CoE Core Directors' Perceptions of the Challenges Facing the CoEs

Resource Insufficiencies	*[When] the Request For Proposals came out, we literally turned the institution upside-down to get the requisite components creatively advanced. And the process was good. The problem was the funding levels. Because we had reached out so intensively to different schools throughout the university as well as within the medical school, [we] had gotten a lot of people engaged and excited. The funding levels were dramatically different from what we originally had requested, so we were unable to provide the support that we had promised in the original budget to a lot of the collaborators. That was an inappropriate way to start a program, and it didn't start us off on the right foot.* . . . . . . *Not having any money to work with, having no budget essentially, is a challenge! We have all kinds of great ideas that we would like to be able to do, but we don't have any money just to spend on doing them. So we spend a lot of time going around, basically begging, asking for assistance. Some departments are more willing to provide financial assistance than others. But overall, the medical climate being what it is, basically, the bottom line is, 'if you can't make money at it, it isn't going to happen.' So, we have certain projects that are on hold because we're trying to find a way to make them financially self-sustainable, and that's been frustrating. But that's American medicine today, and that's academic medicine today. You have to pay for it yourself.*
Organizational Climate	*It's very difficult to move such a huge complex organization, which is really a collective of organizations with dominant cultures and then many sub-cultures within each organization. So, it's very hard, through a leadership development effort, to dramatically change something. . . . Since designation, the challenge is, structurally, in the concept of the CoE. When you set this up, do you allow everyone to ghettoize women's health? Put all those troublesome women in one spot and the rest of the place doesn't have to deal with them. That's a risk. It hasn't happened here, but it's a constant struggle to make sure that you keep women's issues out there in the whole academic medical community and in the community at large, rather than saying, 'Oh, that's your problem now.' That's the balance.* . . . . . . *Most of the heads of the department are men. And, a lot of people feel that, until women become in more leadership roles, not much is going to change.*

DISCUSSION

The evaluation findings are synopsized in Table 1. In reflecting further on the evaluation findings, several observations seem worth emphasizing. Funding for the Centers was modest, therefore, many of the CoEs' accomplishments rested on the dedication to purpose shared by those involved at all levels. Support by institutional leaders was an important factor in the degree to which the CoE model was embraced within the institution. The level of support from those involved within the core components was equally important, and often meant that core participants had to dedicate time and effort beyond the usual practice. The nexus of relationships that national designation stimulated also can be attributed to the level of effort that those affiliated with the CoEs devoted to their operations. These connections had not been formed prior to CoE designation to the extent that they were afterward. Additionally, several of the quotations in the results section suggest that the CoEs extended their activities into minority and underserved communities in ways that were not occurring prior to the CoE designation. Therefore, the CoE program was an important catalyst for network development at multiple levels of operation.

The reported findings are consistent with and elaborate those of Weisman and Squires (2000) who compared 12 nationally designated CoEs with a 1994 sample of non-CoE, hospital-sponsored primary care women's health centers nationwide. Weisman and Squires found that these CoEs compared with the national sample were more likely to integrate clinical care with research and training and more likely to serve diverse women across the lifespan. Thus compared with earlier primary care women's health centers, the CoEs appear to be more multidisciplinary and comprehensive in their approach to women's health.

Notwithstanding the considerable accomplishments of the CoEs in the relatively short period since the program began, many challenges remain that may compromise the durability of the Centers. Concerns about funding were raised universally. The funding structures of most academic health centers dictate that CoEs must compete for funding if they are to remain viable and develop further. Challenges and potential barriers to CoE development remain in the forms of competition for resources, time pressures exerted on those who affiliate with the Center, and the traditional organizational boundaries that may cause turf conflicts. Several respondents also raised concerns about stereotypical attitudes towards women's health that place limits on its scope and relative importance. Were such attitudes to predominate, some fear that the CoEs could become convenient repositories for isolating women's health as an unappreciated discipline, thus leading to its "ghettoization." Such concerns and uncertainties were plainly voiced and they have implications for the ability to sustain the CoEs. The CoE Center Directors expressed reservations about the magnitude of

effort required to develop and maintain coordinated multidisciplinary initiatives, which, by their nature, place them outside of a department, thus increasing the workload. This, coupled with continued challenges, such as the lack of women in leadership positions, contributed to a sense of vulnerability regarding the CoEs' sustainability.

Several limitations of this study are worth noting. Although all 18 originally selected CoEs were given an opportunity to participate, three that no longer had the national designation at the time of the study declined to participate. Therefore, their views are not represented in the evaluation. In the quantitative portion of the study, a comparison group of non-CoE women's health centers was not available. Instead the investigators selected databases of national survey data and conducted a survey local to three CoE sites to estimate average access to preventive and counseling services. It is possible that even after statistically adjusting for demographic differences found between sample (e.g., age, region, insurance type, education level), that the CoE survey participants and those in the benchmark samples were not comparable. This could occur if, for example, women who were highly motivated to receive health care services sought care at a CoE clinical care center at a much higher proportion than those seeking care in the community. If the latter happened, it would be unclear whether the effect was due to the CoEs or more simply to the patient's insistence. Because the CoE sample was diverse in terms of age, ethnicity and educational attainment it seems unlikely that the results obtained in the CoE benchmark comparisons can be entirely explained by patient motivation or insistence. Another factor that may have distorted the CoE versus benchmark comparisons is that most (92%) of the participants in the CoE survey who had a regular physician received care from a female physician, whereas the percentage of women seeing female physicians in the national comparison samples was lower (less than 25%). Research shows that female physicians provide more clinical preventive services to women than male physicians. The quantitative study was not statistically powered to compare subgroups of study participants, and secondary analyses of the quantitative data are planned which will explore trends in preventive screening services and counseling in the subgroup of women served by female physicians by CoE versus non-CoE status.

In conclusion, the evidence presented in this paper suggests that the benefits of the national designation and model are considerable, and that the type of women's health center as embodied by the CoEs provides a higher standard of preventive care and patient satisfaction for adult women than standard practice. Nevertheless, the CoEs are susceptible to failure if not adequately supported in the future. The institutional gains in legitimizing women's health, in fostering collaboration across core components, and in extending services to diverse community groups are vulnerable to losing ground if the CoEs cannot continue to find funding support in the form of research grants, service contracts, and adequate cost reimbursement mechanisms for services. Moreover, support from senior leadership at the institutions that house the CoEs remains an important ingredient in assuring that the CoE model is sustained. In the final analysis, part of the calculus for the future development of CoE programs should account for the sometimes uneasy interplay between the degree of dedication in time and effort required, versus the degree of challenge imposed by operating on limited resources, the additional responsibilities that come with being affiliated, and the traditional institutional barriers that still remain to be overcome.

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U. S. Department of Health and Human Services
Office on Women's Health
5600 Fishers Lane
Room 16A-55
Rockville, MD 20857
Phone: (301) 443-4422
Fax: (301) 443-1384
www.4woman.gov/coe/index.htm