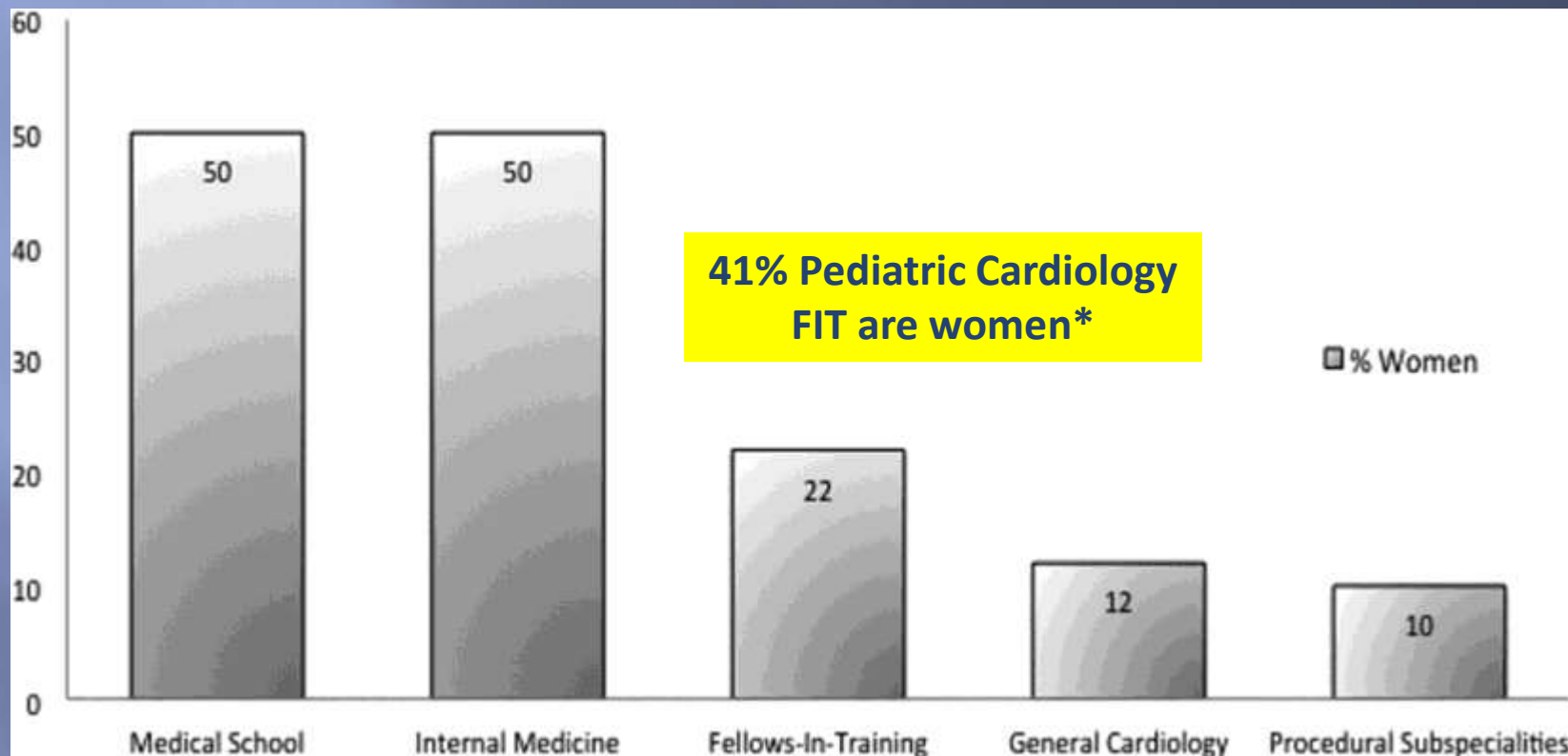


# WOMEN IN CARDIOLOGY: *A POWERFUL FORCE*

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No Disclosures

# Percentage of women in different stages of training and cardiology practice.



Sanghavi M Circ Cardiovasc Qual Outcomes. 2014;7:188-190



\*2010 Tracking Data from the American Board of Pediatrics

# Goals

- ▣ Case Presentation
- ▣ Demographics of women in cardiology
- ▣ Barriers to training/practice
- ▣ Solutions

# Case Presentation - 1990

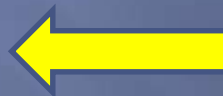
Female IM resident  
applies to 6 Cardiology  
Fellowships



INTERVIEWS @ 6  
RANKS 2 Programs



Heme Onc  
Fellowship??



July 3, 1991



July 1, 1991 Cardiology  
Fellowship Begins



June 1995



2<sup>nd</sup> Job Interview with  
Group – asked husband  
to come to interview



July 6,  
1995



Job #1 Faculty,  
Medical School



## and this is now.....

*Faculty describe mood of “fear” in cardiology department*

- ▣ “Of nine faculty members in the cardiology department interviewed, five – all physicians – said their department was a hostile work environment in general but especially for women. “
- ▣ “\_\_\_ made labs inaccessible to certain people, dealt with promotions unfairly by favoring some & disfavoring others & gave critical assignments to those he favored regardless of merit, the five female physicians claimed. Though the bullying was not directed solely at women, those interviewed said that women felt the brunt of it.”

# Number of Women in Cardiology

- ABIM statistics for # Cardiology Fellows:
  - 13% in 1994-1995
  - 18% in 2002-2003
  - 22% in 2013 (ACC, unpublished data)
  - 70% increase in female FIT over the past 2 decades
  - 88% increase in women in surgical residency over past 3 decades

# Number of Cardiologists by Age & Sex ACC 2009 Survey Results

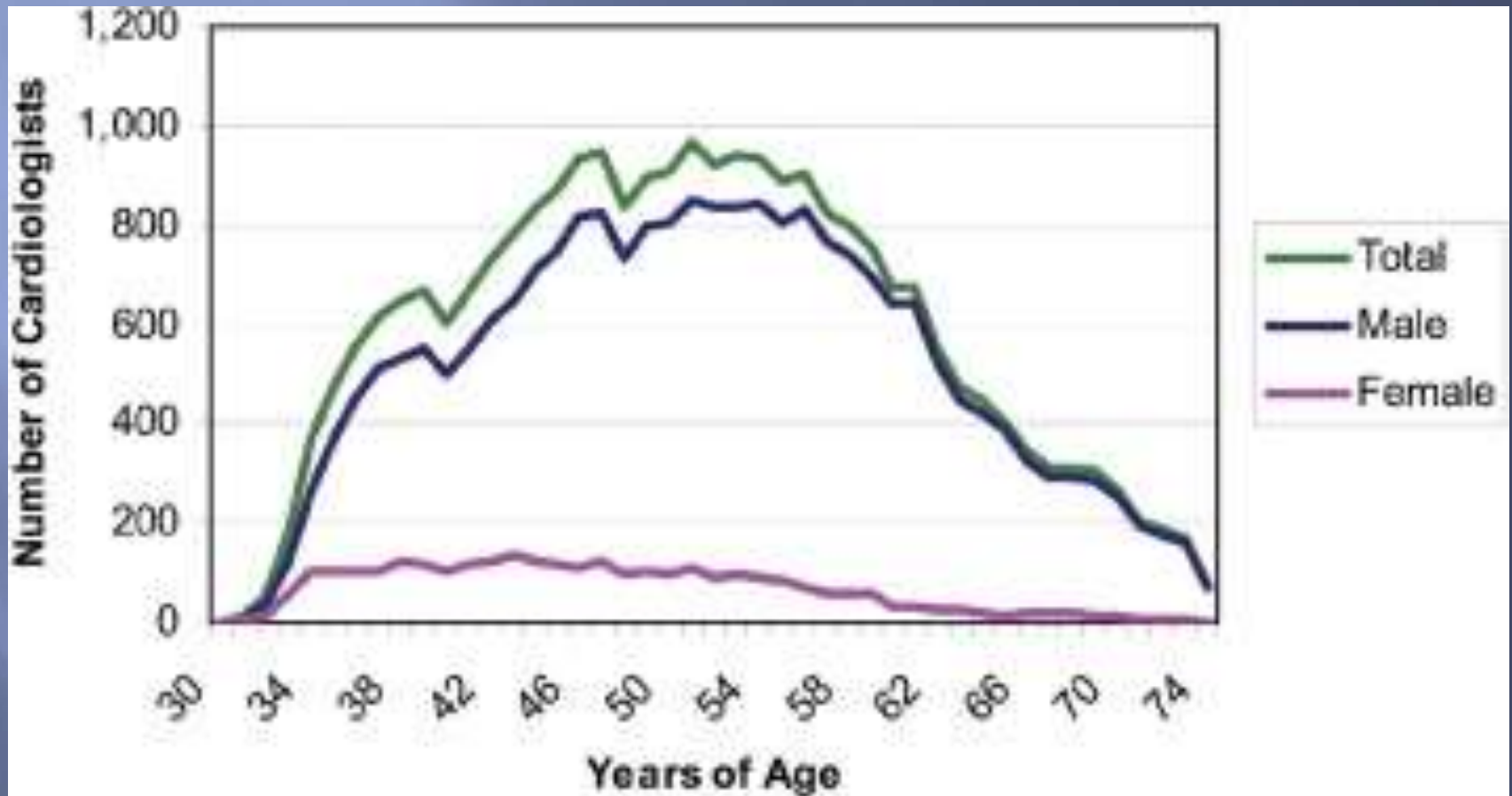
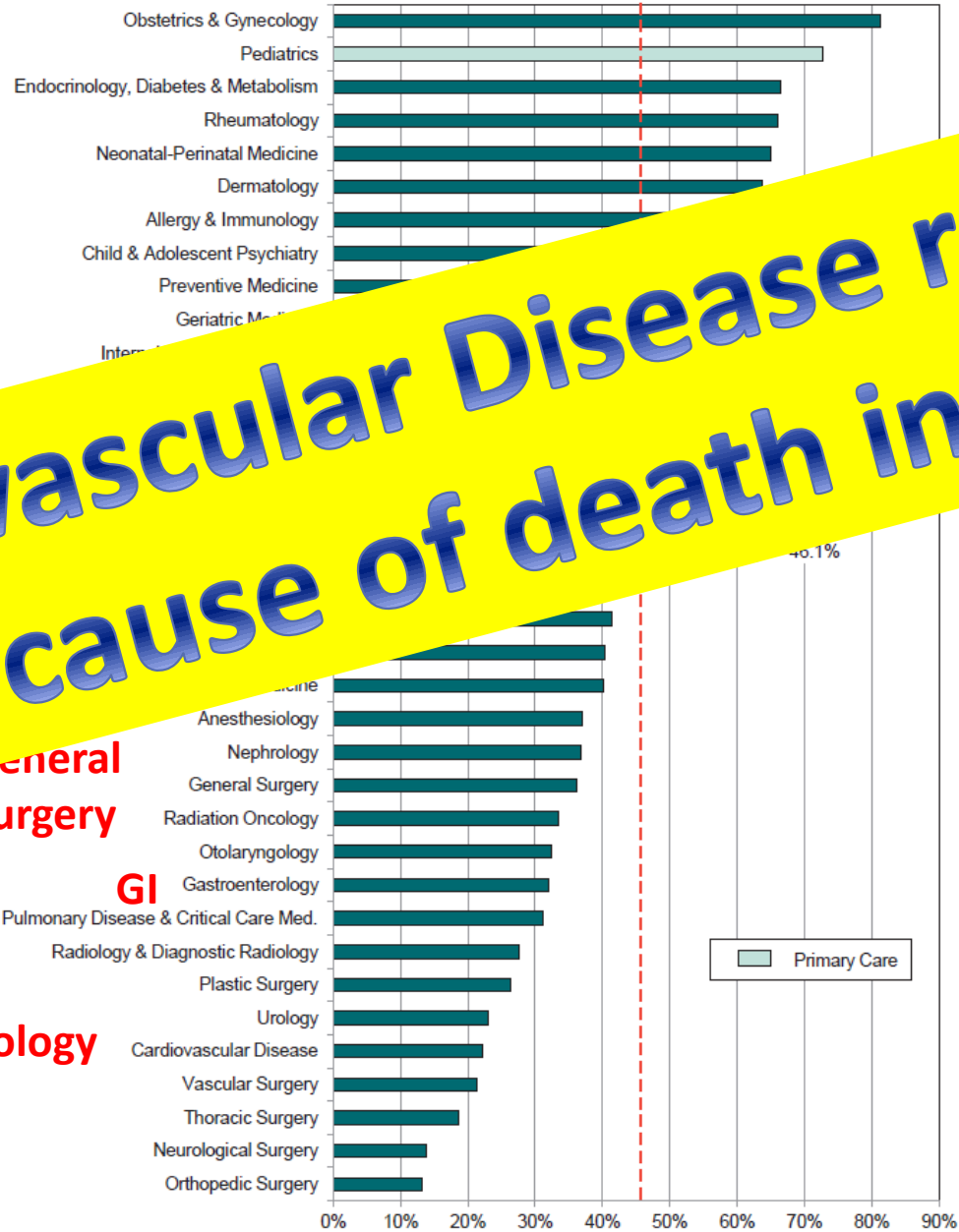




Figure 13. Percentage of ACGME Residents/Fellows Who Are Female by Specialty, August 2010



**Cardiovascular Disease remains the #1 cause of death in women**

**General Surgery**

**GI**

**Cardiology**

Source: 2010 AAMC/AMA National GME Census



# Understanding Career Decisions

## 2008 ACC Survey

- **Academic Practice Setting:** 49% women vs 30% men
- **Private Practice Setting:** 35% women vs 56% men
- **Marriage:** 73% women vs 91% men
- **Children:** 66% women vs 92% men
- **Discrimination:** 69% women vs 22% men
  - Sexual 65% women vs 11% men
  - Parenting responsibilities 27% women vs 1% men
  - Racial 10% men vs 9% women
  - Religious 8% men vs 4% women
- **Satisfaction:** high 90% women & 92% men\*
  - *Salary satisfaction: lower for women (63% vs 72%)*

# History of Women in Cardiology

St Hildegard  
von Bingen



1100



1924



1949



Helen  
Taussig, MD

1960

Honorary  
member  
of ACC, 1<sup>st</sup>  
female  
president  
of AHA  
1964



1987

First female  
cardiologist  
@ Mayo  
Clinic



~ 1990s

Women in  
cardiology  
sections  
formed

# Why do we need women cardiologists?

- Female physicians communicate differently with patients
  - More empathy
  - More in tune to psychosocial aspects of care
- Real life experiences as a woman
  - Pregnancy, motherhood, menopause
- Patient preference
- Want to attract the best and the brightest candidates to train in cardiology

# Barriers to Training Female Cardiologists

- Rigor & length of training (additional 3-5 yrs)
- Working Pattern
  - Not Family Friendly Field
- Achievement Syndrome
- Fertility Concerns (ACOG defines advanced maternal age >35 yrs of age @ time of delivery)
- Radiation Exposure
- Lack of female role models/Mentorship
- Educational Debt
- Cardiology's Macho Culture/Image
  - Shifting paradigm to attract more women & U.S. graduates →
  - Taking the E-Road (Emergency Medicine, Radiology, Ophthalmology, Anesthesiology, Dermatology) -> Gen X
  - Discrimination

# Facts of Radiation Exposure

> ¼ women select career to decrease XRT exposure

\*Mean Effective Dose for an Expert Operator 4 mSV/yr

Diagnostic cath - 0.02-0.38  $\mu$ Sv

Ablations 0.24-9.6  $\mu$ Sv

PCI 0.17-0.31  $\mu$ SV

Pacemaker/ AICD 0.24-17.4  $\mu$ SV

- **Probability of congenital malformation, childhood cancer**
  - 0.07% general population
  - 0.079% if the mother's radiation exposure is 0.5-1mSv/yr
  - 0.16% if the mother' radiation exposure is > 10 mSv/yr
- **Recommendations\*\***
  - International Commission on Radiological Protection < 1mSv (entire gestation)
  - National Council for Radiation Exposure <0.5 mSv/month, <5 mSv (gestation)
- **Majority of women do not perform fluoroscopy while pregnant (65%)**
  - Early weeks of pregnancy, highest risks of teratogenesis
  - Later weeks, practical considerations
  - Decrease procedures by ~50%
- **Nuclear Cardiology Rotation - wear badge, do not inject**

\*Kim et al. Health Phys 2008;94:211-217

\*\* Best et al. SCAI consensus document on occupational radiation exposure to the pregnant cardiologist and technical personnel. Catheter Cardiovasc Int 2011;77:232-41



# Cardiologist Compensation & Academic Appointments by Sex

	Women	Men
<b>Cardiologist Compensation*</b>		
Average annual salary	\$310,000	\$362,000
<b>Academic Appointments</b>		
Instructor	6%	5%
Assistant Professor	18%	24%
Associate Professor	7%	14%
Full Professor	5%	19%

- Data from 2013 Medscape Cardiologist Compensation Report
- Academic Appointments (all specialties) reported as percentages of FT faculty at US fully accredited medical schools

# Creative Solutions

- **Alternative Career Pathways**
  - Shorten Training (High School/college or IM/Cardiology combo program)
  - Flexibility in work hours
  - Temporary replacements during pregnancy
  - Practice general cardiology, teach, research, noninvasive coronary skills, CTA
  - Consider organizational changes to reduce call burden during pregnancy, early after
  - Job Sharing
  - Part-time employment
- **Expand Mentorship Opportunities & Supportive Leadership**
  - Medical Schools & Teaching Hospitals must appoint & promote more women to positions of leadership
  - Network of Mentors
  - Promote accurate image of career pathways
- **General**
  - Provide onsite daycare/lactation support



# Advice

- Do your homework well/ utilize resources
- Train and work in a supportive, family-friendly environment.
- Identify mentors at all levels of training.
- OK to have more than one mentor at once.
- Use your connections.
- Constantly ask for feedback.
- Negotiate, negotiate.
  - Salaries are available on-line
  - Put everything you want in writing and then ask for more
- Non-traditional career tracks.
- Join the WIC.
- FIT should begin mentoring residents, medical students.

# Women in Cardiology Section American College of Cardiology

- *Mission statement*
  - To enhance careers of women cardiologists through the creation of professional development, mentoring & networking programs & through the promotion of leadership opportunities within the ACC
  - To enhance the appeal of cardiology for women residents by recommending changes in training programs & by promoting effective, efficient & diverse career opportunities
  - To encourage young women in high school, college and medical school to pursue a career in cardiology through the creation of mentoring programs and preceptorships

# AHA: Women in Cardiology Committee

## ACC: WIC Section

### *ACC WIC*

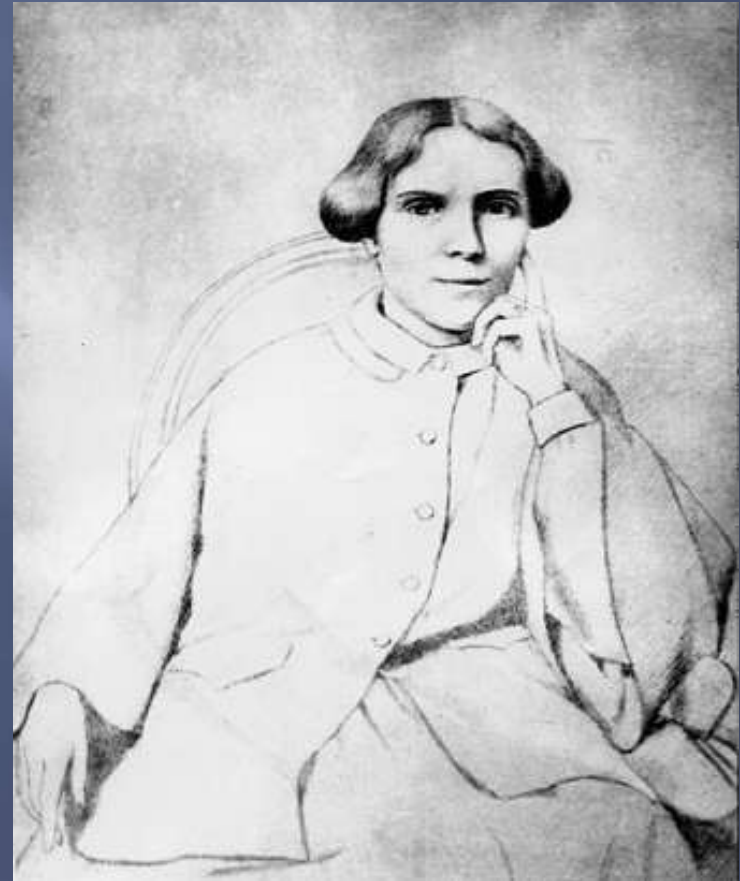
- Fee \$35 per year, no fee for FIT
- Workshops @ National ACC & other times
- Virtual Mentoring Program
- Visiting Professor Program
- Recommended Books on website
- <http://www.cardiosource.org/wic>

### *AHA Women in Cardiology Committee*

- Women in Cardiology Mentoring Award: AHA
- 24 early career cardiologists selected annually to participate in mentoring program at AHA Scientific Sessions

Elizabeth Blackwell, MD  
(1821-1910), M.D. Degree Jan 23, 1849 from  
Geneva Medical College

“Medicine is so broad a field, so closely interwoven with general interests, dealing as it does with all ages, sexes and classes, and yet so personal a character in its individual appreciations, that it must be regarded as one of those great departments of work in which the cooperation of men and women is needed to fulfill all its requirements.”





# UTSW Cardiology Fellows/Faculty



Since accreditation of the UTSW Cardiology Fellowship Program **20% of general cardiology fellowship graduates** have been women

Currently, the UTSW Cardiology Faculty has **~35 % female faculty members** – the highest of any U.S. Academic Cardiology Program (private communication, Dr Joseph Hill)



# Case Presentation

- 23 yrs ago a female internal medicine resident applies to 6 cardiology programs (told by medical school mentor that cardiology would be “too technical of a field to consider”)
  - Interviews at 6 programs
  - Does not rank 4 out of 6 programs due to interview badness
  - Arrives for fellowship training July 1, 1991
  - First child delivered July 3<sup>rd</sup>, 1991
  - Considers changing fellowship to heme/onc; shadows heme/onc mentor → but drawn back to cardiology fellowship
  - Workplace humor? By cofellows
  - Female role models were treated poorly by their peers in the workplace
  - Preterm Labor 32 weeks with 2<sup>nd</sup> pregnancy with 2 weeks left in fellowship
  - Finishes fellowship/research commitment 1995
  - Begins job on faculty at US Medical School 1995
    - Blocked from using equipment required for research
    - Interview for 2<sup>nd</sup> job (2003) – group requests that husband (not in medicine) also come to interview



# History of Women in Cardiology



- St Hildegard von Bingen, 12<sup>th</sup> century mystic (1098-1179)
  - Cardiac medication (Meluvin)
  - Treated the “aching heart”, heart failure, valvular heart disease, edema
- AHA founded 1924
- ACC founded 1949
- 1950-60s – first women cardiologists train
- Helen Taussig
  - honorary member of ACC 1960
  - President of AHA 1964
- 1987 first female cardiologist on staff @ Mayo Clinic
- ACC Women in Cardiology Section (WIC) 1996
- AHA 1990s Women in Cardiology Committee of the Clinical Council of Cardiology